

Deaths: Final Data for 2020

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Abstract

Objectives—This report presents final 2020 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 2020, a total of 3,383,729 deaths were reported in the United States. The age-adjusted death rate was 835.4 deaths per 100,000 U.S. standard population, an increase of 16.8% from the 2019 rate. Life expectancy at birth was 77.0 years, a decrease of 1.8 years from 2019. Age-specific death rates increased from 2019 to 2020 for age groups 15 years and over and decreased for age group under 1 year. Many of the 15 leading causes of death in 2020 changed from 2019. COVID-19, a new cause of death in 2020, became the third leading cause in 2020. The infant mortality rate decreased 2.9% to a historic low of 5.42 infant deaths per 1,000 live births in 2020.

Conclusions—In 2020, the age-adjusted death rate increased and life expectancy at birth decreased for the total, male, and female populations, primarily due to the influence of deaths from COVID-19.

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

Highlights

Mortality experience in 2020

- In 2020, a total of 3,383,729 resident deaths were registered in the United States, an increase of 528,891 deaths compared with 2019 (2,854,838). The 1-year increase in the number of deaths was a record high, primarily driven by the COVID-19 pandemic.
- The crude death rate was 1,027.0 deaths per 100,000 population. The age-adjusted death rate, which accounts for the aging of the population, was 835.4 deaths per 100,000 U.S. standard population.
- The age-adjusted death rate for the American Indian or Alaska Native non-Hispanic population (subsequently, American Indian or Alaska Native) (1,036.2) was 1.2 times greater than for the White non-Hispanic population (subsequently, White) (834.7).
- The age-adjusted death rate for the Black non-Hispanic population (subsequently, Black) (1,119.0) was 1.3 times greater than for the White population (834.7).
- The age-adjusted death rate for the White population (834.7) was 1.8 times greater than for the Asian non-Hispanic population (subsequently, Asian) (457.7) and 1.2 times greater than for the Hispanic population (723.6).
- Life expectancy at birth was 77.0 years.
- Life expectancy in 2020 for the Hispanic population was 0.5 year higher than for the White population.
- The 15 leading causes of death in 2020 were:
 1. Diseases of heart (heart disease)
 2. Malignant neoplasms (cancer)
 3. COVID-19
 4. Accidents (unintentional injuries)
 5. Cerebrovascular diseases (stroke)
 6. Chronic lower respiratory diseases
 7. Alzheimer disease
 8. Diabetes mellitus (diabetes)



9. Influenza and pneumonia
 10. Nephritis, nephrotic syndrome and nephrosis (kidney disease)
 11. Chronic liver disease and cirrhosis
 12. Intentional self-harm (suicide)
 13. Essential hypertension and hypertensive renal disease (hypertension)
 14. Parkinson disease
 15. Septicemia
- In 2020, the infant mortality rate (IMR) was 5.42 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. Diseases of the circulatory system
 10. Neonatal hemorrhage

Comparison to previous year

- The age-adjusted death rate increased 16.8% from 715.2 per 100,000 standard population in 2019 to 835.4 in 2020.
- Life expectancy for the total population decreased 1.8 years from 78.8 in 2019 to 77.0 in 2020.
- Life expectancy for females (79.9) was 5.7 years higher than for males (74.2), an increase of 0.6 year from 2019.
- The difference in life expectancy between the Black and White populations increased 1.9 years from 4.0 years in 2019 to 5.9 years in 2020.
- From 2019 to 2020, life expectancy decreased for American Indian or Alaska Native males (4.8 years), Hispanic males (4.5 years), American Indian or Alaska Native females (4.3 years), Black males (3.5 years), Hispanic females (3.1 years), Black females (2.7 years), Asian males (2.4 years), Asian females (1.5 years), White males (1.5 years), and White females (1.2 years).
- The 15 leading causes of death changed in 2020 from 2019 with the introduction of COVID-19 in 2020, the third leading cause of death, and Pneumonitis due to solids and liquids dropping from the list of leading causes. The other leading causes in 2020 were the same as in 2019, although some changed ranks.
- Age-adjusted death rates increased significantly in 2020 from 2019 for 10 of the 15 leading causes of death: heart disease, unintentional injuries, stroke, Alzheimer disease,

diabetes, Influenza and pneumonia, Chronic liver disease and cirrhosis, hypertension, Parkinson disease, and Septicemia. Significant decreases occurred in 2020 from 2019 for 3 of the 15 leading causes of death: cancer, Chronic lower respiratory diseases, and suicide.

- Age-adjusted death rates increased in 2020 from 2019 for drug-induced causes (29.4%) and alcohol-induced causes (26.0%).
- The decrease in life expectancy at birth for the total population in 2020 was mainly due to increases in mortality from COVID-19, unintentional injuries, heart disease, homicide, and diabetes.
- Among external causes of injury death, unintentional poisoning has been the leading mechanism of injury mortality since 2011.
- IMR decreased 2.9% in 2020 to a record low of 5.42 infant deaths per 1,000 live births.
- Nine of the 10 leading causes of infant death remained the same as in 2019, but 2 causes changed rank.

Introduction

This report presents detailed 2020 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). In March 2020, the World Health Organization (WHO) declared a global pandemic and assigned an ICD-10 code for COVID-19. The Division of Vital Statistics of the National Center for Health Statistics (NCHS) implemented the code and incorporated it into cause-of-death lists used for tabulating mortality statistics. Detail on cause-of-death classification is provided in Technical Notes at the end of this report. The pandemic had a substantial impact on the mortality profile of the U.S. population for 2020.

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 information (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 include Hispanic, American Indian or Alaska Native non-Hispanic, Asian non-Hispanic, Black or African American non-Hispanic, Native Hawaiian or Other Pacific Islander non-Hispanic, and White non-Hispanic. Data presented in this report according to the 1997 OMB revised race and Hispanic-origin categories represent the official data by race and origin for 2018–2020. The categories differ from the bridged-race categories shown in reports before 2018. For comparison purposes and to show the impact of the change, selected data for 2018, 2019, and 2020 are presented for both single- and bridged-race categories. See Methods and Technical Notes in this report for additional information on how race and Hispanic-origin categories were redefined, and an accompanying report, “Comparability of Race-specific Mortality Data Based on 1977 Versus 1997 Reporting Standards” (10), for more information on differences between single- and bridged-race groups.

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 (11). The public-use file does not include geographic detail, but a file with this information may be available upon request (12). Death data also may be accessed from the Centers for Disease Control and Prevention’s Wide-ranging Online Data for Epidemiologic Research (CDC WONDER), a web-based system that makes the agency’s information resources available to public health professionals and the general public (13).

Methods

Data in this report are based on information from all resident death certificates filed in the 50 states and the District of Columbia. More than 99% of deaths occurring in the United States are believed to be registered (14).

This report provides detailed death data in [Tables 1–16](#) and supplemental Internet [Tables I–1 through I–24](#). 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. Selected causes are presented primarily based on their impact on public health and future planning.

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 2020 compared with 2019 and differences in death rates across demographic groups in 2020 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.

According to the revised standards issued by OMB in 1997, the 2003 revision of the U.S. Standard Certificate of Death provides 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 (8,15,16). The categories include Hispanic, single-race American Indian or Alaska Native non-Hispanic (subsequently, American Indian or 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 2020 is relatively small (0.5%), 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 or Alaska Native, Asian, Black, Hispanic, and White.

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; see Technical Notes. 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. Data presented in this report by the revised Hispanic-origin and race categories represent the official statistics by race and origin for 2018–2020. Because single-race data are not available for the entire United States before 2018, data by race for 2018, 2019, and 2020 are not completely comparable with data for previous years, and comparisons should be made with this consideration. However, data for selected estimates for 2018, 2019, and 2020 were also tabulated for bridged-race categories to evaluate the impact of the change in categorization. Data by bridged-race categories will be discontinued after the 2020 data year. 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 2020 and earlier years are comparable.

The changes in rates and life expectancies in 2020 from 2019 are discussed by Hispanic origin, single-race categories, and sex. However, for comparison purposes, [Tables A, 1, 4, and 13](#) present data for 2018–2020 by both bridged- and single-race categories. [Tables I–1 through I–4, I–9, and I–20 through I–22](#) show trend data by bridged-race categories for 2020 and previous years and single-race data for 2018, 2019, and 2020. A more detailed analysis of bridged-race data compared with single-race

Table A. Age-adjusted death rate based on bridged compared with unbridged race, by race and sex for the non-Hispanic population: United States, 2020

[Age-adjusted rates per 100,000 U.S. standard population. Bridged-race categories are consistent with 1977 Office of Management and Budget (OMB) standards; unbridged categories are consistent with 1997 OMB standards. Hispanic origin and race are reported separately on the death certificate. Hispanic origin is not a race; as a result, data for Hispanic people are not bridged and are not presented in this table. Data presented in this table for specified categories other than Black non-Hispanic and White non-Hispanic 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]

Bridged race ¹		Unbridged race ²	
Race by non-Hispanic origin and sex	Age-adjusted death rate	Race by non-Hispanic origin and sex	Age-adjusted death rate
American Indian or Alaska Native ³	1,008.4	American Indian or Alaska Native ³	1,036.2
Male	1,206.2	Male	1,205.9
Female	833.6	Female	881.5
Asian ⁴	...	Asian ⁴	457.7
Male	...	Male	557.4
Female	...	Female	378.5
Asian or Pacific Islander ⁵	470.5	Asian or Pacific Islander ⁵	...
Male	572.3	Male	...
Female	388.6	Female	...
Black	1,101.7	Black	1,119.0
Male	1,375.6	Male	1,399.0
Female	892.6	Female	905.2
Native Hawaiian or Other Pacific Islander	...	Native Hawaiian or Other Pacific Islander	821.3
Male	...	Male	947.9
Female	...	Female	699.8
White	831.2	White	834.7
Male	980.5	Male	985.0
Female	700.3	Female	703.1
Two or more races ⁶	...	Two or more races ⁶	376.9
Male	...	Male	445.5
Female	...	Female	317.4

... Category not applicable.

¹Multiple-race data reported according to 1997 OMB standards were bridged to single-race categories of 1977 OMB standards; see Technical Notes.

²Multiple-race data reported according to 1997 OMB standards. For race-specific categories, only one race was reported on the death certificate; see Technical Notes.

³Includes Aleut and Eskimo people.

⁴Includes Chinese, Filipino, Japanese, and other Asian people.

⁵Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian and Pacific Islander people.

⁶Two or more races were reported on the death certificate.

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

data is available in “Comparability of Race-specific Mortality Data Based on 1977 Versus 1997 Reporting Standards” (10).

Death rates by race and ethnicity for the American Indian or 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 (17). Death rates for the American Indian or Alaska Native population are underestimated by about 33% due to misclassification (17). Death rates for the Asian and Hispanic populations are underestimated by about 3.0% (17). 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 3 and 4](#) 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, and [Table I-24](#) presents age-adjusted rates, both unadjusted and adjusted for race-ethnicity misclassification, by Hispanic

origin and race and sex. [Table I-23](#) presents the classification ratios used to adjust rates for race-ethnicity misclassification. An example of the effects of misclassification on death rates is provided in the Technical Notes (see *Quality of race and Hispanic-origin data*).

The population data used to calculate death rates for 2020 shown in this report are postcensal population estimates based on the 2010 decennial census and are available from the CDC WONDER website: <https://wonder.cdc.gov/single-race-population.html> (18). Reflecting the 1997 OMB guidelines on race and ethnicity reporting, the 2010 census included an option for individuals to report more than one race and provided for the reporting of Asian people separately from Native Hawaiian or Other Pacific Islander people (8).

The populations used to calculate death rates by bridged-race categories for 2000–2020 were produced under a collaborative arrangement with the U.S. Census Bureau in which population data for multiple-race people were bridged back to single-race categories. Populations for 2010–2020 and the intercensal period 2001–2009 are consistent with the 2010 census (18,19). In addition, the 2010 census counts were modified to be consistent with the 1977 OMB race categories, that is, to report the data for Asian people or Pacific Islander people as a combined category (Asian or Pacific Islander) and to reflect age as of the census

reference date (16). The procedures used to produce the bridged populations are described elsewhere (20,21).

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 2020, a total of 3,383,729 resident deaths were registered in the United States—528,891 more deaths than in 2019. The crude death rate for 2020 (1,027.0 deaths per 100,000 population) was 18.1% higher than the 2019 rate (869.7) (Tables B, 1, 2, 5, 7, and 9). In 2020, 350,831 deaths were identified with COVID-19 as the underlying cause of death (Table 8). COVID-19 was a contributing cause but was not considered the underlying cause of an additional 33,705 deaths (22).

The age-adjusted death rate in 2020 was 835.4 deaths per 100,000 U.S. standard population—16.8% higher than the rate of 715.2 in 2019 (Tables B and 1). The age-adjusted death rates increased for males (17.9%) and females (15.3%). 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, and 2020 (Figure 1) (13).

Death rates by Hispanic origin and race

In 2020, age-adjusted death rates by ethnicity and race groups (Table 1) were:

- Hispanic population: 723.6 deaths per 100,000 U.S. standard population
- American Indian or Alaska Native non-Hispanic (subsequently, American Indian or Alaska Native) population: 1,036.2
- Asian non-Hispanic (subsequently, Asian) population: 457.7
- Black non-Hispanic (subsequently, Black) population: 1,119.0
- Native Hawaiian or Other Pacific Islander non-Hispanic (subsequently, Native Hawaiian or Other Pacific Islander) population: 821.3

Figure 1. Crude and age-adjusted death rates: United States, 1960–2020

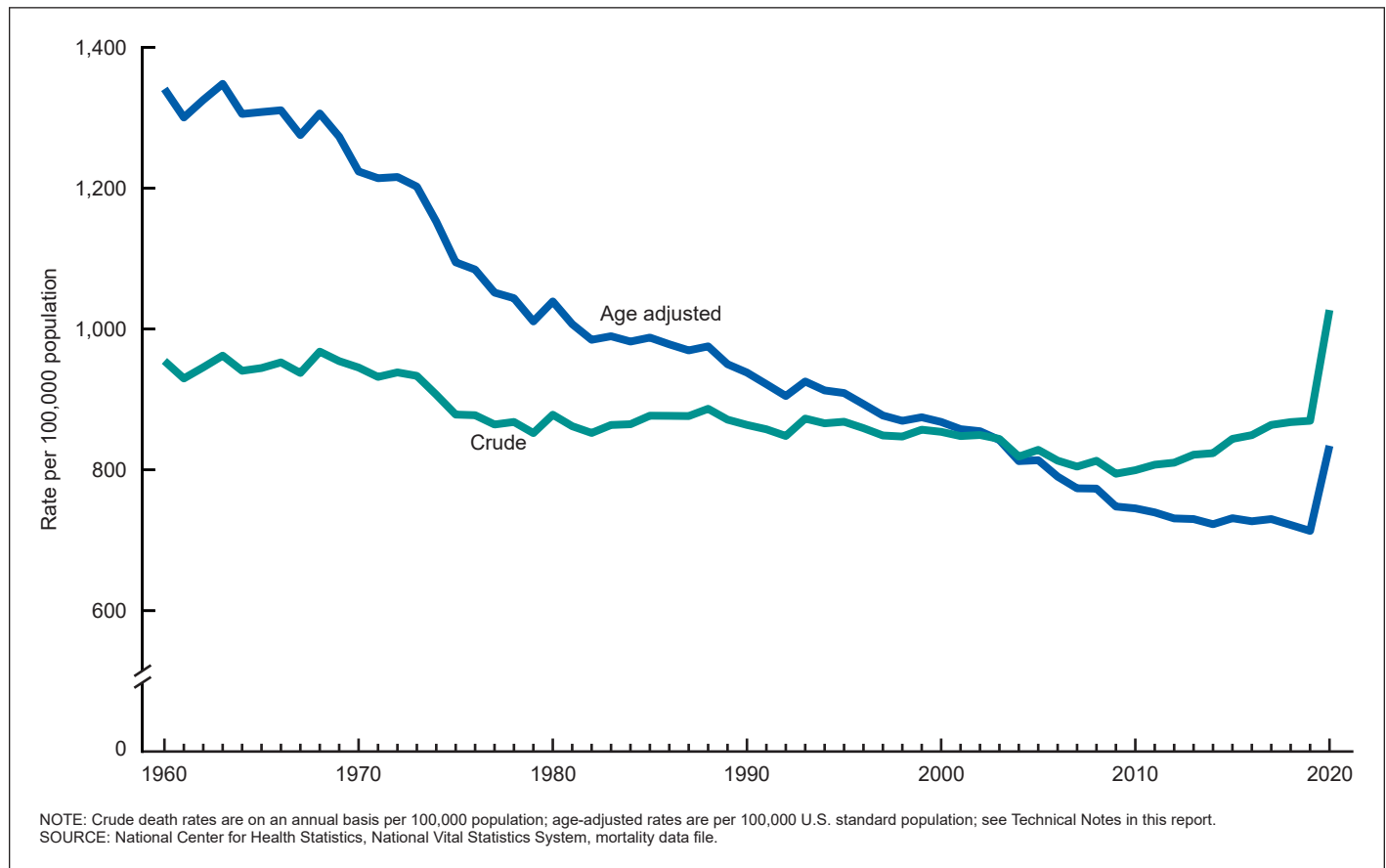


Table B. Percent change in death rates and age-adjusted death rates in 2020 from 2019, by age, Hispanic origin and race, and sex: United States

[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]

Age group (years)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ^{3,4}			Asian ^{3,5}			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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	18.1	19.6	16.4	42.2	47.5	35.6	37.1	38.3	35.6	26.2	29.4	22.8	28.7	30.2	27.1	23.5	24.5	22.3	14.1	14.9	13.2
Age-adjusted rate	16.8	17.9	15.3	38.1	42.7	32.4	32.4	33.7	30.9	22.8	26.0	19.3	26.6	28.0	24.9	21.0	23.3	18.7	12.8	13.4	12.1
Under 1 ⁶	-5.2	-5.7	-4.6	-6.8	-6.5	-7.0	-4.2	1.5	-11.0	-28.9	-30.8	-26.3	-6.4	-6.0	-6.9	-15.1	-27.0	3.2	-1.6	-3.5	1.0
1-4	-2.6	0.8	-7.1	-2.1	-0.5	-3.5	-7.1	9.3	-22.2	-20.4	-18.8	-21.3	2.2	9.0	-5.9	23.6	64.9	-26.8	-1.4	-0.4	-3.8
5-14	2.2	5.9	-1.7	5.4	2.4	9.3	3.6	-10.6	28.0	-9.3	-13.8	-3.8	7.6	14.7	-2.2	6.4	11.1	-4.7	-0.8	4.1	-6.4
15-24	20.8	22.3	16.7	25.8	27.9	19.5	15.1	19.5	6.7	16.1	7.1	39.9	36.0	36.4	34.6	-11.1	-3.8	-26.6	12.2	13.7	8.5
25-34	23.8	24.9	21.3	32.4	32.9	31.9	42.7	39.2	48.6	12.5	13.8	9.3	34.8	35.2	33.3	24.1	19.5	36.3	16.9	18.1	14.1
35-44	24.5	26.7	20.6	43.2	49.6	28.8	45.3	48.6	40.6	26.8	34.1	14.3	29.7	30.4	28.1	16.1	14.9	18.2	17.6	18.6	15.9
45-54	20.7	22.8	17.3	47.8	53.7	36.3	40.3	41.1	39.1	23.0	27.3	16.4	27.9	30.8	24.0	37.1	35.5	39.2	13.3	14.1	12.0
55-64	17.6	19.0	15.4	49.1	53.6	40.7	40.6	40.5	40.9	27.1	31.4	20.1	25.0	26.2	23.3	34.8	35.4	33.5	11.5	12.4	10.1
65-74	17.4	18.5	16.0	47.8	53.3	40.0	32.4	34.3	30.3	31.5	36.9	24.7	28.6	29.5	27.4	14.4	14.2	14.6	12.0	12.7	11.2
75-84	16.0	17.0	14.8	40.3	44.1	36.4	28.8	27.5	30.2	22.1	24.8	19.1	26.8	28.2	25.4	19.8	25.9	13.9	12.6	13.5	11.6
85 and over	15.0	14.9	15.0	27.1	30.1	25.2	21.7	24.1	20.2	21.5	23.2	20.3	25.6	26.5	25.2	18.9	28.4	13.3	13.3	13.0	13.5

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

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

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

⁴Includes Aleut and Eskimo people.

⁵Includes Chinese, Filipino, Japanese, and other Asian people.

⁶Death rates for "under 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.

- White non-Hispanic (subsequently, White) population: 834.7

In 2020, the age-adjusted death rate for the American Indian or Alaska Native population was 1.2 times that for the White population. The rate for the Black population was 1.3 times that for the White population. The rate for the White population was 1.8 times the rate for the Asian population and 1.2 times the rate for the Hispanic population (Table C).

The age-adjusted rate increased 38.1% (from 523.8 in 2019 to 723.6 in 2020) for the Hispanic population, 32.4% (from 782.5 to 1,036.2) for the American Indian or Alaska Native population, 26.6% (from 884.0 to 1,119.0) for the Black population, 22.8% (from 372.8 to 457.7) for the Asian population, 21.0% (from 679.0 to 821.3) for the Native Hawaiian or Other Pacific Islander population, and 12.8% (from 739.9 to 834.7) for the White population (Tables B and 1).

From 2019 to 2020, the age-adjusted death rate increased 42.7% for Hispanic males, 33.7% for American Indian or Alaska Native males, 32.4% for Hispanic females, 30.9% for American Indian or Alaska Native females, 28.0% for Black males, 26.0% for Asian males, 24.9% for Black females, 23.3% for Native Hawaiian or Other Pacific Islander males, 19.3% for Asian females, 18.7% for Native Hawaiian or Other Pacific Islander females, 13.4% for White males, and 12.1% for White females (Tables B and 1).

For each group by race and ethnicity, the age-adjusted rate for COVID-19 in 2020 was higher for males than for females. The rate was highest for Hispanic males (214.5), followed by American Indian or Alaska Native males (208.8), Black males (185.5), American Indian or Alaska Native females (147.9), Native Hawaiian or Other Pacific Islander males (145.7), Black females (112.6), Hispanic females (107.5), Asian males (86.3), White males (82.0), Native Hawaiian or Other Pacific Islander females (81.3), White females (54.3), and Asian females (44.9) (Table 10).

Death rates by age and sex

For the total population, age-specific death rates increased significantly from 2019 to 2020 for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and over, and decreased for the age group under 1 year. Changes in rates for other age groups were not significant (Tables B, 5, and 7; Figure 2).

The age-adjusted death rate for males was 1.4 times the rate for females in 2020 (Table C). The male-to-female death rate ratio was unchanged from the ratio in 2019.

Death rates for males increased significantly for age groups 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and over. The rate decreased significantly for the age group under 1. The change in rates for males aged 1–4 was not statistically significant. Death rates for females increased significantly for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and over. Death rates for females decreased significantly for age groups under 1 and 1–4. The change in rates for females aged 5–14 was not significant.

Race and ethnicity by sex—For the total, male, and female Hispanic populations, age-specific death rates increased for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84 and 85 and over, and decreased from 2019 to 2020 for the age group under 1.

For the total and male American Indian or Alaska Native non-Hispanic (subsequently, American Indian or Alaska Native) populations, age-specific death rates increased from 2019 to 2020 for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and over. For American Indian or Alaska Native females, age-specific death rates increased for age groups 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and over.

For the total Asian non-Hispanic (subsequently, Asian) population, age-specific rates increased from 2019 to 2020 for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and over. The rate decreased for the age group under 1. The age-specific death rate for Asian males increased for age groups 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and over and decreased for the age group under 1. The age-specific death rates increased for Asian females for age groups 15–24, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and over, and decreased for the age group under 1.

For the total and female Black non-Hispanic (subsequently, Black) populations, age-specific death rates increased from 2019 to 2020 for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and over. The rate decreased for the age group under 1. The rate for Black males increased for age groups 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and over, and decreased for age group under 1.

For the total Native Hawaiian or Other Pacific Islander non-Hispanic (subsequently, Native Hawaiian or Other Pacific Islander) population, age-specific death rates increased for age groups 25–34, 45–54, 55–64, 65–74, 75–84, and 85 and over. For Native Hawaiian or Other Pacific Islander males, the age-specific rates increased for age groups 45–54, 55–64, 65–74, 75–84, and 85 and over. For Native Hawaiian or Other Pacific Islander females, age-specific death rates increased for age groups 45–54 and 55–64.

For the total, male, and female White non-Hispanic (subsequently, White) populations, age-specific death rates increased significantly between 2019 and 2020 for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and over (Tables B and 2).

Other observed changes from 2019 to 2020 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.

Life table data shown in this report for 2010–2020 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

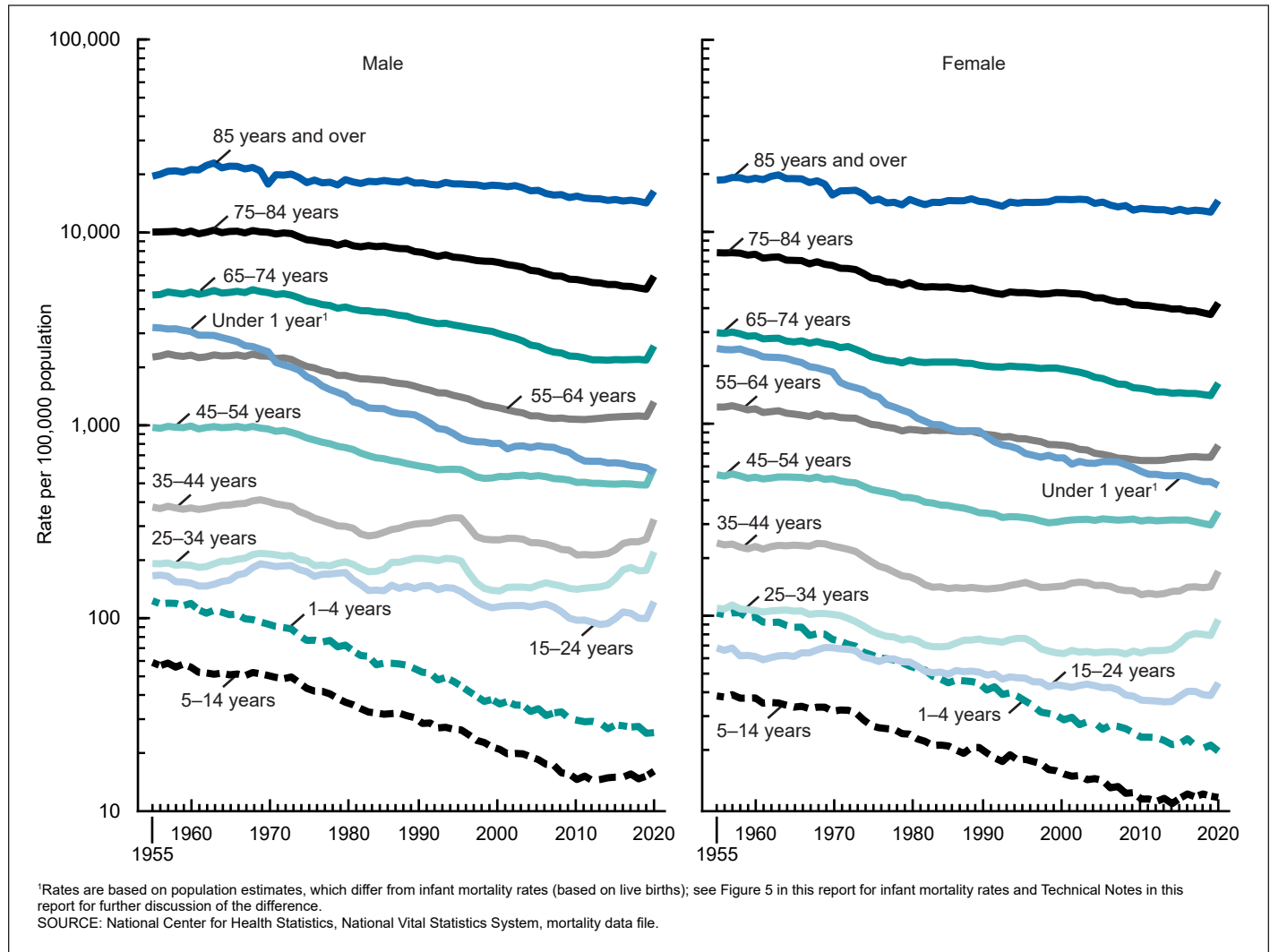
Table C. Number of deaths, percentage of total deaths, death rate, and age-adjusted death rate for 2020, percent change in age-adjusted death rates in 2020 from 2019, and ratio of age-adjusted death rates by sex and Hispanic origin and race for the 15 leading causes of death for total population in 2020: 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. Asterisks (*) preceding cause-of-death codes indicate they are not part of 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]

Rank ²	Cause of death (based on <i>International Classification of Diseases, 10th Revision</i>)	Number	Percent of total deaths, 2020	Crude death rate, 2020	Age-adjusted death rate							
					2020	Percent change from 2019 to 2020	Ratio					
							Non-Hispanic ¹					
							Male to female	American Indian or Alaska Native to White	Asian to White	Black to White	Native Hawaiian or Other Pacific Islander to White	White, non-Hispanic ³ to Hispanic ³
...	All causes	3,383,729	100.0	1,027.0	835.4	16.8	1.4	1.2	0.5	1.3	1.0	1.2
1	Diseases of heart (I00–I09,I11,I13,I20–I51)	696,962	20.6	211.5	168.2	4.1	1.6	0.9	0.5	1.4	1.0	1.4
2	Malignant neoplasms (C00–C97)	602,350	17.8	182.8	144.1	-1.4	1.4	0.8	0.6	1.1	0.9	1.5
3	COVID-19 (U07.1) ⁴	350,831	10.4	106.5	85.0	...	1.6	2.6	0.9	2.1	1.7	0.4
4	Accidents (unintentional injuries) (V01–X59,Y85–Y86)	200,955	5.9	61.0	57.6	16.8	2.3	1.6	0.3	1.1	0.6	1.5
5	Cerebrovascular diseases (I60–I69)	160,264	4.7	48.6	38.8	4.9	1.1	0.9	0.8	1.5	1.3	1.1
6	Chronic lower respiratory diseases (J40–J47)	152,657	4.5	46.3	36.4	-4.7	1.2	0.7	0.2	0.7	0.5	2.6
7	Alzheimer disease (G30)	134,242	4.0	40.7	32.4	8.7	0.7	0.6	0.5	0.9	0.6	1.2
8	Diabetes mellitus (E10–E14)	102,188	3.0	31.0	24.8	14.8	1.6	2.5	0.9	2.2	2.3	0.7
9	Influenza and pneumonia (J09–J18)	53,544	1.6	16.3	13.0	5.7	1.4	1.5	0.8	1.4	1.2	1.0
10	Nephritis, nephrotic syndrome and nephrosis (N00–N07, N17–N19,N25–N27)	52,547	1.6	15.9	12.7	0.0	1.4	1.3	0.7	2.4	1.6	1.0
11	Chronic liver disease and cirrhosis (K70,K73–K74)	51,642	1.5	15.7	13.3	17.7	1.9	4.3	0.3	0.6	0.5	0.9
12	Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)	45,979	1.4	14.0	13.5	-2.9	4.0	1.4	0.4	0.5	0.7	2.3
13	Essential hypertension and hypertensive renal disease (I10,I12,I15)	41,907	1.2	12.7	10.1	13.5	1.2	1.2	1.0	2.3	1.3	0.9
14	Parkinson disease (G20–G21)	40,284	1.2	12.2	9.9	12.5	2.2	0.5	0.5	0.5	0.5	1.5
15	Septicemia (A40–A41)	40,050	1.2	12.2	9.7	2.1	1.2	1.3	0.5	1.8	1.2	1.3
...	All other causes (residual)	657,327	19.4	199.5	...	...	...	...	...	...	...	...

... Category not applicable.

¹Includes only one race reported on the death certificate.²Based on number of deaths; see Technical Notes.³Includes people of Hispanic origin of any race; see Technical Notes.⁴COVID-19 became an official cause of death in 2020; data for 2019 are not applicable.

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

Figure 2. Death rate, by age and sex: United States, 1955–2020

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 (see Technical Notes). As noted in the Methods section, the age-specific and age-adjusted death rates shown in this report 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 and [Tables I–23 and I–24](#).

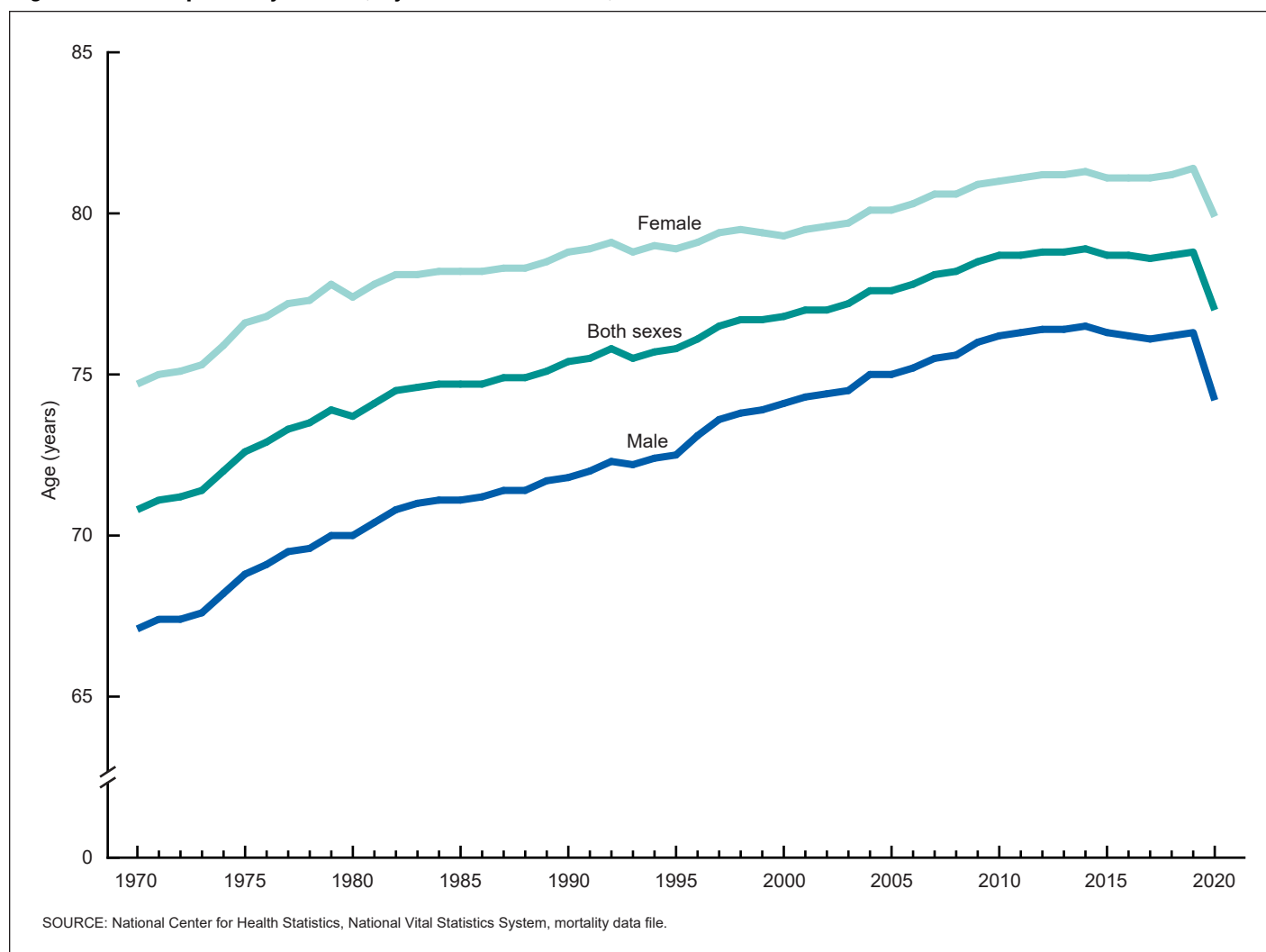
Life tables were generated for both sexes and by each sex for the following populations:

- Total U.S.
- Hispanic
- American Indian or Alaska Native non-Hispanic
- Asian non-Hispanic
- Black non-Hispanic
- White non-Hispanic

In 2020, life expectancy at birth for the U.S. population was 77.0 years, 1.8 years lower than 2019 ([Tables 3 and 4](#)). This

decrease, mostly due to the COVID-19 pandemic and increases in unintentional injuries, is the largest single-year decrease for the total population since 1943 (3). The general trend in U.S. life expectancy between 1900 and 2019 had been one of improvement. In 2020, life expectancy for males (74.2 years) was 2.1 years lower than in 2019. Life expectancy for females (79.9 years) was 1.5 years lower than in 2019. From 1900 through the late 1970s, the gap in life expectancy between the sexes widened (3) from 2.0 to 7.8 years. The gap between sexes has narrowed since its peak in the 1970s ([Figure 3](#) and [Table 4](#)). In 2020, the difference in life expectancy between males and females was 5.7 years, an increase of 0.6 year from 2019.

Life expectancy figures for the Hispanic population and the 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 and White populations, regardless of Hispanic origin (23). Life tables for the American Indian or Alaska Native non-Hispanic (subsequently, American Indian or Alaska Native) and Asian non-Hispanic (subsequently, Asian) populations were added to the Life Table Program with data for 2019 (24).

Figure 3. Life expectancy at birth, by sex: United States, 1970–2020

Life expectancy for the American Indian or Alaska Native population decreased 4.7 years (from 71.8 years in 2019 to 67.1 in 2020).

Life expectancy for the Hispanic population decreased by 4.0 years (from 81.9 years in 2019 to 77.9 in 2020) (Table 4). The difference in life expectancy between the Hispanic and White populations decreased 2.6 years from 3.1 years in 2019 to 0.5 year in 2020 (Table 4).

Life expectancy decreased by 3.3 years for the Black population (from 74.8 years in 2019 to 71.5 in 2020). The difference in life expectancy between the White and Black populations increased 1.9 years from 4.0 years in 2019 to 5.9 years in 2020 (Table 4).

Life expectancy declined by 2.0 years for the Asian population (from 85.6 years in 2019 to 83.6 in 2020).

Life expectancy decreased by 1.4 years for the White population (from 78.8 years in 2019 to 77.4 in 2020).

Among the 10 major Hispanic-origin–race–sex groups in 2020, Asian females had the highest life expectancy at birth (85.9 years), followed by Hispanic females (81.3), Asian males (81.1), White females (80.1), Black females (75.4), White males (74.8), Hispanic males (74.6), American Indian or Alaska Native females

(70.7), Black males (67.8), and American Indian or Alaska Native males (63.8) (Tables 3 and 4).

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 2020 for the total population, a person aged 50 could expect to live an average of 30.4 more years, for a total of 80.4 years. A person aged 65 could expect to live an average of 18.5 more years, for a total of 83.5 years, and a person aged 85 could expect to live an average of 6.1 more years, for a total of 91.1 years (Table 3). Life expectancy decreased from 2019 to 2020 at all ages (Table 3) (3).

Leading causes of death

The 15 leading causes of death in 2020 accounted for 80.6% of all deaths in the United States (Table C). In 2020, 14 of the 15 leading causes of death remained the same as in 2019. Heart disease and cancer remained the first and second leading causes in 2020. COVID-19, newly added as a cause of death in 2020, became the third leading cause. Of the remaining leading causes in 2020, seven causes changed rank. Unintentional injuries, the third leading cause in 2019, became the fourth leading cause

in 2020. Chronic lower respiratory diseases, the fourth leading cause in 2019, became the sixth. Alzheimer disease, the sixth leading cause in 2019, became the seventh. Diabetes, the seventh leading cause in 2019, became the eighth. Kidney disease, the 8th leading cause in 2019, became the 10th. Suicide, the 10th leading cause in 2019, became the 12th. Septicemia, the 12th leading cause in 2019, became the 15th. Pneumonitis due to solids and liquids dropped from the list of 15 leading causes in 2020. 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 2020 were:

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

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 by the number of deaths, age-adjusted death rates are used to depict trends for leading causes of death in this report because they are better than crude rates for showing changes in mortality over time and among causes of death (Figure 4; Tables C and 5).

From 2019 through 2020, age-adjusted death rates increased significantly for 10 of the 15 leading causes of death and decreased for 3 of the 15 leading causes (Table C). The rate for the top leading cause of death, heart disease, increased 4.1% in 2020 from 2019 (Figure 4; Tables C and 5) (13). The rate for the second leading cause of death, cancer, decreased 1.4%, continuing a gradual but consistent downward trend since 1993. Deaths from these two diseases combined accounted for 38.4% of deaths in the United States in 2020 (Table C).

COVID-19, the third leading cause of death in 2020, accounted for 10.4% of deaths in the United States. In 2020, the age-adjusted death rate for COVID-19 was 85.0 per 100,000 standard population. The rate for males (107.7) was 1.6 times higher than the rate for females (66.6). Among race and ethnicity groups, the rate was highest for the American Indian or Alaska Native non-Hispanic (subsequently, American Indian or Alaska Native) population (175.9), followed by the Hispanic population (155.5), Black non-Hispanic (subsequently, Black) population (142.0), Native Hawaiian or Other Pacific Islander non-Hispanic

(subsequently, Native Hawaiian or Other Pacific Islander) population (112.4), White non-Hispanic (subsequently, White) population (66.6), and Asian non-Hispanic (subsequently, Asian) population (63.1).

Other leading causes of death that showed significant increases in 2020 from 2019 were unintentional injuries (16.8%), stroke (4.9%), Alzheimer disease (8.7%), diabetes (14.8%), Influenza and pneumonia (5.7%), Chronic liver disease and cirrhosis (17.7%), hypertension (13.5%), Parkinson disease (12.5%), and Septicemia (2.1%).

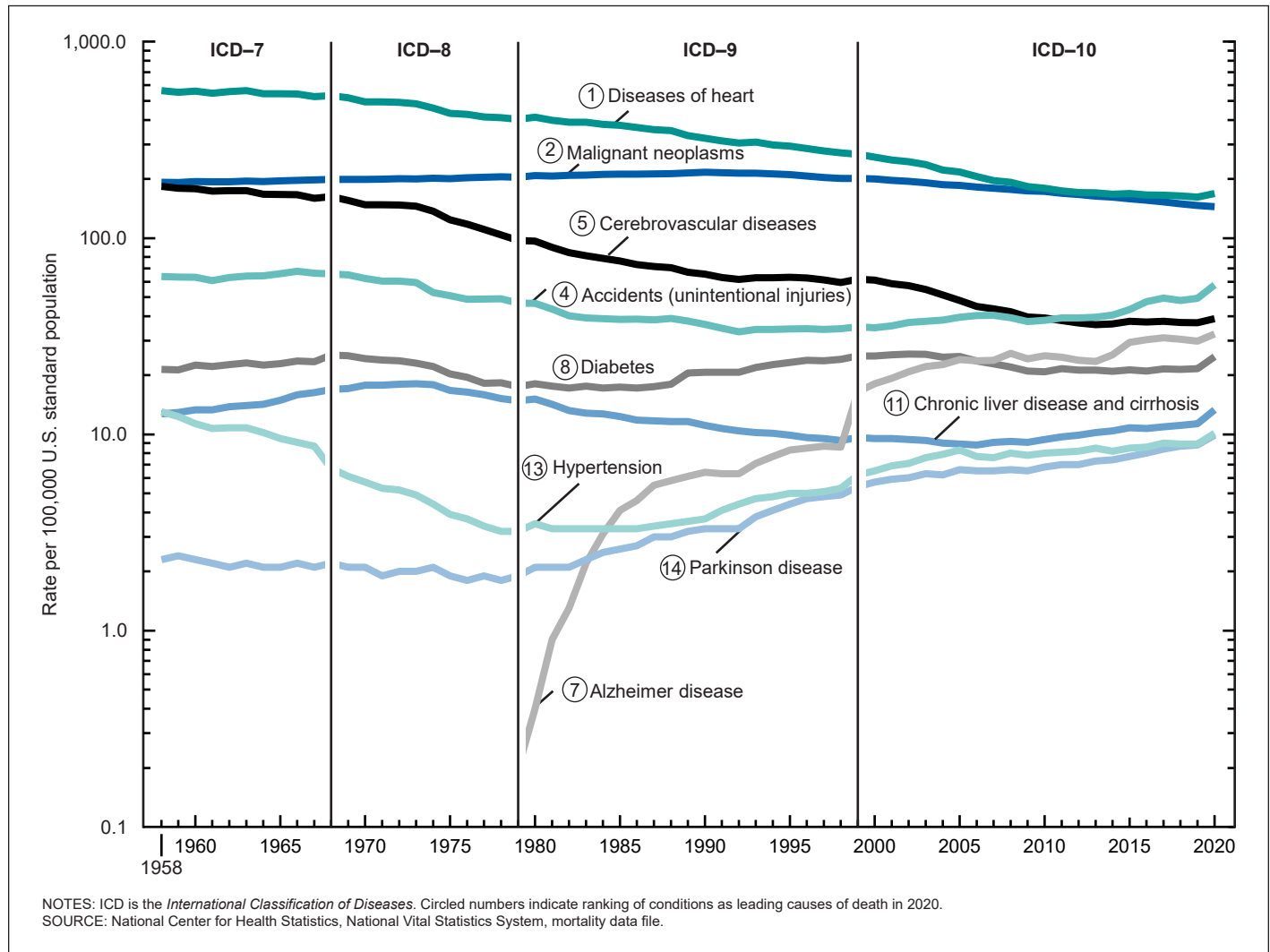
The age-adjusted rate decreased significantly in 2020 from 2019 for Chronic lower respiratory diseases (4.7%) and suicide (2.9%).

The age-adjusted death rates for 2019 and 2020 for kidney disease were not significantly different.

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 had higher rates than females for 14 of the 15 leading causes of death (Table C), 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 (4.0). Other high ratios were observed for unintentional injuries (2.3); Parkinson disease (2.2); Chronic liver disease and cirrhosis (1.9); heart disease, COVID-19, and diabetes (1.6 each); cancer, Influenza and pneumonia, and kidney disease (1.4 each); Chronic lower respiratory diseases, hypertension, and Septicemia (1.2 each); and stroke (1.1). 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 or Alaska Native population were higher than for the White population for 9 of the 15 leading causes of death (Table C). The largest ratio was for Chronic liver disease and cirrhosis (4.3). Other causes for which the ratio was high include COVID-19 (2.6), diabetes (2.5), unintentional injuries (1.6), Influenza and pneumonia (1.5), suicide (1.4), kidney disease and Septicemia (1.3 each), and hypertension (1.2). Age-adjusted rates for the American Indian or Alaska Native population were lower than for the White population for 6 of the 15 leading causes of death. The smallest American Indian or Alaska Native-to-White ratio was for Parkinson disease (0.5); that is, the risk of dying from Parkinson disease was two times greater for the White population than for the American Indian or Alaska Native population. Other causes with a low American Indian or Alaska Native-to-White ratio were for Alzheimer disease (0.6), Chronic lower respiratory diseases (0.7), cancer (0.8), and heart disease and stroke (0.9 each).

Age-adjusted death rates for the Black population were higher than for the White population for 10 of the 15 leading causes of death (Table C). The largest ratio was for kidney disease (2.4). Other causes for which the ratio was high include hypertension (2.3), diabetes (2.2), COVID-19 (2.1), Septicemia (1.8), stroke (1.5), heart disease and Influenza and pneumonia (1.4 each), and cancer and unintentional injuries (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 conditions 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).

Figure 4. Age-adjusted death rate for selected leading causes of death: United States, 1958–2020

Age-adjusted death rates for the White population were higher than for the Hispanic population for 9 of the 15 leading causes of death (Table C). The largest ratio was for Chronic lower respiratory diseases (2.6). Other causes with high ratios include suicide (2.3); cancer, unintentional injuries, and Parkinson disease (1.5 each); heart disease (1.4); Septicemia (1.3); Alzheimer disease (1.2); and stroke (1.1). 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 COVID-19 (0.4), followed by diabetes (0.7) and Chronic liver disease and cirrhosis and hypertension (0.9 each).

Age-adjusted death rates for the White population were higher than for the Asian population for 14 of the 15 leading causes of death (Table C). The highest ratio was for Chronic lower respiratory diseases (4.1), followed by unintentional injuries (3.7), Chronic liver disease and cirrhosis (3.4), suicide (2.6), Septicemia (2.1), heart disease (2.0), Alzheimer disease (1.9), Parkinson disease (1.8), cancer (1.7), kidney disease (1.4), stroke and Influenza and pneumonia (1.2 each), and COVID-19 and diabetes (1.1 each).

Assault (homicide), the 16th leading cause of death in 2020, dropped from among the 15 leading causes of death in 2010. In 2020, the age-adjusted rate for homicide increased 30.0%, from 6.0 in 2019 to 7.8 per 100,000 standard population in 2020. Homicide remains a major issue for some age groups. Homicide was among the 15 leading causes of death in 2020 for age groups under 1 year (14th), 1–4 (3rd), 5–14 (4th), 15–24 (2nd), 25–34 (3rd), 35–44 (7th), 45–54 (10th), and 55–64 (14th) (13).

Although Human immunodeficiency virus (HIV) disease has not been among the 15 leading causes of death since 1997 (25), it is still considered a major public health problem for some age groups. The age-adjusted death rate for HIV disease did not change from 2019 at 1.4 deaths per 100,000 U.S. standard population. 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 6.4% per year from 1999 through 2019 (9,13). In 2020, HIV disease was among the 15 leading causes of death for age groups 25–34 (12th), 35–44 (14th), 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, 8th for Black males, 10th 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 (26,27). The number of deaths from *C. difficile* climbed from 793 deaths in 1999 to a high of 8,085 deaths in 2011 (13). Since 2011, the number of deaths from this cause has decreased nearly every year. In 2020, the number of deaths from *C. difficile* fell to 4,069. The age-adjusted death rate decreased 9.1%, from 1.1 deaths per 100,000 U.S. standard population in 2019 to 1.0 in 2020. Since 2015, the rate for *C. difficile* has decreased an average of 12.9% per year. About 84.3% of deaths from *C. difficile* occurred among people aged 65 and over (Table 6).

Leading causes of death in 2020 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 2020, 303,984 people died of dementia-related causes in the United States (Tables 6, 8, and I-1). 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 (28). Dementia is characterized by memory impairment and cognitive decline (29–31). 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 (28–30).

Certification and coding rule changes can impact data analysis of component causes of dementia. In 2020, Alzheimer disease accounted for 44.2% of all dementia deaths; Unspecified dementia for 34.5%; Other degenerative diseases of nervous system, not elsewhere classified for 14.7%; and Vascular dementia for 6.6%. For detailed information, see CDC WONDER (13). Changes in the percentage of deaths assigned to individual causes comprising dementia may be the result of many factors (31). Combining the types of dementia provides a more comprehensive and stable measure of dementia mortality.

The age-adjusted death rate for dementia-related causes increased 10.1% in 2020 from 2019 for the total population (from 66.6 to 73.3). The rate for males increased 6.9% (56.6 to

60.5) and increased for females 11.7% (72.6 to 81.1) (Tables 5, 10, and I-1).

Among race-ethnicity groups—The age-adjusted rate for the American Indian or Alaska Native non-Hispanic (subsequently, American Indian or Alaska Native) female population increased 15.2% (from 43.3 to 49.9), but rates did not change significantly for the total and male American Indian or Alaska Native populations. For the total, male, and female Asian non-Hispanic (subsequently, Asian) populations, rates increased 12.9% (32.6 to 36.8), 11.1% (27.0 to 30.0), and 14.5% (35.9 to 41.1), respectively. For the total, male, and female Black non-Hispanic (subsequently, Black) populations, rates increased 15.8% (64.5 to 74.7), 11.4% (59.6 to 66.4), and 17.9% (66.3 to 78.2), respectively. For the total, male, and female Hispanic populations, rates increased 14.8% (47.3 to 54.3), 11.9% (41.2 to 46.1), and 16.5% (50.9 to 59.3), respectively. For the total, male, and female White non-Hispanic (subsequently, White) populations, rates increased 9.3% (71.2 to 77.8), 6.3% (59.9 to 63.7), and 11.1% (78.1 to 86.8), respectively. No changes to the age-adjusted death rate for dementia-related causes for the Native Hawaiian or Other Pacific Islander non-Hispanic (subsequently, Native Hawaiian or Other Pacific Islander) populations were observed.

Drug-induced mortality

In 2020, a total of 96,096 people died of drug-induced causes in the United States (Tables 6, 8, and I-2). 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 2020, drug-overdose deaths accounted for 95.5% of all drug-induced deaths (Tables 6 and 8). 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 increased 29.4% for the total population from 22.8 in 2019 to 29.5 in 2020 (Table 10). For males in 2020, the age-adjusted death rate for drug-induced causes was 2.3 times the rate for females. The rate increased by 32.2% for males and 23.4% for females in 2020 from 2019.

Among race-ethnicity groups—Age-adjusted rates increased from 2019 to 2020 by 36.7% for the American Indian or Alaska Native population (35.5% for American Indian or Alaska Native males and 38.9% for American Indian or Alaska Native females), 40.0% for the Asian population (40.0% for Asian males and 29.4% for Asian females), 42.9% for the Black population (43.6% for Black males and 38.7% for Black females), 37.3% for the Hispanic population (39.0% for Hispanic males and 31.7% for Hispanic females), and 25.9% for the White population (28.3% for White males and 20.3% for White females) (Tables 5, 10, and I-2). For Native Hawaiian or Other Pacific Islander populations, changes in age-adjusted rates from 2019 to 2020 were not significant.

Alcohol-induced mortality

In 2020, a total of 49,061 people died of alcohol-induced causes in the United States (Tables 6, 8, and I-3). 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 increased 26.0%, from 10.4 in 2019 to 13.1 in 2020 (Tables 5, 10, and I-3). For males in 2020, the age-adjusted death rate for alcohol-induced causes was 2.6 times the rate for females. The rate increased 26.3% for males and 27.1% for females from 2019 to 2020 (Tables 5, 10, and I-3).

Among race-ethnicity groups—Age-adjusted rates increased in 2020 from 2019 by 37.0% for the American Indian or Alaska Native population (35.2% for American Indian or Alaska Native males and 39.3% for American Indian or Alaska Native females), 26.1% for the Asian population (35.9% for Asian males), 27.6% for the Black population (26.1% for Black males and 31.0% for Black females), 18.9% for the Hispanic population (17.4% for Hispanic males and 23.7% for Hispanic females), and 27.7% for the White population (27.8% for White males and 27.9% for White females). The age-adjusted rate for alcohol-induced death did not change significantly in 2020 from 2019 for Asian females and Native Hawaiian or Other Pacific Islander males and females.

Firearm-related mortality

In 2020, 45,222 people died from firearm-related injuries in the United States (Tables 6, 8, and I-4). The age-adjusted death rate for firearm-related injuries for the total, male, and female populations increased significantly from 2019 to 2020 by 14.3%, 15.0%, and 11.8% respectively (Tables 5, 10, and I-4). For males in 2020, the age-adjusted death rate for firearm-related injuries was 6.3 times the rate for females.

Among race-ethnicity groups—The age-adjusted death rate increased in 2020 from 2019 by 31.2% for the American Indian or Alaska Native population (38.7% for American Indian or Alaska Native males) 35.1% for the Black population (33.7% for Black males and 43.1% for Black females), 19.7% for the Hispanic population (23.2% for Hispanic males), and 4.5% for the White population (4.7% for White males). The age-adjusted death rates for firearm-related injuries did not change significantly in 2020 from 2019 for American Indian or Alaska Native females, Asian males and females, Hispanic females, Native Hawaiian or Other Pacific Islander males and females, and White females.

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

Changes in mortality by age and cause of death can have a major effect on life expectancy. In other words, year-to-year changes in life expectancy may be influenced by changes in age-specific rates for certain causes, particularly for younger age groups. Life expectancy at birth for the total population decreased by 1.8 years in 2020 (77.0) from 2019 primarily

because of increases in mortality from COVID-19, unintentional injuries, heart disease, homicide, and diabetes. The decrease in life expectancy for the total population was slightly offset by decreases in mortality from cancer, Chronic lower respiratory diseases, Certain conditions originating in the perinatal period, and suicide. Life expectancy at birth for males decreased 2.1 years (from 76.3 years in 2019 to 74.2 in 2020) due to increases in mortality from COVID-19, unintentional injuries, heart disease, homicide, and diabetes. These increases were offset somewhat by decreases in mortality from cancer, Chronic lower respiratory diseases, Certain conditions originating in the perinatal period, and suicide. For the female population, life expectancy decreased 1.5 years (from 81.4 years to 79.9) due to increases in mortality from COVID-19, unintentional injuries, heart disease, diabetes, and Alzheimer disease, which were offset by decreases in mortality from cancer, Chronic lower respiratory diseases, suicide, and Certain conditions originating in the perinatal period. (For a discussion of the major causes contributing to the change in life expectancy, see Technical Notes.)

Life expectancy for the American Indian or Alaska Native non-Hispanic (subsequently, American Indian or Alaska Native) population decreased 4.7 years to 67.1 years. This decrease, the largest among race and ethnicity groups, was primarily due to increases in mortality due to COVID-19, unintentional injuries, chronic liver disease, diabetes, and heart disease. The decline in life expectancy was offset by decreases in mortality due to Chronic lower respiratory diseases, pneumonitis, kidney disease, cancer, and perinatal conditions.

Life expectancy for the Hispanic population in 2020 decreased 4.0 years to 77.9 years. This decrease was due to increases in mortality from COVID-19, heart disease, unintentional injuries, diabetes, and Alzheimer disease, which were offset by decreases from cancer, Certain conditions originating in the perinatal period, congenital malformations, and Viral hepatitis. Life expectancy for the Hispanic male population decreased 4.5 years in 2020 (74.6) from 2019 due to increases in mortality from COVID-19, unintentional injuries, heart disease, diabetes, and homicide, which were offset somewhat by decreases in mortality from cancer, Certain conditions originating in the perinatal period, congenital malformations, and Aortic aneurysm and dissection. Life expectancy for the Hispanic female population in 2020 (81.3) decreased 3.1 years from 2019 due to increases in mortality from COVID-19, heart disease, Alzheimer disease, diabetes, and unintentional injuries, which were offset somewhat by decreases in mortality from congenital malformations, cancer, Viral hepatitis, and Certain conditions originating in the perinatal period.

Life expectancy for the Black non-Hispanic (subsequently, Black) population in 2020 decreased 3.3 years to 71.5 years. This decrease was due to increases in mortality from COVID-19, unintentional injuries, heart disease, homicide, and diabetes, which were offset by decreases from cancer, Certain conditions originating in the perinatal period, congenital malformations, and Aortic aneurysm and dissection. Life expectancy for Black male population in 2020 decreased 3.5 years to 67.8. This decrease was due to increases in mortality from COVID-19, unintentional injuries, homicide, heart disease, and diabetes, which were offset by decreases in mortality from cancer, Certain conditions originating in the perinatal period, congenital malformations,

and Aortic aneurysm and dissection. Life expectancy for Black female population decreased 2.7 years in 2020 (75.4) from 2019 due to increases in mortality from COVID-19, heart disease, unintentional injuries, diabetes, and homicide, which were offset somewhat by decreases from cancer, Certain conditions originating in the perinatal period, congenital malformations, and Aortic aneurysm and dissection.

Life expectancy for the Asian non-Hispanic (subsequently, Asian) population decreased 2.0 years to 83.6 years. The decrease, primarily due to increases in mortality due to COVID-19, heart disease, diabetes, stroke, and unintentional injuries, was offset by decreases in mortality due to cancer, perinatal conditions, suicide, pneumonitis, and aortic aneurysm.

Life expectancy for the White non-Hispanic (subsequently, White) population in 2020 decreased 1.4 years to 77.4 years (Table 4). This decrease was due to increases in mortality from COVID-19, unintentional injuries, heart disease, Chronic liver disease and cirrhosis, and diabetes. These increases in mortality were offset to some extent by decreases from Chronic lower respiratory diseases, cancer, suicide, and Certain conditions originating in the perinatal period. Life expectancy for the White male population decreased 1.5 years in 2020 (74.8) from 2019 due to increases in mortality from COVID-19, unintentional injuries, heart disease, Chronic liver disease and cirrhosis, and diabetes, which were offset somewhat by decreases in mortality from cancer, suicide, Chronic lower respiratory diseases, and Certain conditions originating in the perinatal period. Life expectancy for White females decreased 1.2 years in 2020 (80.1) from 2019 due to increases in mortality from COVID-19, unintentional injuries, heart disease, Alzheimer disease, and Chronic liver disease and cirrhosis, which were offset somewhat by decreases in mortality from Chronic lower respiratory diseases, cancer, suicide, and kidney diseases.

The difference in life expectancy between the male and female populations increased 0.6 year in 2020 to 5.7 years (Table 4). The widening in the male–female life expectancy gap was due primarily to greater increases in mortality for the male population from COVID-19, unintentional injuries, homicide, heart disease, and Chronic lower respiratory diseases (data not shown).

Injury mortality by mechanism and intent

In 2020, a total of 278,345 deaths were classified as injury related (Table 11). Injury data are presented using the external cause-of-injury mortality matrix for ICD–10, as jointly conceived by the International Collaborative Effort on Injury Statistics and the Injury Control and Emergency Health Services section of the American Public Health Association (32,33). 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 2020—poisoning, firearm, fall, and motor-vehicle traffic—accounted for 81.3% of all injury deaths (Table 11). A total of 97,034 deaths occurred as the result of poisonings in 2020, accounting for 34.9% of all injury deaths (Table 11). The age-adjusted death rate for poisoning increased significantly, by 28.4% from 23.2 deaths per 100,000 U.S. standard population in 2019 to 29.8 in 2020. Most poisoning deaths were either unintentional (90.1%) or suicides (5.7%). However, 4.0% of poisoning deaths were of undetermined intent. The age-adjusted death rate for unintentional poisoning increased 33.2%, from 20.2 in 2019 to 26.9 in 2020. Firearm injuries resulted in 45,222 deaths in 2020 (Table 11), accounting for 16.2% of all injury deaths. The age-adjusted death rate for firearm injuries (all intents) in 2020 increased 14.3% from 2019. The two major component causes of firearm injury deaths in 2020 were suicide (53.7%) and homicide (42.9%). The age-adjusted death rate for firearm suicide increased 2.9%, from 6.8 in 2019 to 7.0 in 2020. The age-adjusted rate for firearm homicide increased 34.8%, from 4.6 in 2019 to 6.2 in 2020. A total of 43,292 people died as the result of falls in 2020, accounting for 15.6% of all injury deaths (Table 11). The age-adjusted death rate for falls in 2020 increased 3.9%, from 10.2 in 2019 to 10.6 in 2020. The overwhelming majority of fall-related deaths (97.3%) were unintentional. Motor vehicle traffic-related injuries in 2020 resulted in 40,698 deaths, accounting for 14.6% of all injury deaths (Table 11). The age-adjusted death rate for these injuries increased 8.1%, from 11.1 in 2019 to 12.0 in 2020.

State of residence

Mortality patterns varied considerably by state (Tables 12 and 15). The state with the highest age-adjusted death rate in 2020 was Mississippi (1,138.7 deaths per 100,000 U.S. standard population), with a rate 36.3% above the national rate (835.4). The state with the lowest age-adjusted death rate was Hawaii (588.0), with a rate 29.6% below the national rate. The age-adjusted death rate for Mississippi was 93.7% 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 (34).

Infant mortality

In 2020, a total of 19,582 deaths occurred among children under age 1 year (Tables D, E, 14, and 15). This number represents 1,339 fewer infant deaths in 2020 than in 2019. The ratio of male-to-female IMRs was 1.2, the same as in 2019. The IMR was 5.42 infant deaths per 1,000 live births, the neonatal mortality rate (deaths of infants aged 0–27 days per 1,000 live births) was 3.56, and the postneonatal mortality rate (deaths of infants aged 28 days–11 months per 1,000 live births) was 1.86 in 2020 (Figure 5 and Tables D and 13; see Technical Notes for information on alternative data sources). The IMR decreased

Table D. Number of infant, neonatal, and postneonatal deaths and mortality rates, by sex: United States, 2019–2020

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

Age and sex	2020		2019		Percent change ¹ from 2019 to 2020
	Number	Rate	Number	Rate	
Infant					
Total	19,582	5.42	20,921	5.58	-2.9
Male	10,859	5.88	11,674	6.09	-3.4
Female	8,723	4.94	9,247	5.05	-2.2
Neonatal					
Total	12,856	3.56	13,801	3.68	-3.3
Male	7,098	3.84	7,684	4.01	-4.2
Female	5,758	3.26	6,117	3.34	-2.4
Postneonatal					
Total	6,726	1.86	7,120	1.90	-2.1
Male	3,761	2.04	3,990	2.08	-1.9
Female	2,965	1.68	3,130	1.71	-1.8

¹Based on a comparison of 2020 and 2019 mortality rates.

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

Table E. Number of infant deaths, percentage of total infant deaths, and infant mortality rate for 2020, and percentage change in infant mortality rates from 2019 to 2020 for the 10 leading causes of infant death in 2020: United States

[Infant deaths per 100,000 live births]

Rank ¹	Cause of death (based on <i>International Classification of Diseases, 10th Revision</i>)	Number	Percent of total deaths	Rate	Percent change ² from 2019 to 2020
...	All causes	19,582	100.0	541.9	-2.9
1	Congenital malformations, deformations and chromosomal abnormalities	4,043	20.6	111.9	-2.5
2	Disorders related to short gestation and low birth weight, not elsewhere classified	3,141	16.0	86.9	-5.4
3	Sudden infant death syndrome	1,389	7.1	38.4	15.3
4	Accidents (unintentional injuries)	1,194	6.1	33.0	-2.4
5	Newborn affected by maternal complications of pregnancy	1,116	5.7	30.9	-6.9
6	Newborn affected by complications of placenta, cord and membranes	700	3.6	19.4	-2.0
7	Bacterial sepsis of newborn	542	2.8	15.0	-6.8
8	Respiratory distress of newborn	388	2.0	10.7	-5.3
9	Diseases of the circulatory system	386	2.0	10.7	-0.9
10	Neonatal hemorrhage	317	1.6	8.8	-5.4
...	All other causes	6,366	32.5	...	...

... Category not applicable.

¹Based on number of deaths; see Technical Notes in this report.²Based on a comparison of the 2020 infant mortality rate with the 2019 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.

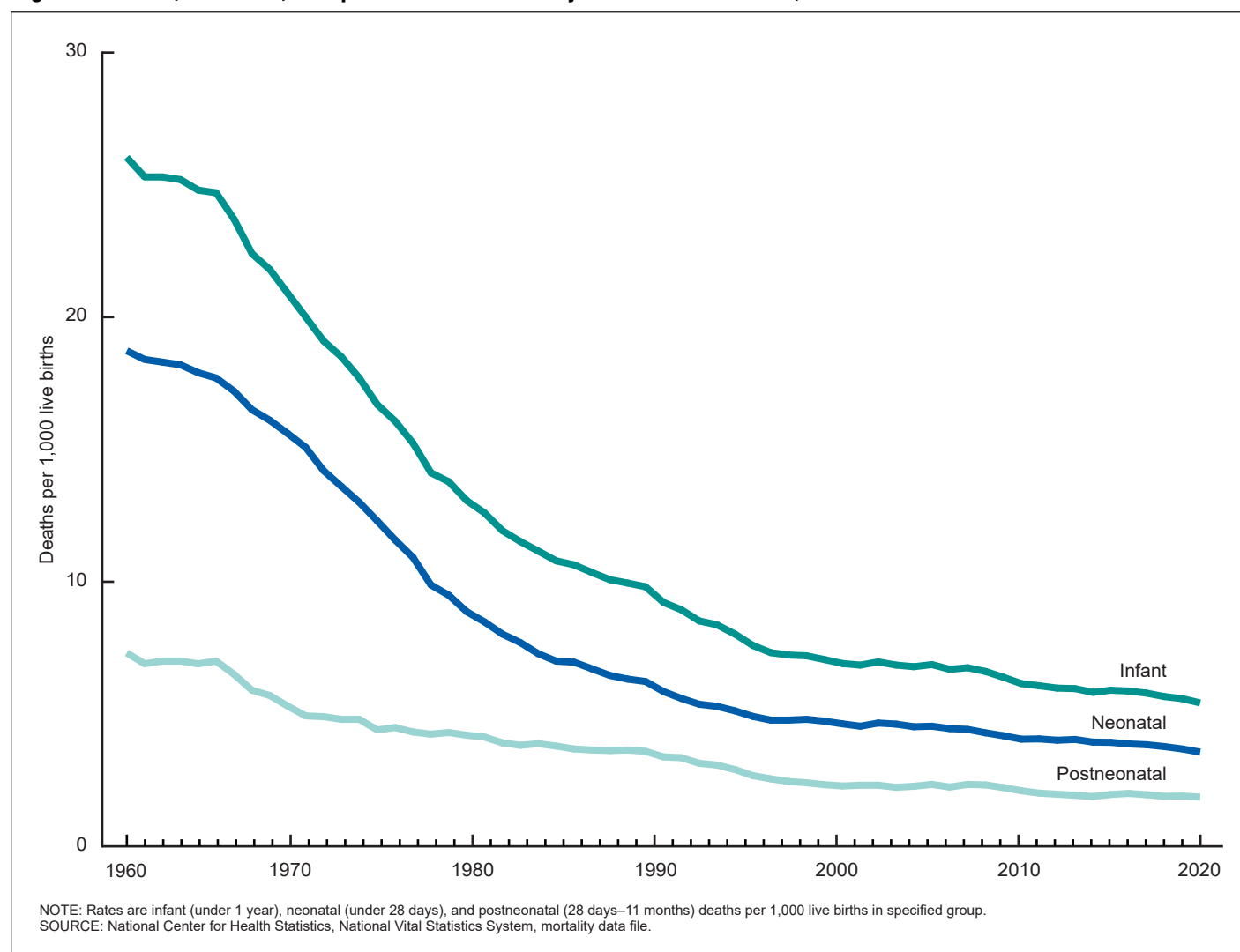
SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

2.9% and the neonatal mortality rate decreased 3.3% from 2019 to 2020. The postneonatal mortality rate did not change significantly.

The 10 leading causes of infant death in 2020 accounted for 67.5% of all infant deaths in the United States (Table E). 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)
6. Newborn affected by complications of placenta, cord and membranes (cord and placental complications)
7. Bacterial sepsis of newborn
8. Respiratory distress of newborn
9. Diseases of the circulatory system
10. Neonatal hemorrhage

Figure 5. Infant, neonatal, and postneonatal mortality rates: United States, 1960–2020

The rankings of the 10 leading causes of infant death changed for a few causes between 2019 and 2020 (35). Unintentional injuries, the third leading cause in 2019, became the fourth leading cause in 2020, while SIDS, the fourth leading cause in 2019, became the third leading cause in 2020. Necrotizing enterocolitis of newborn, the 10th leading cause in 2019, dropped out of the list and was replaced by Neonatal hemorrhage, which was the 11th leading cause of infant death in 2019. Among the 10 leading causes, the IMR decreased 5.4% from 2019 for low birth weight and increased 15.3% for SIDS. Changes in rates among the other leading causes of infant death were not statistically significant (Table E).

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 (36); 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 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 (17).

In 2020, the IMR for Hispanic infants was 4.89 per 1,000 live births, a decrease of 6.0% from 5.20 in 2019. Among non-Hispanic populations, the IMR was 7.31 for American Indian or Alaska Native infants, 2.35 for Asian infants, 10.85 for Black infants, 6.96 for Native Hawaiian or Other Pacific Islander infants, and 4.29 for White infants (Table 13). The IMR changes in 2020 from 2019 for these groups were not statistically significant.

Maternal mortality

In 2020, a total of 861 females died of maternal causes in the United States—107 more deaths than in 2019 (Table 16). The overall maternal mortality rate increased 18.4%, from 20.1 deaths per 100,000 live births in 2019 to 23.8 in 2020. COVID-19, listed on the death certificate as a contributing cause of death for 11.8% of maternal deaths in 2020, likely contributed to the rise in maternal mortality in 2020. The maternal mortality rate for Hispanic females increased 44.4%, from 12.6 in 2019 to 18.2 in 2020. Among non-Hispanic populations, the rate for

Black (subsequently, Black) females increased 25.7%, from 44.0 in 2019 to 55.3 in 2020. The changes in maternal mortality rates for Asian (subsequently, Asian) and White (subsequently, White) females were not significant. The maternal mortality rate for Black females (55.3) was 4.5 times the rate for Asian females (12.3), 3.0 times the rate for Hispanic females (18.2), and 2.9 times the rate for White females (19.1). The maternal mortality rates for American Indian or Alaska Native non-Hispanic (subsequently, American Indian or Alaska Native) and Native Hawaiian or Other Pacific Islander non-Hispanic (subsequently, Native Hawaiian or Other Pacific Islander) females do not meet 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 (37) (see Technical Notes). This method restricts application of the pregnancy checkbox to decedents aged 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 (37). For women aged 45 and over, 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 females 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” (37) and Technical Notes.

Additional mortality tables based on 2020 final data

Trend data on mortality due to dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries by Hispanic origin and race are available as supplemental tables (Tables I–1 through I–4) from the National Center for Health Statistics website: <https://www.cdc.gov/nchs/data/nvsr/nvsr72/nvsr72-10-tables.pdf>. Mortality data by specified Hispanic subgroup, marital status, educational attainment, and injury at work are available in supplemental Tables I–5 through I–9. Estimated population and standard errors by specified Hispanic subgroups, marital status, and educational attainment are available as supplemental tables (Tables I–17 through I–19). See “List of Internet Tables” for the complete list of supplemental tables.

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Table 1. Number of deaths, death rate, and age-adjusted death rate, by Hispanic origin and race and sex: United States, 2010–2020

[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 races³									
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
Hispanic⁴									
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
Non-Hispanic, single race									
American Indian or Alaska Native⁵:									
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
Asian⁵:									
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
Black⁵:									
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
Native Hawaiian or Other Pacific Islander⁵:									
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
White⁵:									
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
Non-Hispanic, bridged race									
American Indian or Alaska Native⁶:									
2020.....	26,755	14,827	11,928	967.1	1,094.3	845.1	1,008.4	1,206.2	833.6
2019.....	19,696	10,842	8,854	712.2	799.6	628.2	767.3	911.0	640.6
2018.....	19,491	10,875	8,616	709.8	807.7	615.6	780.8	937.4	641.7
2017.....	19,198	10,502	8,696	703.4	784.4	625.5	800.2	943.9	674.0
2016.....	18,595	10,280	8,315	685.9	772.8	602.2	800.3	954.0	668.0
2015.....	18,039	9,869	8,170	670.7	747.4	596.7	805.7	950.2	679.5
2014.....	17,138	9,338	7,800	642.5	713.4	574.2	796.9	935.0	677.4
2013.....	16,219	8,840	7,379	613.7	681.4	548.3	787.5	930.6	666.4
2012.....	15,705	8,598	7,107	599.3	668.7	532.5	787.8	929.9	666.3
2011.....	15,181	8,175	7,006	584.2	640.9	529.5	798.1	933.8	684.7
2010.....	14,846	8,072	6,774	577.8	640.1	517.7	818.8	965.8	696.8

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, 2010–2020—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
Asian or Pacific Islander^{6,7}:									
2020	99,574	52,442	47,132	467.8	513.8	425.5	470.5	572.3	388.6
2019	77,474	39,830	37,644	373.2	400.9	347.7	384.9	457.2	326.5
2018	75,266	38,760	36,506	366.3	394.4	340.5	392.2	467.6	332.4
2017	72,598	37,236	35,362	359.8	386.2	335.6	395.3	470.1	336.4
2016	68,235	34,892	33,343	350.3	374.9	327.8	394.4	466.6	337.4
2015	65,277	33,306	31,971	341.5	364.9	320.1	396.2	468.9	339.6
2014	60,424	31,039	29,385	327.7	352.7	305.0	390.5	464.2	333.3
2013	58,702	30,343	28,359	331.8	359.2	306.7	407.5	490.2	344.8
2012	55,298	28,214	27,084	322.0	344.1	301.7	409.6	486.3	351.4
2011	52,346	26,909	25,437	315.7	339.9	293.7	413.2	493.4	352.8
2010	50,018	25,938	24,080	310.0	336.7	285.6	425.6	513.0	360.6
Black⁶:									
2020	451,792	239,016	212,776	1,035.7	1,143.4	936.7	1,101.7	1,375.6	892.6
2019	348,761	182,341	166,420	806.6	880.2	739.0	870.7	1,074.7	715.4
2018	343,393	178,904	164,489	799.8	869.6	735.6	879.5	1,085.2	724.2
2017	335,667	174,403	161,264	787.5	854.2	726.1	881.0	1,083.3	728.0
2016	326,810	168,750	158,060	775.5	836.2	719.7	882.8	1,081.2	734.1
2015	315,254	161,850	153,404	754.6	809.4	704.3	876.1	1,070.1	731.0
2014	303,844	154,836	149,008	735.4	783.3	691.4	870.7	1,060.3	731.2
2013	299,227	152,661	146,566	733.4	782.5	688.4	885.2	1,083.3	740.6
2012	291,179	148,344	142,835	720.9	768.5	677.3	887.1	1,086.4	742.1
2011	286,797	145,052	141,745	718.0	760.4	679.2	901.6	1,098.3	759.8
2010	283,438	143,824	139,614	718.7	764.5	676.9	920.4	1,131.7	770.8
White⁶:									
2020	2,491,026	1,282,214	1,208,812	1,242.4	1,296.9	1,189.4	831.2	980.5	700.3
2019	2,189,567	1,118,660	1,070,907	1,089.8	1,129.1	1,051.7	736.8	864.9	625.0
2018	2,188,349	1,111,840	1,076,509	1,088.4	1,121.4	1,056.2	745.7	874.3	634.1
2017	2,179,857	1,102,838	1,077,019	1,083.2	1,111.4	1,055.8	755.0	885.1	642.8
2016	2,133,463	1,077,362	1,056,101	1,059.7	1,085.6	1,034.6	749.0	879.5	637.2
2015	2,123,631	1,063,705	1,059,926	1,055.3	1,072.5	1,038.5	753.2	881.3	644.1
2014	2,066,949	1,035,345	1,031,604	1,028.1	1,045.4	1,011.3	742.8	872.3	633.8
2013	2,052,660	1,021,135	1,031,525	1,021.6	1,032.1	1,011.5	747.1	876.8	638.4
2012	2,016,896	998,832	1,018,064	1,004.9	1,011.2	998.8	745.8	876.2	637.6
2011	2,006,319	989,835	1,016,484	1,001.0	1,004.1	998.1	754.3	887.2	644.6
2010	1,969,916	971,604	998,312	984.3	987.5	981.2	755.0	892.5	643.3

¹Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report.²Age-adjusted rates are per 100,000 U.S. standard population. For method of computation, see Technical Notes.³Includes origins and races not shown separately; see Technical Notes.⁴Includes 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.⁵Only one race was reported on the death certificate. Hispanic-origin and race categories are consistent with 1997 OMB standards; see Technical Notes.⁶Multiple-race data reported according to 1997 OMB standards were bridged to single-race categories of 1977 OMB standards. Hispanic-origin and race categories are consistent with 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.⁷Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian or Pacific Islander people.

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, 2020

[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 race 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	Age group (years)													Age-adjusted rate ²
	All ages	Under 1 ¹	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	Age not stated	
	Number													
Total	3,383,729	19,582	3,529	5,623	35,816	73,486	104,490	191,142	440,549	674,507	822,084	1,012,805	116	...
Male	1,769,884	10,859	2,026	3,362	26,484	51,832	68,494	119,844	271,127	391,999	428,858	394,920	79	...
Female	1,613,845	8,723	1,503	2,261	9,332	21,654	35,996	71,298	169,422	282,508	393,226	617,885	37	...
Single race ³	3,365,628	18,700	3,378	5,422	34,931	72,155	103,256	189,513	437,754	671,240	819,061	1,010,103	115	...
Male	1,759,840	10,342	1,938	3,247	25,878	50,921	67,708	118,848	269,501	390,181	427,302	393,896	78	...
Female	1,605,788	8,358	1,440	2,175	9,053	21,234	35,548	70,665	168,253	281,059	391,759	616,207	37	...
Two or more races ⁴	18,101	882	151	201	885	1,331	1,234	1,629	2,795	3,267	3,023	2,702	1	...
Male	10,044	517	88	115	606	911	786	996	1,626	1,818	1,556	1,024	1	...
Female	8,057	365	63	86	279	420	448	633	1,169	1,449	1,467	1,678	–	...
Hispanic, total ⁵	305,708	4,238	742	1,240	7,709	12,403	17,252	28,652	47,899	58,239	62,231	65,092	11	...
Male	175,585	2,366	418	693	5,913	9,311	12,372	19,654	31,415	35,047	32,212	26,173	11	...
Female	130,123	1,872	324	547	1,796	3,092	4,880	8,998	16,484	23,192	30,019	38,919	–	...
Hispanic, single race ³	303,156	4,067	714	1,198	7,532	12,175	17,056	28,431	47,535	57,830	61,868	64,739	11	...
Male	174,125	2,268	403	673	5,795	9,148	12,248	19,503	31,195	34,800	32,041	26,040	11	...
Female	129,031	1,799	311	525	1,737	3,027	4,808	8,928	16,340	23,030	29,827	38,699	–	...
American Indian or Alaska Native	1,430	40	4	16	70	106	118	144	247	261	227	197	–	...
Male	811	20	3	9	58	73	78	88	147	139	116	80	–	...
Female	619	20	1	7	12	33	40	56	100	122	111	117	–	...
Asian	790	29	3	9	30	32	50	53	95	139	184	166	–	...
Male	424	20	2	4	23	25	37	36	62	64	85	66	–	...
Female	366	9	1	5	7	7	13	17	33	75	99	100	–	...
Black	5,251	250	33	42	223	332	325	472	760	901	976	937	–	...
Male	2,979	143	18	29	167	243	226	293	463	522	531	344	–	...
Female	2,272	107	15	13	56	89	99	179	297	379	445	593	–	...
Native Hawaiian or Other Pacific Islander	397	17	4	2	14	31	36	68	58	67	59	41	–	...
Male	253	10	–	1	10	21	29	51	38	43	35	15	–	...
Female	144	7	4	1	4	10	7	17	20	24	24	26	–	...
White	295,288	3,731	670	1,129	7,195	11,674	16,527	27,694	46,375	56,462	60,422	63,398	11	...
Male	169,658	2,075	380	630	5,537	8,786	11,878	19,035	30,485	34,032	31,274	25,535	11	...
Female	125,630	1,656	290	499	1,658	2,888	4,649	8,659	15,890	22,430	29,148	37,863	–	...
Hispanic, two or more races ⁴	2,552	171	28	42	177	228	196	221	364	409	363	353	–	...
Male	1,460	98	15	20	118	163	124	151	220	247	171	133	–	...
Female	1,092	73	13	22	59	65	72	70	144	162	192	220	–	...

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, 2020—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-race 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	Age group (years)													Age- adjusted rate ²
	All ages	Under 1 ¹	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	Age not stated	
	Number—Con.													
Non-Hispanic, single race ³	3,053,624	14,435	2,660	4,219	27,342	59,842	85,927	160,402	388,407	610,978	755,398	943,958	56	...
Male	1,579,934	7,964	1,533	2,570	20,042	41,676	55,273	98,864	236,966	353,693	394,111	367,208	34	...
Female	1,473,690	6,471	1,127	1,649	7,300	18,166	30,654	61,538	151,441	257,285	361,287	576,750	22	...
American Indian or Alaska Native.....	24,725	196	64	88	575	1,622	2,084	2,867	4,695	5,133	4,448	2,953	—	...
Male	13,431	112	36	48	391	1,012	1,271	1,718	2,700	2,843	2,184	1,116	—	...
Female	11,294	84	28	40	184	610	813	1,149	1,995	2,290	2,264	1,837	—	...
Asian	91,175	514	111	171	829	1,479	2,504	5,036	10,090	17,076	22,447	30,917	1	...
Male	47,699	285	57	91	554	1,018	1,666	3,157	6,377	10,004	12,075	12,414	1	...
Female	43,476	229	54	80	275	461	838	1,879	3,713	7,072	10,372	18,503	—	...
Black.....	449,213	5,749	917	1,354	9,602	17,114	21,990	38,394	82,302	103,373	89,285	79,121	12	...
Male	237,703	3,164	526	848	7,391	12,210	13,873	23,114	48,767	58,056	43,106	26,642	6	...
Female	211,510	2,585	391	506	2,211	4,904	8,117	15,280	33,535	45,317	46,179	52,479	6	...
Native Hawaiian or Other Pacific														
Islander	4,439	67	15	20	82	220	311	575	903	1,016	750	480	—	...
Male	2,489	35	11	14	60	156	194	346	523	567	389	194	—	...
Female	1,950	32	4	6	22	64	117	229	380	449	361	286	—	...
White	2,484,072	7,909	1,553	2,586	16,254	39,407	59,038	113,530	290,417	484,380	638,468	830,487	43	...
Male	1,278,612	4,368	903	1,569	11,646	27,280	38,269	70,529	178,599	282,223	336,357	326,842	27	...
Female	1,205,460	3,541	650	1,017	4,608	12,127	20,769	43,001	111,818	202,157	302,111	503,645	16	...
Non-Hispanic, two or more races ⁴	15,523	708	122	158	708	1,100	1,035	1,407	2,424	2,855	2,659	2,347	—	...
Male	8,565	417	72	94	488	745	660	845	1,402	1,568	1,384	890	—	...
Female	6,958	291	50	64	220	355	375	562	1,022	1,287	1,275	1,457	—	...
Not stated or not classifiable origin ⁶	8,874	201	5	6	57	141	276	681	1,819	2,435	1,796	1,408	49	...
Male	5,800	112	3	5	41	100	189	481	1,344	1,691	1,151	649	34	...
Female	3,074	89	2	1	16	41	87	200	475	744	645	759	15	...

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, 2020—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-race 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	Age group (years)													Age-adjusted rate ²
	All ages	Under 1 ¹	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	Age not stated	
							Rate ⁷							
Total ⁸	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
Male	1,090.8	569.1	25.5	16.1	121.9	221.1	325.5	601.5	1,323.3	2,581.7	5,937.2	16,354.9	...	998.3
Female	965.1	477.5	19.7	11.3	44.8	95.7	170.7	348.8	773.1	1,626.8	4,261.1	14,560.0	...	695.1
Single race ³	1,051.8	535.9	23.2	14.0	85.8	161.4	250.6	477.4	1,045.9	2,083.8	5,022.9	15,291.4	...	840.9
Male	1,117.0	580.2	26.0	16.5	124.4	223.6	328.7	606.2	1,332.1	2,596.4	5,967.9	16,445.5	...	1,004.9
Female	988.6	489.7	20.2	11.5	45.4	96.8	172.6	351.8	778.1	1,635.5	4,283.1	14,634.9	...	699.4
Two or more races ⁵	190.7	358.8	15.2	8.5	48.4	97.6	131.7	242.6	508.5	970.4	2,086.2	5,124.6	...	362.6
Male	213.5	411.7	17.3	9.5	65.4	134.9	175.9	313.5	628.5	1,168.5	2,458.0	5,241.9	...	429.8
Female	168.2	303.6	13.0	7.4	30.9	61.0	91.4	179.0	401.9	800.2	1,797.8	5,055.6	...	304.5
Hispanic, total ¹⁵	498.6	436.7	18.4	11.8	77.0	128.8	197.3	395.2	911.3	1,955.3	4,547.5	12,172.0	...	723.6
Male	567.8	478.2	20.4	12.9	115.6	185.7	274.0	538.1	1,220.6	2,562.1	5,615.5	13,436.2	...	903.8
Female	428.2	393.6	16.4	10.6	36.7	67.0	115.4	250.1	614.6	1,439.9	3,776.7	11,447.7	...	570.1
Hispanic, single race ³	510.6	441.5	18.6	11.9	78.0	130.3	200.3	400.4	922.6	1,976.4	4,590.7	12,263.6	...	731.0
Male	581.3	482.9	20.7	13.1	117.5	187.9	278.3	544.8	1,235.5	2,588.5	5,670.2	13,535.0	...	913.1
Female	438.5	398.4	16.5	10.6	36.8	67.7	116.9	253.6	621.9	1,456.2	3,811.2	11,534.5	...	575.6
American Indian or Alaska Native	76.9	95.3	*	*	24.0	36.9	44.5	67.8	164.5	354.6	834.1	2,191.6	...	136.0
Male	84.1	93.3	*	*	38.8	47.7	54.5	78.1	190.2	384.6	955.4	2,373.2	...	155.1
Female	69.1	97.5	*	*	*	24.6	32.8	56.1	137.2	325.7	736.5	2,082.6	...	118.2
Asian	122.5	191.1	*	*	29.5	32.4	57.1	77.8	199.5	550.8	1,771.3	4,677.4	...	238.0
Male	131.5	257.5	*	*	44.2	50.3	83.9	107.7	271.7	565.4	1,982.3	5,344.1	...	278.7
Female	113.4	*	*	*	*	*	*	*	133.1	538.9	1,623.0	4,321.5	...	205.4
Black	169.2	366.0	12.2	6.8	44.5	67.2	76.6	151.7	336.2	729.6	1,839.6	5,000.5	...	292.5
Male	195.0	411.0	*	9.3	65.0	96.9	111.1	201.9	441.9	947.0	2,434.0	5,374.2	...	368.8
Female	144.1	319.2	*	*	22.9	36.5	44.8	107.8	244.8	554.4	1,424.5	4,806.7	...	232.0
Native Hawaiian or Other Pacific Islander	172.5	*	*	*	*	83.0	102.2	277.8	363.1	892.1	2,038.0	4,505.5	...	328.9
Male	212.9	*	*	*	*	104.2	150.1	404.3	478.8	1,220.9	2,919.1	*	...	427.7
Female	129.3	*	*	*	*	*	*	*	248.9	601.8	1,415.1	4,585.5	...	240.1
White	551.6	472.0	20.2	12.6	82.5	138.6	214.5	427.1	984.1	2,094.2	4,817.8	12,789.3	...	770.7
Male	627.9	515.0	22.5	13.8	124.3	199.9	297.6	581.0	1,318.6	2,748.2	5,949.8	14,104.6	...	963.5
Female	473.8	427.3	17.8	11.4	38.9	71.7	125.2	269.9	662.0	1,538.6	4,001.1	12,032.6	...	605.8
Hispanic, two or more races ⁴	131.8	348.2	14.1	8.8	48.8	79.6	86.2	147.2	350.5	777.2	1,747.2	5,136.8	...	298.2
Male	150.7	390.9	*	8.2	64.0	112.1	109.8	207.5	449.8	1,051.7	2,001.4	5,530.1	...	361.5
Female	112.8	303.7	*	9.4	33.1	46.0	62.9	90.5	262.0	556.0	1,569.7	4,925.0	...	245.9

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, 2020—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-race 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 (years)											Age-adjusted rate ²
		Under 1 ¹	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
							Rate ⁷ —Con.						
Non-Hispanic, single race ³	1,171.7	562.1	24.8	14.8	88.0	169.2	262.9	492.1	1,058.3	2,086.2	5,049.8	15,531.2	852.9
Male	1,238.2	606.6	27.9	17.6	126.3	232.8	341.2	616.9	1,338.3	2,584.8	5,976.0	16,670.3	1,014.2
Female	1,107.9	515.6	21.5	11.8	48.0	104.0	185.9	371.4	797.2	1,648.9	4,319.5	14,883.8	714.1
American Indian or Alaska Native	1,016.5	696.2	53.4	25.8	160.9	427.5	680.8	1,013.6	1,566.5	2,548.4	5,097.8	10,228.6	1,036.2
Male	1,123.4	781.1	59.0	27.7	215.6	524.4	838.6	1,248.0	1,914.9	3,063.6	5,655.5	10,263.0	1,205.9
Female	913.2	608.0	47.6	23.8	104.6	327.1	526.1	791.4	1,257.0	2,108.2	4,654.9	10,207.8	881.5
Asian	470.8	254.9	12.5	7.8	35.3	46.0	80.9	189.1	469.9	1,093.8	2,996.7	9,994.5	457.7
Male	515.8	275.2	12.5	8.1	47.0	64.3	114.5	254.4	651.3	1,462.1	3,689.4	10,626.0	557.4
Female	429.6	233.4	12.6	7.5	23.5	28.2	51.1	132.1	317.9	806.5	2,459.1	9,611.3	378.5
Black	1,084.3	1,099.8	42.5	24.0	162.9	259.3	407.5	761.4	1,649.3	3,184.3	6,316.6	15,080.3	1,119.0
Male	1,200.0	1,190.7	48.2	29.7	247.8	370.3	539.7	980.3	2,132.8	4,171.7	7,864.4	16,563.2	1,399.0
Female	978.4	1,005.8	36.6	18.2	75.9	148.5	287.3	569.2	1,240.4	2,443.3	5,336.2	14,424.7	905.2
Native Hawaiian or Other Pacific Islander	723.5	791.3	*	23.3	96.8	213.5	335.0	784.2	1,390.2	2,477.0	4,358.2	7,856.0	821.3
Male	804.6	804.8	*	*	137.7	293.7	409.5	939.3	1,645.0	2,889.0	4,908.5	7,883.0	947.9
Female	641.1	777.1	*	*	53.5	128.1	257.4	627.6	1,145.8	2,099.0	3,888.4	7,837.8	699.8
White	1,262.4	437.7	20.6	12.7	72.6	157.2	248.1	462.8	994.6	1,998.5	5,030.5	15,943.9	834.7
Male	1,317.7	472.2	23.3	15.1	101.4	213.6	319.6	575.6	1,251.8	2,455.1	5,929.1	17,096.4	985.0
Female	1,208.6	401.5	17.7	10.3	42.2	98.7	175.7	350.2	748.8	1,586.6	4,304.2	15,275.6	703.1
Non-Hispanic, two or more races ⁴	205.4	360.0	15.4	8.4	48.2	102.2	145.8	269.9	543.8	1,005.2	2,142.1	5,118.4	376.9
Male	229.2	414.9	17.7	9.7	65.7	140.6	197.6	344.9	668.3	1,187.0	2,527.4	5,195.6	445.5
Female	182.1	302.5	12.9	6.9	30.3	64.9	99.8	203.4	433.1	847.1	1,838.0	5,072.4	317.4

... Category not applicable.

— Quantity zero.

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

¹Death rates for under 1 (based on population estimates) differ from infant mortality rates (based on live births); see Technical Notes.

²For method of computation, see Technical Notes.

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

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

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

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

⁷Data for age not stated included in all ages category but not distributed among age groups.

⁸Includes 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. Life expectancy at selected ages, by Hispanic origin and race and sex: United States, 2020

[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]

Exact age	Non-Hispanic, single race																	
	Total ¹			Hispanic ^{2,3}			American Indian or Alaska Native ^{2,4}			Asian ^{2,4}			Black ^{2,4}			White ^{2,4}		
	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.....	77.0	74.2	79.9	77.9	74.6	81.3	67.1	63.8	70.7	83.6	81.1	85.9	71.5	67.8	75.4	77.4	74.8	80.1
1.....	76.4	73.6	79.3	77.3	74.0	80.7	66.7	63.3	70.2	82.9	80.4	85.2	71.3	67.5	75.1	76.7	74.2	79.4
5.....	72.5	69.7	75.3	73.4	70.0	76.7	62.8	59.5	66.3	78.9	76.4	81.2	67.4	63.7	71.2	72.8	70.2	75.5
10.....	67.5	64.7	70.4	68.4	65.1	71.8	57.9	54.6	61.4	74.0	71.5	76.3	62.5	58.7	66.2	67.8	65.3	70.5
15.....	62.6	59.8	65.4	63.4	60.1	66.8	53.0	49.7	56.5	69.0	66.5	71.3	57.6	53.8	61.3	62.9	60.3	65.5
20.....	57.7	55.0	60.5	58.6	55.3	61.9	48.3	45.1	51.8	64.1	61.6	66.4	52.9	49.3	56.5	58.0	55.5	60.6
25.....	53.0	50.5	55.7	53.9	50.7	57.1	43.8	40.7	47.1	59.3	56.8	61.4	48.4	45.0	51.7	53.3	50.9	55.8
30.....	48.4	45.9	50.9	49.2	46.1	52.2	39.7	36.7	42.7	54.4	52.0	56.5	44.0	40.8	47.0	48.6	46.3	51.0
35.....	43.8	41.5	46.2	44.5	41.6	47.4	35.8	33.0	38.7	49.6	47.1	51.6	39.5	36.5	42.4	44.1	41.9	46.3
40.....	39.3	37.0	41.5	39.9	37.1	42.6	32.1	29.4	34.8	44.7	42.4	46.7	35.2	32.4	37.9	39.5	37.4	41.6
45.....	34.8	32.7	36.9	35.3	32.7	37.9	28.3	25.9	30.8	39.9	37.7	41.8	31.0	28.3	33.5	35.0	33.1	37.0
50.....	30.4	28.4	32.4	30.9	28.4	33.3	25.0	22.8	27.2	35.2	33.0	37.0	26.9	24.3	29.2	30.6	28.8	32.5
55.....	26.2	24.3	28.0	26.6	24.2	28.8	21.8	19.8	23.8	30.6	28.6	32.3	23.0	20.6	25.1	26.4	24.7	28.1
60.....	22.2	20.5	23.8	22.6	20.4	24.5	18.9	17.2	20.4	26.2	24.3	27.7	19.4	17.2	21.3	22.4	20.8	23.9
65.....	18.5	17.0	19.8	18.8	16.9	20.4	16.0	14.6	17.3	21.9	20.3	23.2	16.2	14.3	17.8	18.6	17.2	19.9
70.....	14.9	13.7	15.9	15.3	13.6	16.5	13.2	12.2	14.1	17.9	16.5	18.9	13.2	11.6	14.5	14.9	13.8	16.0
75.....	11.6	10.6	12.4	11.9	10.6	12.9	10.7	9.9	11.3	14.0	12.9	14.8	10.5	9.2	11.4	11.6	10.6	12.4
80.....	8.6	7.8	9.2	8.9	7.9	9.5	8.5	8.0	8.7	10.5	9.6	11.1	8.0	7.0	8.6	8.6	7.8	9.2
85.....	6.1	5.5	6.5	6.4	5.6	6.7	6.5	6.2	6.6	7.4	6.8	7.8	5.9	5.2	6.3	6.1	5.5	6.5
90.....	4.2	3.7	4.4	4.4	3.8	4.5	4.9	4.7	4.9	5.0	4.6	5.2	4.3	3.8	4.4	4.1	3.7	4.3
95.....	2.8	2.5	2.9	3.0	2.6	3.0	3.8	3.7	3.6	3.3	3.0	3.3	3.1	2.8	3.2	2.8	2.5	2.9
100.....	2.0	1.8	2.0	2.1	1.9	2.1	2.9	2.9	2.8	2.3	2.1	2.2	2.3	2.1	2.3	2.0	1.8	2.0

¹Includes origins and races not shown separately; see Technical Notes in this report.²Based on death rates adjusted for Hispanic-origin and race misclassification on death certificates; see Technical Notes.³Includes people of Hispanic origin of any race; see Technical Notes.⁴Only 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 4. Life expectancy at birth, by Hispanic origin and race and sex: United States, 2010–2020

[Life table data are based on newly revised life table methodology; see Technical Notes in this report]

Hispanic origin and race and year	Both sexes	Male	Female
All origins and races ¹			
2020.....	77.0	74.2	79.9
2019 ²	78.8	76.3	81.4
2018.....	78.7	76.2	81.2
2017.....	78.6	76.1	81.1
2016.....	78.7	76.2	81.1
2015.....	78.7	76.3	81.1
2014.....	78.9	76.5	81.3
2013.....	78.8	76.4	81.2
2012.....	78.8	76.4	81.2
2011.....	78.7	76.3	81.1
2010.....	78.7	76.2	81.0
Hispanic ^{3,4}			
2020.....	77.9	74.6	81.3
2019 ²	81.9	79.1	84.4
2018.....	81.8	79.1	84.3
2017.....	81.8	79.1	84.3
2016.....	81.8	79.1	84.3
2015 ⁵	81.9	79.3	84.3
2014.....	82.1	79.4	84.5
2013.....	81.9	79.2	84.2
2012.....	81.9	79.3	84.3
2011.....	81.8	79.2	84.2
2010.....	81.7	78.8	84.3
Non-Hispanic, single race			
American Indian or Alaska Native ^{4,6,7} :			
2020.....	67.1	63.8	70.7
2019.....	71.8	68.6	75.0
Asian ^{4,6,7} :			
2020.....	83.6	81.1	85.9
2019.....	85.6	83.5	87.4
Black ^{4,6,7} :			
2020.....	71.5	67.8	75.4
2019 ²	74.8	71.3	78.1
2018.....	74.7	71.3	78.0
White ^{4,6,7} :			
2020 ³	77.4	74.8	80.1
2019 ²	78.8	76.3	81.3
2018.....	78.6	76.2	81.1
Non-Hispanic, bridged race			
Black ^{4,7,8} :			
2020.....	71.9	68.1	75.6
2019 ²	75.0	71.6	78.2
2018.....	74.9	71.5	78.1
2017.....	74.9	71.5	78.1
2016.....	74.9	71.6	78.0
2015.....	75.1	71.9	78.1
2014.....	75.3	72.2	78.2
2013.....	75.1	71.9	78.1
2012.....	75.1	71.9	78.1
2011.....	75.0	71.8	77.8
2010.....	74.7	71.5	77.7

**Table 4. Life expectancy at birth, by Hispanic origin and race and sex:
United States, 2010–2020—Con.**

[Life table data are based on newly revised life table methodology; see Technical Notes in this report]

Hispanic origin and race and year	Both sexes	Male	Female
Non-Hispanic, bridged race—Con.			
White ^{4,7,8} :			
2020	77.5	74.9	80.2
2019 ²	78.8	76.4	81.3
2018	78.7	76.2	81.1
2017	78.5	76.1	81.0
2016	78.6	76.2	81.0
2015	78.7	76.3	81.0
2014	78.8	76.5	81.2
2013	78.8	76.5	81.2
2012	78.9	76.5	81.2
2011	78.7	76.4	81.1
2010	78.8	76.4	81.1

¹Includes origins and races not shown separately; see Technical Notes.²Life expectancies were updated using final data; as a result, data may differ from preliminary data previously published; see Technical Notes.³Includes 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.⁴Based on death rates adjusted for Hispanic-origin and race misclassification on death certificates; see Technical Notes.⁵Life expectancies were revised using updated Medicare data; as a result, data may differ from those previously published; see Technical Notes.⁶Only one race was reported on the death certificate. Hispanic-origin and race categories are consistent with 1997 OMB standards; see Technical Notes.⁷Life expectancies by single-race categories are not completely comparable with life expectancies by bridged-race categories and should be interpreted accounting for the change from bridged- to single-race categories.⁸Multiple-race data reported according to 1997 OMB standards were bridged to single-race categories of 1977 OMB standards. Hispanic-origin and race categories are consistent with 1977 OMB standards. For more information on the reporting of multiple race, see Technical Notes.

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

Table 5. Death rate by age, and age-adjusted death rate, for the 10 leading causes of death in 2020, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2020

[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]

Cause of death (based on <i>International Classification of Diseases, 10th Revision</i>) and year	All ages ¹	Age group (years)											85 and over	Age- adjusted rate ³
		Under 1 ²	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84			
All causes														
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 (100-109,111,113,120–151)														
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	1,607.7	5,570.7	236.3	
2002.....	242.3	12.7	1.1	0.6	2.5	8.0	30.7	93.9	240.5	612.0	1,673.2	5,726.3	244.6	
2001.....	245.7	11.9	1.5	0.7	2.5	8.0	29.6	92.4	248.9	632.6	1,723.0	5,784.1	249.5	
2000.....	252.6	13.0	1.2	0.7	2.6	7.4	29.2	94.2	261.2	665.6	1,780.3	5,926.1	257.6	
1999.....	259.9	13.8	1.2	0.7	2.8	7.6	30.2	95.7	269.9	701.7	1,849.9	6,063.0	266.5	

Table 5. Death rate by age, and age-adjusted death rate, for the 10 leading causes of death in 2020, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2020—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]

Cause of death (based on <i>International Classification of Diseases, 10th Revision</i>) and year	All ages ¹	Age group (years)											Age- adjusted rate ³
		Under 1 ²	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
Malignant neoplasms (C00–C97)													
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
COVID-19 (U07.1) ⁴													
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
Accidents (unintentional injuries) (V01–X59,Y85–Y86)													
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

See footnotes at end of table.

Table 5. Death rate by age, and age-adjusted death rate, for the 10 leading causes of death in 2020, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2020—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]

Cause of death (based on <i>International Classification of Diseases, 10th Revision</i>) and year	All ages ¹	Age group (years)											85 and over	Age- adjusted rate ³
		Under 1 ²	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84			
Cerebrovascular diseases (I60–I69)														
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)														
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	

Table 5. Death rate by age, and age-adjusted death rate, for the 10 leading causes of death in 2020, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2020—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]

Cause of death (based on <i>International Classification of Diseases, 10th Revision</i>) and year	All ages ¹	Age group (years)											Age- adjusted rate ³
		Under 1 ²	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
Alzheimer disease (G30)													
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)													
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

Table 5. Death rate by age, and age-adjusted death rate, for the 10 leading causes of death in 2020, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2020—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]

Cause of death (based on <i>International Classification of Diseases, 10th Revision</i>) and year	All ages ¹	Age group (years)											Age- adjusted rate ³
		Under 1 ²	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
Influenza and pneumonia (J09–J18)													
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
Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27)													
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

Table 5. Death rate by age, and age-adjusted death rate, for the 10 leading causes of death in 2020, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2020—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]

Cause of death (based on <i>International Classification of Diseases, 10th Revision</i>) and year	All ages ¹	Age group (years)										85 and over	Age- adjusted rate ³
		Under 1 ²	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84		
Dementia-related causes ⁵													
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
Drug-induced causes ⁵													
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

See footnotes at end of table.

Table 5. Death rate by age, and age-adjusted death rate, for the 10 leading causes of death in 2020, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2020—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]

Cause of death (based on <i>International Classification of Diseases, 10th Revision</i>) and year	All ages ¹	Age group (years)											85 and over	Age- adjusted rate ³
		Under 1 ²	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84			
Alcohol-induced causes ⁵														
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	
Injury by firearms ⁵														
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.

¹Data for age not stated included in all ages category but not distributed among age groups.²Death rates for under 1 (based on population estimates) differ from infant mortality rates (based on live births); see Technical Notes.³For method of computation, see Technical Notes.⁴COVID-19 became an official cause of death in 2020; rates for years before 2020 are not applicable.⁵For the list of ICD-10 codes included, see Technical Notes.

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

Table 6. Number of deaths from selected causes, by age: United States, 2020

[Only selected causes of death are shown; as a result, subcategories do not add to totals; see Technical Notes in this report. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD-10)*; see Technical Notes]

Cause of death (based on ICD-10)	All ages	Age group (years)											Age not stated
		Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over	
All causes	3,383,729	19,582	3,529	5,623	35,816	73,486	104,490	191,142	440,549	674,507	822,084	1,012,805	116
Enterocolitis due to <i>Clostridium difficile</i> (A04.7)	4,069	2	1	3	3	12	39	155	422	883	1,235	1,314	—
Septicemia (A40-A41)	40,050	117	43	35	106	386	979	2,510	6,242	9,656	10,444	9,530	2
Viral hepatitis (B15-B19)	3,943	—	1	—	9	42	168	518	1,530	1,227	307	141	—
Human immunodeficiency virus (HIV) disease (B20-B24)	5,115	2	—	—	53	468	770	1,165	1,542	833	242	40	—
Malignant neoplasms (C00-C97)	602,350	54	307	792	1,306	3,573	10,730	34,589	110,243	175,464	162,876	102,413	3
Malignant neoplasms of lip, oral cavity and pharynx (C00-C14)	10,835	—	1	1	15	41	187	842	2,827	3,317	2,264	1,340	—
Malignant neoplasm of esophagus (C15)	15,673	—	—	—	3	28	216	1,016	3,694	5,328	3,660	1,728	—
Malignant neoplasm of stomach (C16)	11,233	—	—	—	25	119	438	1,017	2,155	2,985	2,759	1,735	—
Malignant neoplasms of colon, rectum and anus (C18-C21)	53,095	1	—	—	46	408	1,523	4,800	10,544	13,337	12,241	10,195	—
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	28,227	4	15	14	38	97	321	1,424	6,806	9,988	6,591	2,929	—
Malignant neoplasm of pancreas (C25)	46,774	—	—	—	9	56	458	2,447	8,695	15,072	13,227	6,810	—
Malignant neoplasms of trachea, bronchus and lung (C33-C34)	136,166	—	1	5	13	126	756	5,058	26,664	45,572	40,513	17,458	—
Malignant melanoma of skin (C43)	8,214	—	—	1	16	104	315	650	1,417	2,173	2,118	1,420	—
Malignant neoplasm of breast (C50)	42,765	—	—	—	5	377	1,769	4,555	8,648	10,750	9,195	7,464	2
Malignant neoplasm of cervix uteri (C53)	4,272	—	—	—	5	205	607	841	1,000	858	482	274	—
Malignant neoplasm of ovary (C56)	13,438	—	—	4	14	96	285	1,065	2,837	4,014	3,478	1,645	—
Malignant neoplasm of prostate (C61)	32,707	—	—	1	1	1	32	326	2,944	8,083	10,944	10,375	—
Malignant neoplasms of kidney and renal pelvis (C64-C65)	14,441	2	15	22	25	61	210	893	2,690	4,302	3,828	2,393	—
Malignant neoplasm of bladder (C67)	16,682	—	—	—	1	18	65	342	1,696	3,800	5,372	5,388	—
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70-C72)	18,034	10	73	310	237	414	862	1,830	4,158	5,275	3,441	1,424	—
Non-Hodgkin lymphoma (C82-C85)	20,171	—	3	14	44	144	319	759	2,495	5,184	6,591	4,617	1
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	12,999	—	—	—	1	9	68	546	1,744	3,578	4,356	2,697	—
Leukemia (C91-C95)	23,422	20	85	171	261	346	541	956	2,616	5,685	7,405	5,336	—
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00-D48)	16,229	39	35	55	65	131	251	491	1,539	3,278	5,081	5,264	—
Anemias (D50-D64)	5,633	13	6	22	62	152	191	290	553	1,028	1,307	2,009	—
Diabetes mellitus (E10-E14)	102,188	—	5	56	312	1,168	2,904	7,546	18,002	27,213	25,445	19,536	1
Nutritional deficiencies (E40-E64)	14,682	17	3	5	14	39	87	235	815	1,895	3,535	8,037	—
Obesity (E66)	10,209	—	1	5	99	560	1,216	1,953	2,702	2,330	1,068	274	1
Parkinson disease (G20-G21)	40,284	—	—	—	1	3	6	85	873	6,187	17,323	15,806	—
Alzheimer disease (G30)	134,242	—	—	—	—	1	7	100	1,393	9,300	37,728	85,713	—

See footnotes at end of table.

Table 6. Number of deaths from selected causes, by age: United States, 2020—Con.

[Only selected causes of deaths are shown; therefore, subcategories do not add to totals; see Technical Notes in this report. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD-10)*; see Technical Notes]

Cause of death (based on ICD-10)	All ages	Age group (years)											Age not stated
		Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over	
Major cardiovascular diseases (I00-I78)	923,237	363	171	252	1,135	4,922	15,300	42,859	110,555	174,090	226,698	346,865	27
Diseases of heart (I00-I09,I11,I13,I20-I51)	696,962	242	112	167	870	3,984	12,177	34,169	88,551	134,827	167,346	254,492	25
Essential hypertension and hypertensive renal disease. (I10,I12,I15)	41,907	1	—	1	23	149	576	1,830	4,983	7,766	9,915	16,663	—
Cerebrovascular diseases (I60-I69)	160,264	104	55	76	188	600	2,008	5,686	14,153	26,363	43,252	67,777	2
Atherosclerosis. (I70)	4,757	4	—	—	3	8	21	85	340	726	1,194	2,376	—
Aortic aneurysm and dissection (I71)	9,317	—	—	4	31	127	381	701	1,269	2,148	2,407	2,249	—
Influenza and pneumonia (J09-J18)	53,544	125	84	105	185	578	1,148	2,511	6,295	10,460	13,832	18,219	2
Chronic lower respiratory diseases (J40-J47)	152,657	8	19	147	220	400	793	3,538	18,816	38,559	49,363	40,790	4
Pneumonitis due to solids and liquids (J69)	18,327	7	3	12	41	119	246	587	1,652	3,229	4,957	7,473	1
Chronic liver disease and cirrhosis (K70,K73-K74)	51,642	—	—	4	47	1,631	4,938	9,503	16,151	11,895	5,676	1,796	1
Alcoholic liver disease (K70)	29,505	—	—	—	29	1,375	3,904	6,786	10,198	5,524	1,472	216	1
Cholelithiasis and other disorders of gallbladder (K80-K82)	3,985	1	—	1	6	21	53	130	368	737	1,157	1,511	—
Nephritis, nephrotic syndrome and nephrosis (N00-N07,N17-N19,N25-N27)	52,547	44	12	10	68	321	859	2,344	6,213	11,461	14,696	16,518	1
Pregnancy, childbirth and the puerperium (O00-O09)	1,288	...	...	2	191	594	476	20	4	1	—	—	—
Certain conditions originating in the perinatal period (P00-P96)	9,672	9,550	54	29	11	4	2	5	8	5	—	1	3
Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)	9,573	4,043	382	321	384	450	494	741	1,257	699	459	343	—
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99)	34,098	2,490	222	117	609	1,360	1,513	1,990	3,525	4,603	5,684	11,954	31
COVID-19 (U07.1)	350,831	35	19	49	501	2,254	6,079	16,964	42,090	76,277	97,030	109,529	4
Accidents (unintentional injuries). (V01-X59,Y85-Y86)	200,955	1,194	1,153	1,566	15,117	31,315	31,057	27,819	28,915	18,609	18,646	25,541	23
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)	42,339	74	349	892	6,922	8,117	6,228	5,629	6,223	4,089	2,637	1,176	3
Falls (W00-W19)	42,114	7	12	28	152	359	625	1,282	3,140	5,925	11,176	19,407	1
Accidental discharge of firearms (W32-W34)	535	1	40	52	129	92	65	48	53	34	16	5	—
Accidental drowning and submersion. (W65-W74)	4,177	34	423	197	546	557	509	508	552	437	286	127	1
Accidental hanging, strangulation, and suffocation (W75-W84)	6,768	1,024	118	71	99	195	273	438	827	1,140	1,182	1,401	—
Accidental exposure to smoke, fire and flames (X00-X09)	2,951	8	73	104	99	158	234	307	640	674	415	239	—
Accidental poisoning and exposure to noxious substances (X40-X49)	87,404	17	37	61	6,664	20,938	21,943	18,078	15,030	3,891	522	205	18
Intentional self-harm (suicide). (*U03,X60-X84,Y87.0)	45,979	...	...	601	6,062	8,454	7,314	7,249	7,160	4,716	3,032	1,389	2
Intentional self-harm (suicide) by poisoning (X60-X69)	5,528	...	...	34	476	789	844	1,140	1,165	638	297	145	—
Intentional self-harm (suicide) by hanging, strangulation and suffocation (X70)	12,495	...	...	330	1,914	3,063	2,597	2,086	1,493	639	252	121	—
Intentional self-harm (suicide) by discharge of firearms X72-X74)	24,292	...	...	224	3,173	3,901	3,215	3,418	3,889	3,107	2,337	1,028	—

See footnotes at end of table.

Table 6. Number of deaths from selected causes, by age: United States, 2020—Con.

[Only selected causes of deaths are shown; therefore, subcategories do not add to totals; see Technical Notes in this report. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	All ages	Age group (years)											Age not stated
		Under 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
Assault (homicide) (*U01–*U02,X85–Y09,Y87.1)	24,576	246	311	454	6,466	7,125	4,482	2,542	1,753	742	329	124	2
Assault (homicide) by discharge of firearms (*U01.4,X93–X95)	19,384	10	75	309	5,966	6,158	3,540	1,783	992	353	152	45	1
Legal intervention (Y35,Y89.0)	780	–	1	4	117	255	195	121	61	20	6	–	–
Complications of medical and surgical care (Y40–Y84,Y88)	5,361	11	16	20	60	101	204	451	938	1,400	1,275	885	–
Dementia-related causes ¹	303,984	4	10	17	11	20	48	337	3,703	22,160	81,454	196,220	–
Drug-induced deaths ¹	96,096	65	70	113	7,214	22,489	23,497	19,811	16,898	4,784	799	340	16
Drug overdose deaths ¹	91,799	65	70	112	7,095	21,784	22,710	18,919	15,819	4,291	655	263	16
Alcohol-induced deaths ¹	49,061	–	–	1	184	2,745	6,744	11,088	16,679	8,824	2,361	431	4
Injury by firearms ¹	45,222	11	124	616	9,446	10,441	7,039	5,388	5,021	3,534	2,520	1,081	1

– Quantity zero.

... Category not applicable.

¹Included in selected categories above. 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. Death rate for selected causes, by age: United States, 2020

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision* (ICD-10); see Technical Notes]

Cause of death (based on ICD-10)	All ages ¹	Age group (years)										
		Under 1 ²	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
All causes	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
Enterocolitis due to <i>Clostridium difficile</i> (A04.7)	1.2	*	*	*	*	*	0.1	0.4	1.0	2.7	7.5	19.7
Septicemia (A40-A41)	12.2	3.1	0.3	0.1	0.2	0.8	2.3	6.2	14.7	29.7	63.5	143.1
Viral hepatitis (B15-B19)	1.2	*	*	*	*	0.1	0.4	1.3	3.6	3.8	1.9	2.1
Human immunodeficiency virus (HIV) disease (B20-B24)	1.6	*	*	*	0.1	1.0	1.8	2.9	3.6	2.6	1.5	0.6
Malignant neoplasms (C00-C97)	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
Malignant neoplasms of lip, oral cavity and pharynx (C00-C14)	3.3	*	*	*	*	0.1	0.4	2.1	6.7	10.2	13.8	20.1
Malignant neoplasm of esophagus (C15)	4.8	*	*	*	*	0.1	0.5	2.5	8.7	16.4	22.2	26.0
Malignant neoplasm of stomach (C16)	3.4	*	*	*	0.1	0.3	1.0	2.5	5.1	9.2	16.8	26.1
Malignant neoplasms of colon, rectum and anus (C18-C21)	16.1	*	*	*	0.1	0.9	3.6	11.9	24.9	41.0	74.4	153.1
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	8.6	*	*	*	0.1	0.2	0.8	3.5	16.1	30.7	40.1	44.0
Malignant neoplasm of pancreas (C25)	14.2	*	*	*	*	0.1	1.1	6.1	20.5	46.3	80.4	102.3
Malignant neoplasms of trachea, bronchus and lung (C33-C34)	41.3	*	*	*	*	0.3	1.8	12.5	62.9	140.0	246.3	262.2
Malignant melanoma of skin (C43)	2.5	*	*	*	*	0.2	0.7	1.6	3.3	6.7	12.9	21.3
Malignant neoplasm of breast (C50)	13.0	*	*	*	*	0.8	4.2	11.3	20.4	33.0	55.9	112.1
Malignant neoplasm of cervix uteri (C53)	1.3	*	*	*	*	0.4	1.4	2.1	2.4	2.6	2.9	4.1
Malignant neoplasm of ovary (C56)	4.1	*	*	*	*	0.2	0.7	2.6	6.7	12.3	21.1	24.7
Malignant neoplasm of prostate (C61)	9.9	*	*	*	*	*	0.1	0.8	6.9	24.8	66.5	155.8
Malignant neoplasms of kidney and renal pelvis (C64-C65)	4.4	*	*	0.1	0.1	0.1	0.5	2.2	6.3	13.2	23.3	35.9
Malignant neoplasm of bladder (C67)	5.1	*	*	*	*	*	0.2	0.8	4.0	11.7	32.7	80.9
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70-C72)	5.5	*	0.5	0.8	0.6	0.9	2.0	4.5	9.8	16.2	20.9	21.4
Non-Hodgkin lymphoma (C82-C85)	6.1	*	*	*	0.1	0.3	0.8	1.9	5.9	15.9	40.1	69.3
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	3.9	*	*	*	*	*	0.2	1.4	4.1	11.0	26.5	40.5
Leukemia (C91-C95)	7.1	0.5	0.5	0.4	0.6	0.8	1.3	2.4	6.2	17.5	45.0	80.1
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00-D48)	4.9	1.0	0.2	0.1	0.2	0.3	0.6	1.2	3.6	10.1	30.9	79.1
Anemias (D50-D64)	1.7	*	*	0.1	0.1	0.3	0.5	0.7	1.3	3.2	7.9	30.2
Diabetes mellitus (E10-E14)	31.0	*	*	0.1	0.7	2.5	6.9	18.7	42.5	83.6	154.7	293.4
Nutritional deficiencies (E40-E64)	4.5	*	*	*	*	0.1	0.2	0.6	1.9	5.8	21.5	120.7
Obesity (E66)	3.1	*	*	*	0.2	1.2	2.9	4.8	6.4	7.2	6.5	4.1
Parkinson disease (G20-G21)	12.2	*	*	*	*	*	*	0.2	2.1	19.0	105.3	237.4
Alzheimer disease (G30)	40.7	*	*	*	*	*	*	0.2	3.3	28.6	229.3	1,287.3
Major cardiovascular diseases (I00-I78)	280.2	9.7	1.1	0.6	2.7	10.7	36.3	106.2	260.7	534.8	1,378.0	5,209.4
Diseases of heart (I00-I09,I11,I13,I20-I51)	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
Essential hypertension and hypertensive renal disease (I10,I12,I15)	12.7	*	*	*	0.1	0.3	1.4	4.5	11.8	23.9	60.3	250.3
Cerebrovascular diseases (I60-I69)	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
Atherosclerosis (I70)	1.4	*	*	*	*	*	0.0	0.2	0.8	2.2	7.3	35.7
Aortic aneurysm and dissection (I71)	2.8	*	*	*	0.1	0.3	0.9	1.7	3.0	6.6	14.6	33.8
Influenza and pneumonia (J09-J18)	16.3	3.3	0.5	0.3	0.4	1.3	2.7	6.2	14.8	32.1	84.1	273.6
Chronic lower respiratory diseases (J40-J47)	46.3	*	*	0.4	0.5	0.9	1.9	8.8	44.4	118.5	300.1	612.6
Pneumonitis due to solids and liquids (J69)	5.6	*	*	*	0.1	0.3	0.6	1.5	3.9	9.9	30.1	112.2

See footnotes at end of table.

Table 7. Death rate for selected causes, by age: United States, 2020—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	All ages ¹	Age group (years)										
		Under 1 ²	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over
Chronic liver disease and cirrhosis (K70,K73–K74)	15.7	*	*	*	0.1	3.5	11.7	23.5	38.1	36.5	34.5	27.0
Alcoholic liver disease (K70)	9.0	*	*	*	0.1	3.0	9.3	16.8	24.0	17.0	8.9	3.2
Cholelithiasis and other disorders of gallbladder (K80–K82)	1.2	*	*	*	*	0.0	0.1	0.3	0.9	2.3	7.0	22.7
Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27)	15.9	1.2	*	*	0.2	0.7	2.0	5.8	14.7	35.2	89.3	248.1
Pregnancy, childbirth and the puerperium (O00–O99)	0.4	...	...	*	0.4	1.3	1.1	0.0	*	*	*	*
Certain conditions originating in the perinatal period (P00–P96)	2.9	255.7	0.3	0.1	*	*	*	*	*	*	*	*
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	2.9	108.2	2.5	0.8	0.9	1.0	1.2	1.8	3.0	2.1	2.8	5.2
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	10.3	66.7	1.4	0.3	1.4	3.0	3.6	4.9	8.3	14.1	34.5	179.5
COVID-19 (U07.1)	106.5	0.9	*	0.1	1.2	4.9	14.4	42.0	99.3	234.3	589.8	1,645.0
Accidents (unintentional injuries). (V01–X59,Y85–Y86)	61.0	32.0	7.4	3.8	35.5	68.0	73.7	68.9	68.2	57.2	113.3	383.6
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)	12.9	2.0	2.2	2.2	16.3	17.6	14.8	13.9	14.7	12.6	16.0	17.7
Falls (W00–W19)	12.8	*	*	0.1	0.4	0.8	1.5	3.2	7.4	18.2	67.9	291.5
Accidental discharge of firearms (W32–W34)	0.2	*	0.3	0.1	0.3	0.2	0.2	0.1	0.1	0.1	*	*
Accidental drowning and submersion. (W65–W74)	1.3	0.9	2.7	0.5	1.3	1.2	1.2	1.3	1.3	1.3	1.7	1.9
Accidental hanging, strangulation, and suffocation (W75–W84)	2.1	27.4	0.8	0.2	0.2	0.4	0.6	1.1	2.0	3.5	7.2	21.0
Accidental exposure to smoke, fire and flames. (X00–X09)	0.9	*	0.5	0.3	0.2	0.3	0.6	0.8	1.5	2.1	2.5	3.6
Accidental poisoning and exposure to noxious substances (X40–X49)	26.5	*	0.2	0.1	15.7	45.4	52.1	44.8	35.4	12.0	3.2	3.1
Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)	14.0	...	...	1.5	14.2	18.4	17.4	18.0	16.9	14.5	18.4	20.9
Intentional self-harm (suicide) by poisoning (X60–X69)	1.7	...	...	0.1	1.1	1.7	2.0	2.8	2.7	2.0	1.8	2.2
Intentional self-harm (suicide) by hanging, strangulation and suffocation (X70)	3.8	...	...	0.8	4.5	6.6	6.2	5.2	3.5	2.0	1.5	1.8
Intentional self-harm (suicide) by discharge of firearms (X72–X74)	7.4	...	...	0.5	7.5	8.5	7.6	8.5	9.2	9.5	14.2	15.4
Assault (homicide) (*U01–*U02,X85–Y09,Y87.1)	7.5	6.6	2.0	1.1	15.2	15.5	10.6	6.3	4.1	2.3	2.0	1.9
Assault (homicide) by discharge of firearms (*U01.4,X93–X95)	5.9	*	0.5	0.8	14.0	13.4	8.4	4.4	2.3	1.1	0.9	0.7
Legal intervention (Y35,Y89.0)	0.2	*	*	*	0.3	0.6	0.5	0.3	0.1	0.1	*	*
Complications of medical and surgical care. (Y40–Y84,Y88)	1.6	*	*	0.0	0.1	0.2	0.5	1.1	2.2	4.3	7.8	13.3
Dementia-related causes ³	92.3	*	*	*	*	0.0	0.1	0.8	8.7	68.1	495.1	2,946.9
Drug-induced deaths ³	29.2	1.7	0.4	0.3	17.0	48.8	55.8	49.1	39.9	14.7	4.9	5.1
Drug overdose deaths ³	27.9	1.7	0.4	0.3	16.7	47.3	53.9	46.9	37.3	13.2	4.0	3.9
Alcohol-induced deaths ³	14.9	*	*	*	0.4	6.0	16.0	27.5	39.3	27.1	14.4	6.5
Injury by firearms ³	13.7	*	0.8	1.5	22.2	22.7	16.7	13.3	11.8	10.9	15.3	16.2

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

... Category not applicable.

¹Data for age not stated included in all ages category but not distributed among age groups.

²Death rates for under 1 (based on population estimates) differ from infant mortality rates (based on live births); see Technical Notes.

³Included in selected categories above. 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 8. Number of deaths from selected causes, by Hispanic origin and race and sex: United States, 2020

[Includes selected causes of deaths; as a result, subcategories do not add to totals; 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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD-10)*; see Technical Notes]

Cause of death (based on ICD-10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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.	3,383,729	1,769,884	1,613,845	305,708	175,585	130,123	24,725	13,431	11,294	91,175	47,699	43,476	449,213	237,703	211,510	4,439	2,489	1,950	2,484,072	1,278,612	1,205,460
Enterocolitis due to <i>Clostridium difficile</i> (A04.7)	4,069	1,800	2,269	328	149	179	29	11	18	80	40	40	411	178	233	7	3	4	3,194	1,408	1,786
Septicemia (A40–A41)	40,050	19,587	20,463	3,018	1,541	1,477	297	142	155	892	471	421	6,808	3,179	3,629	64	33	31	28,758	14,102	14,656
Viral hepatitis. (B15–B19)	3,943	2,537	1,406	562	363	199	61	37	24	210	128	82	552	355	197	12	11	1	2,491	1,605	886
Human immunodeficiency virus (HIV) disease (B20–B24)	5,115	3,838	1,277	712	592	120	34	23	11	48	42	6	2,584	1,729	855	4	4	–	1,639	1,386	253
Malignant neoplasms. (C00–C97)	602,350	317,731	284,619	43,942	22,700	21,242	3,056	1,576	1,480	18,289	9,155	9,134	70,660	35,565	35,095	775	379	396	462,037	246,439	215,598
Malignant neoplasms of lip, oral cavity and pharynx. (C00–C14)	10,835	7,609	3,226	623	444	179	54	35	19	405	268	137	1,077	774	303	19	11	8	8,595	6,032	2,563
Malignant neoplasm of esophagus (C15)	15,673	12,503	3,170	777	634	143	66	48	18	294	219	75	1,208	836	372	16	12	4	13,224	10,680	2,544
Malignant neoplasm of stomach. (C16)	11,233	6,663	4,570	2,013	1,093	920	97	67	30	842	465	377	1,958	1,141	817	31	22	9	6,220	3,834	2,386
Malignant neoplasms of colon, rectum and anus. (C18–C21)	53,095	28,512	24,583	4,582	2,602	1,980	325	180	145	1,822	955	867	7,198	3,931	3,267	63	35	28	38,780	20,620	18,160
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	28,227	18,636	9,591	3,823	2,464	1,359	265	171	94	1,612	1,059	553	3,543	2,389	1,154	69	45	24	18,688	12,353	6,335
Malignant neoplasm of pancreas. (C25)	46,774	24,279	22,495	3,612	1,786	1,826	224	111	113	1,510	708	802	5,735	2,733	3,002	49	22	27	35,403	18,779	16,624
Malignant neoplasms of trachea, bronchus and lung (C33–C34)	136,166	73,005	63,161	5,656	3,228	2,428	673	344	329	3,715	2,058	1,657	14,353	8,096	6,257	145	86	59	110,835	58,766	52,069

See footnotes at end of table.

Table 8. Number of deaths from selected causes, by Hispanic origin and race and sex: United States, 2020—Con.

[Includes selected causes of deaths; as a result, subcategories do not add to totals; 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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD–10)*; see Technical Notes]

Cause of death (based on ICD–10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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 melanoma of skin (C43)	8,214	5,375	2,839	285	158	127	16	10	6	69	36	33	121	54	67	2	1	1	7,702	5,102	2,600
Malignant neoplasm of breast (C50)	42,765	490	42,275	3,254	28	3,226	186	2	184	1,290	9	1,281	6,477	91	6,386	70	–	70	31,215	355	30,860
Malignant neoplasm of cervix uteri (C53)	4,272	...	4,272	628	...	628	29	...	29	187	...	187	765	...	765	14	...	14	2,612	...	2,612
Malignant neoplasm of ovary (C56)	13,438	...	13,438	1,105	...	1,105	73	...	73	504	...	504	1,352	...	1,352	19	...	19	10,304	...	10,304
Malignant neoplasm of prostate (C61)	32,707	32,707	...	2,176	2,176	...	122	122	...	682	682	...	5,509	5,509	...	36	36	...	24,002	24,002	...
Malignant neoplasms of kidney and renal pelvis (C64–C65)	14,441	9,541	4,900	1,324	881	443	125	80	45	320	201	119	1,446	914	532	12	9	3	11,128	7,399	3,729
Malignant neoplasm of bladder (C67)	16,682	12,064	4,618	785	534	251	58	39	19	321	231	90	1,265	760	505	9	6	3	14,168	10,430	3,738
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	18,034	10,214	7,820	1,450	796	654	55	25	30	509	289	220	1,248	672	576	20	12	8	14,626	8,352	6,274
Non-Hodgkin lymphoma (C82–C85)	20,171	11,591	8,580	1,721	984	737	87	52	35	689	370	319	1,486	839	647	21	11	10	16,046	9,263	6,783
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	12,999	7,215	5,784	1,014	548	466	48	23	25	302	177	125	2,341	1,151	1,190	11	6	5	9,214	5,276	3,938
Leukemia (C91–C95)	23,422	13,687	9,735	1,746	990	756	81	46	35	604	342	262	2,048	1,137	911	22	12	10	18,782	11,075	7,707

See footnotes at end of table.

Table 8. Number of deaths from selected causes, by Hispanic origin and race and sex: United States, 2020—Con.

[Includes selected causes of deaths; as a result, subcategories do not add to totals; 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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD-10)*; see Technical Notes]

Cause of death (based on ICD-10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior. (D00–D48)	16,229	8,674	7,555	981	509	472	65	29	36	456	249	207	1,549	711	838	13	8	5	13,088	7,129	5,959
Anemias. (D50–D64)	5,633	2,583	3,050	401	179	222	34	14	20	127	56	71	1,216	562	654	6	–	6	3,821	1,754	2,067
Diabetes mellitus. (E10–E14)	102,188	57,532	44,656	12,832	7,136	5,696	1,273	705	568	3,708	2,034	1,674	19,418	10,043	9,375	269	148	121	63,874	37,012	26,862
Nutritional deficiencies. (E40–E64)	14,682	5,498	9,184	896	373	523	96	33	63	335	139	196	1,638	636	1,002	5	4	1	11,640	4,282	7,358
Obesity. (E66)	10,209	5,488	4,721	980	632	348	86	44	42	68	38	30	1,985	914	1,071	34	18	16	6,972	3,794	3,178
Parkinson disease. (G20–G21)	40,284	24,490	15,794	2,462	1,444	1,018	109	66	43	1,110	644	466	2,053	1,169	884	23	9	14	34,377	21,062	13,315
Alzheimer disease. (G30)	134,242	41,273	92,969	9,867	3,065	6,802	381	104	277	3,394	1,023	2,371	10,839	3,076	7,763	78	30	48	109,154	33,809	75,345
Major cardiovascular diseases. (I00–I78)	923,237	484,291	438,946	66,900	36,723	30,177	4,648	2,570	2,078	25,876	13,398	12,478	126,382	65,780	60,602	1,266	721	545	691,915	361,315	330,600
Diseases of heart. (I00–I09, I11,I13,I20–I51)	696,962	382,776	314,186	48,323	27,700	20,623	3,510	2,079	1,431	17,251	9,523	7,728	92,918	50,006	42,912	924	546	378	529,112	289,832	239,280
Essential hypertension and hypertensive renal disease. (I10,I12,I15)	41,907	19,175	22,732	3,674	1,804	1,870	240	113	127	1,745	767	978	8,019	3,881	4,138	59	29	30	27,893	12,426	15,467
Cerebrovascular diseases. (I60–I69)	160,264	69,637	90,627	13,370	6,374	6,996	773	326	447	6,215	2,769	3,446	22,330	10,253	12,077	238	119	119	116,456	49,360	67,096
Atherosclerosis. (I70)	4,757	2,162	2,595	313	147	166	22	12	10	180	84	96	510	216	294	3	1	2	3,698	1,685	2,013
Aortic aneurysm and dissection. (I71)	9,317	5,595	3,722	524	353	171	36	15	21	295	176	119	1,112	680	432	24	17	7	7,250	4,302	2,948

See footnotes at end of table.

Table 8. Number of deaths from selected causes, by Hispanic origin and race and sex: United States, 2020—Con.

[Includes selected causes of deaths; as a result, subcategories do not add to totals; 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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD–10)*; see Technical Notes]

Cause of death (based on ICD–10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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
Influenza and pneumonia (J09–J18)	53,544	27,745	25,799	4,875	2,661	2,214	427	214	213	2,036	1,147	889	6,852	3,579	3,273	80	35	45	38,900	19,883	19,017
Chronic lower respiratory diseases (J40–J47)	152,657	72,942	79,715	5,949	3,031	2,918	744	355	389	1,964	1,150	814	12,306	6,180	6,126	111	57	54	130,621	61,664	68,957
Pneumonitis due to solids and liquids (J69)	18,327	10,625	7,702	1,142	648	494	92	55	37	564	310	254	1,980	1,095	885	15	9	6	14,421	8,441	5,980
Chronic liver disease and cirrhosis (K70,K73–K74)	51,642	32,546	19,096	8,049	5,526	2,523	1,460	763	697	845	571	274	4,046	2,454	1,592	37	17	20	36,774	22,951	13,823
Alcoholic liver disease (K70)	29,505	20,123	9,382	4,694	3,688	1,006	1,127	604	523	403	330	73	2,183	1,381	802	15	10	5	20,787	13,920	6,867
Cholelithiasis and other disorders of gallbladder (K80–K82)	3,985	2,022	1,963	398	214	184	42	21	21	133	63	70	370	158	212	7	5	2	3,011	1,553	1,458
Nephritis, nephrotic syndrome and nephrosis (N00–N07, N17–N19,N25–N27)	52,547	27,293	25,254	4,701	2,512	2,189	347	165	182	1,607	837	770	10,543	5,161	5,382	92	45	47	34,931	18,398	16,533
Pregnancy, childbirth and the puerperium (O00–O99)	1,288	...	1,288	238	...	238	20	...	20	44	...	44	427	...	427	9	...	9	531	...	531
Certain conditions originating in the perinatal period (P00–P96)	9,672	5,388	4,284	2,130	1,188	942	65	38	27	271	158	113	3,072	1,715	1,357	23	13	10	3,635	2,003	1,632
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	9,573	5,000	4,573	1,635	860	775	89	47	42	267	127	140	1,431	766	665	32	16	16	5,914	3,071	2,843

See footnotes at end of table.

Table 8. Number of deaths from selected causes, by Hispanic origin and race and sex: United States, 2020—Con.

[Includes selected causes of deaths; as a result, subcategories do not add to totals; 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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision* (ICD-10); see Technical Notes]

Cause of death (based on ICD-10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified																					
(R00–R99)	34,098	16,599	17,499	2,606	1,587	1,019	327	203	124	765	370	395	5,295	2,811	2,484	39	23	16	24,591	11,326	13,265
COVID-19 (U07.1)	350,831	192,512	158,319	65,237	40,830	24,407	4,265	2,308	1,957	12,693	7,503	5,190	56,383	29,870	26,513	633	398	235	209,138	110,058	99,080
Accidents (unintentional injuries)																					
(V01–X59,Y85–Y86)	200,955	133,205	67,750	23,152	17,606	5,546	2,461	1,570	891	3,385	2,215	1,170	28,655	20,314	8,341	224	162	62	140,507	89,533	50,974
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)	42,339	30,663	11,676	7,059	5,318	1,741	637	412	225	790	517	273	7,882	5,761	2,121	56	40	16	25,402	18,244	7,158
Falls (W00–W19)	42,114	21,432	20,682	2,552	1,531	1,021	260	147	113	1,063	576	487	2,028	1,177	851	32	14	18	35,967	17,863	18,104
Accidental discharge of firearms																					
(W32–W34)	535	474	61	62	58	4	12	11	1	6	5	1	134	120	14	1	1	–	317	276	41
Accidental drowning and submersion . . .																					
(W65–W74)	4,177	3,185	992	630	524	106	63	47	16	191	149	42	692	551	141	23	21	2	2,505	1,833	672
Accidental hanging, strangulation, and suffocation																					
(W75–W84)	6,768	3,983	2,785	568	360	208	70	48	22	159	79	80	1,101	620	481	8	5	3	4,758	2,810	1,948
Accidental exposure to smoke, fire and flames																					
(X00–X09)	2,951	1,796	1,155	197	134	63	47	25	22	35	23	12	574	354	220	–	–	–	2,071	1,246	825

See footnotes at end of table.

Table 8. Number of deaths from selected causes, by Hispanic origin and race and sex: United States, 2020—Con.

[Includes selected causes of deaths; as a result, subcategories do not add to totals; 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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD–10)*; see Technical Notes]

Cause of death (based on ICD–10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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 poisoning and exposure to noxious substances (X40–X49)	87,404	62,086	25,318	10,682	8,588	2,094	1,154	730	424	857	692	165	14,520	10,585	3,935	81	63	18	58,596	40,354	18,242
Intentional self-harm (suicide)..... (*U03, X60–X84,Y87.0)	45,979	36,551	9,428	4,571	3,701	870	588	444	144	1,302	912	390	3,286	2,666	620	79	65	14	35,442	28,242	7,200
Intentional self-harm (suicide) by poisoning..... (X60–X69)	5,528	2,834	2,694	403	233	170	52	22	30	168	78	90	289	144	145	5	2	3	4,513	2,307	2,206
Intentional self-harm (suicide) by hanging, strangulation and suffocation..... (X70)	12,495	9,753	2,742	1,892	1,494	398	275	196	79	550	372	178	831	644	187	48	41	7	8,655	6,835	1,820
Intentional self-harm (suicide) by discharge of firearms..... (X72–X74)	24,292	21,180	3,112	1,790	1,586	204	225	195	30	323	280	43	1,784	1,591	193	20	18	2	19,851	17,255	2,596
Assault (homicide).... (*U01–*U02, X85–Y09,Y87.1)	24,576	19,958	4,618	3,920	3,277	643	344	266	78	289	207	82	13,493	11,711	1,782	49	42	7	6,143	4,198	1,945
Assault (homicide) by discharge of firearms..... (*U01.4,X93–X95)	19,384	16,428	2,956	2,947	2,572	375	191	156	35	173	139	34	11,832	10,493	1,339	35	31	4	3,969	2,849	1,120
Legal intervention.... (Y35,Y89.0)	780	737	43	163	157	6	18	18	–	7	6	1	191	180	11	2	2	–	385	361	24
Complications of medical and surgical care..... (Y40–Y84,Y88)	5,361	2,869	2,492	430	208	222	59	34	25	117	69	48	852	414	438	15	8	7	3,850	2,117	1,733

See footnotes at end of table.

Table 8. Number of deaths from selected causes, by Hispanic origin and race and sex: United States, 2020—Con.

[Includes selected causes of deaths; as a result, subcategories do not add to totals; 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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD–10)*; see Technical Notes]

Cause of death (based on ICD–10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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
Dementia-related causes ⁴	303,984	99,157	204,827	18,534	6,151	12,383	864	278	586	7,120	2,288	4,832	25,815	8,213	17,602	171	71	100	250,280	81,744	168,536
Drug-induced deaths ⁴	96,096	66,607	29,489	11,059	8,725	2,334	1,076	642	434	990	753	237	15,936	11,560	4,376	91	70	21	65,270	43,689	21,581
Drug overdose deaths ⁴	91,799	63,728	28,071	10,606	8,382	2,224	1,009	604	405	935	705	230	15,256	11,060	4,196	86	66	20	62,312	41,800	20,512
Alcohol-induced deaths ⁴	49,061	35,002	14,059	6,737	5,448	1,289	1,776	1,042	734	617	507	110	4,329	3,047	1,282	25	17	8	35,033	24,568	10,465
Injury by firearms ⁴	45,222	38,981	6,241	5,003	4,395	608	449	381	68	516	435	81	13,974	12,416	1,558	58	52	6	24,664	20,838	3,826

— Quantity zero.

... Category not applicable.

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

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

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

⁴Included in selected categories above. 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 9. Death rate for selected causes, by Hispanic origin and race and sex: United States, 2020

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

Cause of death (based on ICD–10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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.	1,027.0	1,090.8	965.1	498.6	567.8	428.2	1,016.5	1,123.4	913.2	470.8	515.8	429.6	1,084.3	1,200.0	978.4	723.5	804.6	641.1	1,262.4	1,317.7	1,208.6
Enterocolitis due to <i>Clostridium</i> <i>difficile</i> (A04.7)	1.2	1.1	1.4	0.5	0.5	0.6	1.2	*	*	0.4	0.4	0.4	1.0	0.9	1.1	*	*	*	1.6	1.5	1.8
Septicemia. (A40–A41)	12.2	12.1	12.2	4.9	5.0	4.9	12.2	11.9	12.5	4.6	5.1	4.2	16.4	16.0	16.8	10.4	10.7	10.2	14.6	14.5	14.7
Viral hepatitis. (B15–B19)	1.2	1.6	0.8	0.9	1.2	0.7	2.5	3.1	1.9	1.1	1.4	0.8	1.3	1.8	0.9	*	*	*	1.3	1.7	0.9
Human immunodeficiency virus (HIV) disease. (B20–B24)	1.6	2.4	0.8	1.2	1.9	0.4	1.4	1.9	*	0.2	0.5	*	6.2	8.7	4.0	*	*	*	0.8	1.4	0.3
Malignant neoplasms. (C00–C97)	182.8	195.8	170.2	71.7	73.4	69.9	125.6	131.8	119.7	94.4	99.0	90.3	170.6	179.5	162.3	126.3	122.5	130.2	234.8	254.0	216.2
Malignant neoplasms of lip, oral cavity and pharynx. (C00–C14)	3.3	4.7	1.9	1.0	1.4	0.6	2.2	2.9	*	2.1	2.9	1.4	2.6	3.9	1.4	*	*	*	4.4	6.2	2.6
Malignant neoplasm of esophagus. (C15)	4.8	7.7	1.9	1.3	2.1	0.5	2.7	4.0	*	1.5	2.4	0.7	2.9	4.2	1.7	*	*	*	6.7	11.0	2.6
Malignant neoplasm of stomach. (C16)	3.4	4.1	2.7	3.3	3.5	3.0	4.0	5.6	2.4	4.3	5.0	3.7	4.7	5.8	3.8	5.1	7.1	*	3.2	4.0	2.4
Malignant neoplasms of colon, rectum and anus. (C18–C21)	16.1	17.6	14.7	7.5	8.4	6.5	13.4	15.1	11.7	9.4	10.3	8.6	17.4	19.8	15.1	10.3	11.3	9.2	19.7	21.2	18.2
Malignant neoplasms of liver and intrahepatic bile ducts. (C22)	8.6	11.5	5.7	6.2	8.0	4.5	10.9	14.3	7.6	8.3	11.5	5.5	8.6	12.1	5.3	11.2	14.5	7.9	9.5	12.7	6.4
Malignant neoplasm of pancreas. (C25)	14.2	15.0	13.5	5.9	5.8	6.0	9.2	9.3	9.1	7.8	7.7	7.9	13.8	13.8	13.9	8.0	7.1	8.9	18.0	19.4	16.7
Malignant neoplasms of trachea, bronchus and lung. (C33–C34)	41.3	45.0	37.8	9.2	10.4	8.0	27.7	28.8	26.6	19.2	22.3	16.4	34.6	40.9	28.9	23.6	27.8	19.4	56.3	60.6	52.2
Malignant melanoma of skin. (C43)	2.5	3.3	1.7	0.5	0.5	0.4	*	*	*	0.4	0.4	0.3	0.3	0.3	0.3	*	*	*	3.9	5.3	2.6
Malignant neoplasm of breast. (C50)	13.0	0.3	25.3	5.3	0.1	10.6	7.6	*	14.9	6.7	*	12.7	15.6	0.5	29.5	11.4	*	23.0	15.9	0.4	30.9
Malignant neoplasm of cervix uteri. (C53)	1.3	...	2.6	1.0	...	2.1	1.2	...	2.3	1.0	...	1.8	1.8	...	3.5	*	...	*	1.3	...	2.6
Malignant neoplasm of ovary. (C56)	4.1	...	8.0	1.8	...	3.6	3.0	...	5.9	2.6	...	5.0	3.3	...	6.3	*	...	*	5.2	...	10.3

See footnotes at end of table.

Table 9. Death rate for selected causes, by Hispanic origin and race and sex: United States, 2020—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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision* (ICD-10); see Technical Notes]

Cause of death (based on ICD-10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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 neoplasm of prostate (C61)	9.9	20.2	...	3.5	7.0	...	5.0	10.2	...	3.5	7.4	...	13.3	27.8	...	5.9	11.6	...	12.2	24.7	...
Malignant neoplasms of kidney and renal pelvis (C64–C65)	4.4	5.9	2.9	2.2	2.8	1.5	5.1	6.7	3.6	1.7	2.2	1.2	3.5	4.6	2.5	*	*	*	5.7	7.6	3.7
Malignant neoplasm of bladder (C67)	5.1	7.4	2.8	1.3	1.7	0.8	2.4	3.3	*	1.7	2.5	0.9	3.1	3.8	2.3	*	*	*	7.2	10.7	3.7
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	5.5	6.3	4.7	2.4	2.6	2.2	2.3	2.1	2.4	2.6	3.1	2.2	3.0	3.4	2.7	3.3	*	*	7.4	8.6	6.3
Non-Hodgkin lymphoma (C82–C85)	6.1	7.1	5.1	2.8	3.2	2.4	3.6	4.3	2.8	3.6	4.0	3.2	3.6	4.2	3.0	3.4	*	*	8.2	9.5	6.8
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	3.9	4.4	3.5	1.7	1.8	1.5	2.0	1.9	2.0	1.6	1.9	1.2	5.7	5.8	5.5	*	*	*	4.7	5.4	3.9
Leukemia (C91–C95)	7.1	8.4	5.8	2.8	3.2	2.5	3.3	3.8	2.8	3.1	3.7	2.6	4.9	5.7	4.2	3.6	*	*	9.5	11.4	7.7
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	4.9	5.3	4.5	1.6	1.6	1.6	2.7	2.4	2.9	2.4	2.7	2.0	3.7	3.6	3.9	*	*	*	6.7	7.3	6.0
Anemias (D50–D64)	1.7	1.6	1.8	0.7	0.6	0.7	1.4	*	1.6	0.7	0.6	0.7	2.9	2.8	3.0	*	*	*	1.9	1.8	2.1
Diabetes mellitus (E10–E14)	31.0	35.5	26.7	20.9	23.1	18.7	52.3	59.0	45.9	19.1	22.0	16.5	46.9	50.7	43.4	43.8	47.8	39.8	32.5	38.1	26.9
Nutritional deficiencies (E40–E64)	4.5	3.4	5.5	1.5	1.2	1.7	3.9	2.8	5.1	1.7	1.5	1.9	4.0	3.2	4.6	*	*	*	5.9	4.4	7.4
Obesity (E66)	3.1	3.4	2.8	1.6	2.0	1.1	3.5	3.7	3.4	0.4	0.4	0.3	4.8	4.6	5.0	5.5	*	*	3.5	3.9	3.2
Parkinson disease (G20–G21)	12.2	15.1	9.4	4.0	4.7	3.3	4.5	5.5	3.5	5.7	7.0	4.6	5.0	5.9	4.1	3.7	*	*	17.5	21.7	13.4
Alzheimer disease (G30)	40.7	25.4	55.6	16.1	9.9	22.4	15.7	8.7	22.4	17.5	11.1	23.4	26.2	15.5	35.9	12.7	9.7	15.8	55.5	34.8	75.5
Major cardiovascular diseases (I00–I78)	280.2	298.5	262.5	109.1	118.8	99.3	191.1	215.0	168.0	133.6	144.9	123.3	305.1	332.1	280.3	206.4	233.1	179.2	351.6	372.4	331.5
Diseases of heart (I00–I09, I11,I13,I20–I51)	211.5	235.9	187.9	78.8	89.6	67.9	144.3	173.9	115.7	89.1	103.0	76.4	224.3	252.4	198.5	150.6	176.5	124.3	268.9	298.7	239.9
Essential hypertension and hypertensive renal disease (I10,I12,I15)	12.7	11.8	13.6	6.0	5.8	6.2	9.9	9.5	10.3	9.0	8.3	9.7	19.4	19.6	19.1	9.6	9.4	9.9	14.2	12.8	15.5

See footnotes at end of table.

Table 9. Death rate for selected causes, by Hispanic origin and race and sex: United States, 2020—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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision* (ICD-10); see Technical Notes]

Cause of death (based on ICD-10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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
Cerebrovascular diseases (I60–I69)	48.6	42.9	54.2	21.8	20.6	23.0	31.8	27.3	36.1	32.1	29.9	34.1	53.9	51.8	55.9	38.8	38.5	39.1	59.2	50.9	67.3
Atherosclerosis (I70)	1.4	1.3	1.6	0.5	0.5	0.5	0.9	*	*	0.9	0.9	0.9	1.2	1.1	1.4	*	*	*	1.9	1.7	2.0
Aortic aneurysm and dissection (I71)	2.8	3.4	2.2	0.9	1.1	0.6	1.5	*	1.7	1.5	1.9	1.2	2.7	3.4	2.0	3.9	*	*	3.7	4.4	3.0
Influenza and pneumonia (J09–J18)	16.3	17.1	15.4	8.0	8.6	7.3	17.6	17.9	17.2	10.5	12.4	8.8	16.5	18.1	15.1	13.0	11.3	14.8	19.8	20.5	19.1
Chronic lower respiratory diseases (J40–J47)	46.3	45.0	47.7	9.7	9.8	9.6	30.6	29.7	31.5	10.1	12.4	8.0	29.7	31.2	28.3	18.1	18.4	17.8	66.4	63.5	69.1
Pneumonitis due to solids and liquids (J69)	5.6	6.5	4.6	1.9	2.1	1.6	3.8	4.6	3.0	2.9	3.4	2.5	4.8	5.5	4.1	*	*	*	7.3	8.7	6.0
Chronic liver disease and cirrhosis (K70,K73–K74)	15.7	20.1	11.4	13.1	17.9	8.3	60.0	63.8	56.4	4.4	6.2	2.7	9.8	12.4	7.4	6.0	*	6.6	18.7	23.7	13.9
Alcoholic liver disease (K70)	9.0	12.4	5.6	7.7	11.9	3.3	46.3	50.5	42.3	2.1	3.6	0.7	5.3	7.0	3.7	*	*	*	10.6	14.3	6.9
Cholelithiasis and other disorders of gallbladder (K80–K82)	1.2	1.2	1.2	0.6	0.7	0.6	1.7	1.8	1.7	0.7	0.7	0.7	0.9	0.8	1.0	*	*	*	1.5	1.6	1.5
Nephritis, nephrotic syndrome and nephrosis (N00–N07, N17–N19,N25–N27)	15.9	16.8	15.1	7.7	8.1	7.2	14.3	13.8	14.7	8.3	9.1	7.6	25.4	26.1	24.9	15.0	14.5	15.5	17.8	19.0	16.6
Pregnancy, childbirth and the puerperium (O00–O99)	0.4	...	0.8	0.4	...	0.8	0.8	...	1.6	0.2	...	0.4	1.0	...	2.0	*	...	*	0.3	...	0.5
Certain conditions originating in the perinatal period (P00–P96)	2.9	3.3	2.6	3.5	3.8	3.1	2.7	3.2	2.2	1.4	1.7	1.1	7.4	8.7	6.3	3.7	*	*	1.8	2.1	1.6
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	2.9	3.1	2.7	2.7	2.8	2.6	3.7	3.9	3.4	1.4	1.4	1.4	3.5	3.9	3.1	5.2	*	*	3.0	3.2	2.9
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	10.3	10.2	10.5	4.3	5.1	3.4	13.4	17.0	10.0	3.9	4.0	3.9	12.8	14.2	11.5	6.4	7.4	*	12.5	11.7	13.3
COVID-19 (U07.1)	106.5	118.6	94.7	106.4	132.0	80.3	175.3	193.0	158.2	65.5	81.1	51.3	136.1	150.8	122.6	103.2	128.7	77.3	106.3	113.4	99.3

See footnotes at end of table.

Table 9. Death rate for selected causes, by Hispanic origin and race and sex: United States, 2020—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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision* (ICD-10); see Technical Notes]

Cause of death (based on ICD-10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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
Accidents (unintentional injuries) (V01–X59, Y85–Y86)	61.0	82.1	40.5	37.8	56.9	18.2	101.2	131.3	72.0	17.5	24.0	11.6	69.2	102.6	38.6	36.5	52.4	20.4	71.4	92.3	51.1
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)	12.9	18.9	7.0	11.5	17.2	5.7	26.2	34.5	18.2	4.1	5.6	2.7	19.0	29.1	9.8	9.1	12.9	*	12.9	18.8	7.2
Falls (W00–W19)	12.8	13.2	12.4	4.2	5.0	3.4	10.7	12.3	9.1	5.5	6.2	4.8	4.9	5.9	3.9	5.2	*	*	18.3	18.4	18.2
Accidental discharge of firearms (W32–W34)	0.2	0.3	0.0	0.1	0.2	*	*	*	*	*	*	*	0.3	0.6	*	*	*	*	0.2	0.3	0.0
Accidental drowning and submersion (W65–W74)	1.3	2.0	0.6	1.0	1.7	0.3	2.6	3.9	*	1.0	1.6	0.4	1.7	2.8	0.7	3.7	6.8	*	1.3	1.9	0.7
Accidental hanging, strangulation, and suffocation (W75–W84)	2.1	2.5	1.7	0.9	1.2	0.7	2.9	4.0	1.8	0.8	0.9	0.8	2.7	3.1	2.2	*	*	*	2.4	2.9	2.0
Accidental exposure to smoke, fire and flames. (X00–X09)	0.9	1.1	0.7	0.3	0.4	0.2	1.9	2.1	1.8	0.2	0.2	*	1.4	1.8	1.0	*	*	*	1.1	1.3	0.8
Accidental poisoning and exposure to noxious substances (X40–X49)	26.5	38.3	15.1	17.4	27.8	6.9	47.4	61.1	34.3	4.4	7.5	1.6	35.0	53.4	18.2	13.2	20.4	*	29.8	41.6	18.3
Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)	14.0	22.5	5.6	7.5	12.0	2.9	24.2	37.1	11.6	6.7	9.9	3.9	7.9	13.5	2.9	12.9	21.0	*	18.0	29.1	7.2
Intentional self-harm (suicide) by poisoning (X60–X69)	1.7	1.7	1.6	0.7	0.8	0.6	2.1	1.8	2.4	0.9	0.8	0.9	0.7	0.7	0.7	*	*	*	2.3	2.4	2.2

See footnotes at end of table.

Table 9. Death rate for selected causes, by Hispanic origin and race and sex: United States, 2020—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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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
Intentional self-harm (suicide) by hanging, strangulation and suffocation(X70)	3.8	6.0	1.6	3.1	4.8	1.3	11.3	16.4	6.4	2.8	4.0	1.8	2.0	3.3	0.9	7.8	13.3	*	4.4	7.0	1.8
Intentional self-harm (suicide) by discharge of firearms(X72–X74)	7.4	13.1	1.9	2.9	5.1	0.7	9.3	16.3	2.4	1.7	3.0	0.4	4.3	8.0	0.9	3.3	*	*	10.1	17.8	2.6
Assault (homicide)(*U01–*U02, X85–Y09, Y87.1)	7.5	12.3	2.8	6.4	10.6	2.1	14.1	22.2	6.3	1.5	2.2	0.8	32.6	59.1	8.2	8.0	13.6	*	3.1	4.3	2.0
Assault (homicide) by discharge of firearms(*U01.4,X93–X95)	5.9	10.1	1.8	4.8	8.3	1.2	7.9	13.0	2.8	0.9	1.5	0.3	28.6	53.0	6.2	5.7	10.0	*	2.0	2.9	1.1
Legal intervention(Y35,Y89.0)	0.2	0.5	0.0	0.3	0.5	*	*	*	*	*	*	*	0.5	0.9	*	*	*	*	0.2	0.4	0.0
Complications of medical and surgical care(Y40–Y84,Y88)	1.6	1.8	1.5	0.7	0.7	0.7	2.4	2.8	2.0	0.6	0.7	0.5	2.1	2.1	2.0	*	*	*	2.0	2.2	1.7
Dementia-related causes ⁴	92.3	61.1	122.5	30.2	19.9	40.7	35.5	23.3	47.4	36.8	24.7	47.8	62.3	41.5	81.4	27.9	23.0	32.9	127.2	84.2	169.0
Drug-induced deaths ⁴	29.2	41.1	17.6	18.0	28.2	7.7	44.2	53.7	35.1	5.1	8.1	2.3	38.5	58.4	20.2	14.8	22.6	6.9	33.2	45.0	21.6
Drug overdose deaths ⁴	27.9	39.3	16.8	17.3	27.1	7.3	41.5	50.5	32.7	4.8	7.6	2.3	36.8	55.8	19.4	14.0	21.3	6.6	31.7	43.1	20.6
Alcohol-induced deaths ⁴	14.9	21.6	8.4	11.0	17.6	4.2	73.0	87.2	59.3	3.2	5.5	1.1	10.4	15.4	5.9	4.1	*	*	17.8	25.3	10.5
Injury by firearms ⁴	13.7	24.0	3.7	8.2	14.2	2.0	18.5	31.9	5.5	2.7	4.7	0.8	33.7	62.7	7.2	9.5	16.8	*	12.5	21.5	3.8

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

... Category not applicable.

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

²Includes persons of Hispanic origin of any race; see Technical Notes.

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

⁴Included in selected categories above. 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 10. Age-adjusted death rate for selected causes, by Hispanic origin and race and sex: United States, 2020

[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 race should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD-10)*; see Technical Notes]

Cause of death (based on ICD-10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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	835.4	998.3	695.1	723.6	903.8	570.1	1,036.2	1,205.9	881.5	457.7	557.4	378.5	1,119.0	1,399.0	905.2	821.3	947.9	699.8	834.7	985.0	703.1
Enterocolitis due to <i>Clostridium</i> <i>difficile</i> (A04.7)	1.0	1.0	1.0	0.8	0.9	0.8	1.3	*	*	0.4	0.5	0.4	1.1	1.2	1.0	*	*	*	1.0	1.0	1.0
Septicemia (A40-A41)	9.7	10.8	8.9	7.2	8.2	6.4	12.1	12.6	11.7	4.5	5.6	3.7	16.9	19.1	15.3	11.0	11.8	10.3	9.5	10.5	8.7
Viral hepatitis (B15-B19)	0.9	1.3	0.6	1.2	1.5	0.8	2.3	2.9	1.8	1.0	1.4	0.7	1.2	1.7	0.8	*	*	*	0.9	1.1	0.6
Human immunodeficiency virus (HIV) disease (B20-B24)	1.4	2.1	0.7	1.3	2.3	0.4	1.4	2.1	*	0.2	0.4	*	6.0	8.6	3.8	*	*	*	0.7	1.1	0.2
Malignant neoplasms (C00-C97)	144.1	170.3	124.5	103.6	122.1	90.4	122.1	137.1	110.3	89.4	103.7	79.1	169.0	207.9	144.8	140.8	148.9	135.6	150.5	177.4	129.9
Malignant neoplasms of lip, oral cavity and pharynx (C00-C14)	2.6	3.9	1.4	1.4	2.3	0.8	2.0	2.8	*	1.9	2.9	1.2	2.4	4.1	1.2	*	*	*	2.8	4.2	1.5
Malignant neoplasm of esophagus (C15)	3.7	6.4	1.4	1.8	3.3	0.6	2.5	4.1	*	1.4	2.4	0.7	2.7	4.5	1.5	*	*	*	4.3	7.5	1.5
Malignant neoplasm of stomach (C16)	2.8	3.6	2.1	4.5	5.5	3.8	4.0	6.0	2.4	4.1	5.2	3.3	4.8	6.7	3.5	6.1	9.9	*	2.1	2.8	1.5
Malignant neoplasms of colon, rectum and anus (C18-C21)	12.9	15.4	10.8	10.6	13.2	8.4	13.3	15.8	11.0	8.8	10.5	7.5	17.2	22.2	13.7	11.0	12.3	9.4	13.0	15.3	11.0
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	6.6	9.4	4.1	8.8	12.2	5.9	9.9	13.8	6.7	7.9	11.8	4.8	7.9	12.3	4.6	12.6	16.7	8.8	5.9	8.5	3.8
Malignant neoplasm of pancreas (C25)	11.1	12.7	9.6	8.7	9.3	8.1	8.9	9.5	8.5	7.5	8.0	7.0	13.6	15.3	12.3	9.3	9.4	9.4	11.4	13.2	9.7
Malignant neoplasms of trachea, bronchus and lung (C33-C34)	31.9	38.1	27.0	14.1	18.5	10.8	26.5	29.6	24.0	18.2	23.3	14.3	33.8	46.3	25.4	26.7	33.9	20.3	35.1	40.9	30.5
Malignant melanoma of skin (C43)	2.0	2.9	1.3	0.6	0.8	0.5	*	*	*	0.3	0.4	0.3	0.3	0.3	0.3	*	*	*	2.7	3.8	1.7
Malignant neoplasm of breast (C50)	10.5	0.3	19.1	7.2	0.2	13.1	7.7	*	14.0	6.2	*	11.0	15.6	0.5	26.7	12.1	*	23.3	10.6	0.3	19.4
Malignant neoplasm of cervix uteri (C53)	1.1	...	2.2	1.3	...	2.4	1.1	...	2.1	0.9	...	1.6	1.8	...	3.3	*	...	*	1.1	...	2.1
Malignant neoplasm of ovary (C56)	3.2	...	5.9	2.5	...	4.5	2.9	...	5.4	2.4	...	4.3	3.2	...	5.5	*	...	*	3.4	...	6.3

See footnotes at end of table.

Table 10. Age-adjusted death rate for selected causes, by Hispanic origin and race and sex: United States, 2020—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 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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD–10)*; see Technical Notes]

Cause of death (based on ICD–10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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 neoplasm of prostate (C61)	7.8	18.5	...	5.9	14.2	...	5.2	12.2	...	3.5	8.5	...	14.0	37.0	...	7.4	16.1	...	7.5	17.7	...
Malignant neoplasms of kidney and renal pelvis (C64–C65)	3.4	5.1	2.1	3.1	4.6	1.9	4.8	6.5	3.3	1.6	2.3	1.1	3.5	5.2	2.2	*	*	*	3.6	5.3	2.2
Malignant neoplasm of bladder (C67)	4.0	6.8	1.9	2.1	3.5	1.2	2.4	3.8	*	1.6	2.8	0.8	3.2	4.8	2.1	*	*	*	4.5	7.7	2.1
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	4.5	5.5	3.6	3.1	3.6	2.6	2.3	2.1	2.5	2.5	3.2	1.9	2.9	3.6	2.4	3.6	*	*	5.2	6.4	4.2
Non–Hodgkin lymphoma (C82–C85)	4.9	6.4	3.7	4.3	5.5	3.3	3.7	5.0	2.7	3.4	4.3	2.8	3.6	4.9	2.7	3.7	*	*	5.2	6.8	3.9
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	3.1	4.0	2.5	2.5	3.1	2.1	1.9	1.9	1.9	1.5	2.1	1.1	5.9	7.2	5.0	*	*	*	2.9	3.8	2.3
Leukemia (C91–C95)	5.8	7.6	4.3	4.0	5.0	3.2	3.4	4.1	2.7	3.0	4.0	2.3	5.1	6.8	3.9	4.4	*	*	6.2	8.3	4.6
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	4.0	4.9	3.2	2.5	3.0	2.1	3.0	3.0	3.0	2.3	3.0	1.8	3.9	4.5	3.6	*	*	*	4.3	5.4	3.5
Anemias (D50–D64)	1.4	1.5	1.3	1.0	1.0	1.0	1.5	*	1.5	0.6	0.7	0.6	3.0	3.2	2.8	*	*	*	1.2	1.3	1.1
Diabetes mellitus (E10–E14)	24.8	31.2	19.5	30.9	37.8	25.2	52.1	61.6	43.4	18.6	23.5	14.6	47.5	58.1	39.6	48.9	53.3	43.7	21.2	27.3	16.0
Nutritional deficiencies (E40–E64)	3.5	3.2	3.7	2.5	2.5	2.4	4.5	3.4	5.3	1.7	1.8	1.7	4.5	4.6	4.3	*	*	*	3.7	3.3	3.9
Obesity (E66)	2.7	3.1	2.4	1.9	2.4	1.3	3.4	3.8	3.1	0.3	0.4	0.3	4.7	4.7	4.7	5.8	*	*	2.7	3.1	2.3
Parkinson disease (G20–G21)	9.9	14.5	6.6	7.2	10.4	5.0	5.1	7.4	3.4	5.9	8.2	4.2	5.7	8.9	3.9	5.4	*	*	10.9	16.0	7.3
Alzheimer disease (G30)	32.4	25.3	37.0	29.0	23.1	32.6	19.1	12.6	23.7	17.5	13.4	20.1	31.6	25.4	34.6	18.8	16.9	20.2	34.0	26.4	39.0
Major cardiovascular diseases (I00–I78)	223.0	271.8	181.8	171.1	210.7	138.1	198.2	238.3	163.2	130.6	158.9	108.1	317.4	395.1	258.6	241.2	282.2	201.7	222.9	271.2	181.4
Diseases of heart (I00–I09, I11,I13,I20–I51)	168.2	214.2	130.2	122.7	157.5	94.3	148.4	191.0	112.0	86.9	112.2	66.9	231.6	297.4	182.6	173.5	209.8	138.8	170.8	217.3	131.7
Essential hypertension and hypertensive renal disease (I10,I12,I15)	10.1	10.7	9.3	9.5	10.6	8.6	10.4	10.4	10.0	8.9	9.4	8.3	20.3	23.6	17.6	12.0	12.5	11.4	8.9	9.2	8.4

See footnotes at end of table.

Table 10. Age-adjusted death rate for selected causes, by Hispanic origin and race and sex: United States, 2020—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 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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD–10)*; see Technical Notes]

Cause of death (based on ICD–10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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
Cerebrovascular diseases (I60–I69)	38.8	39.8	37.4	34.9	37.8	32.1	34.0	32.1	35.3	31.6	33.3	30.0	57.6	64.2	52.1	47.0	48.3	45.3	37.2	37.4	36.5
Atherosclerosis (I70)	1.1	1.2	1.0	0.9	1.0	0.8	0.9	*	*	0.9	1.1	0.8	1.4	1.4	1.2	*	*	*	1.2	1.3	1.0
Aortic aneurysm and dissection (I71)	2.3	3.1	1.6	1.2	1.8	0.8	1.6	*	1.9	1.5	2.0	1.0	2.8	3.9	1.9	4.7	*	*	2.4	3.2	1.7
Influenza and pneumonia (J09–J18)	13.0	15.8	11.0	12.1	15.0	9.9	18.5	20.6	16.5	10.4	14.0	7.7	17.2	22.0	14.0	15.5	15.5	16.0	12.7	15.1	11.0
Chronic lower respiratory diseases (J40–J47)	36.4	40.2	33.6	15.9	19.5	13.4	30.6	32.8	28.8	10.1	14.3	7.1	30.6	38.2	25.6	22.1	24.1	20.5	41.4	44.5	39.0
Pneumonitis due to solids and liquids (J69)	4.4	6.2	3.2	3.0	4.1	2.2	4.1	5.5	2.9	2.9	3.9	2.2	5.1	7.2	3.8	*	*	*	4.6	6.4	3.4
Chronic liver disease and cirrhosis (K70,K73–K74)	13.3	17.5	9.4	16.4	22.8	10.2	60.5	65.3	56.1	4.1	6.1	2.4	9.0	12.1	6.6	6.4	*	6.3	14.0	18.0	10.3
Alcoholic liver disease (K70)	7.9	10.9	5.0	8.9	14.4	3.7	47.2	51.6	43.2	1.9	3.5	0.6	4.8	6.7	3.4	*	*	*	8.4	11.3	5.8
Cholelithiasis and other disorders of gallbladder (K80–K82)	1.0	1.1	0.8	1.0	1.2	0.8	1.9	2.2	1.6	0.7	0.8	0.6	1.0	1.0	0.9	*	*	*	1.0	1.2	0.8
Nephritis, nephrotic syndrome and nephrosis (N00–N07, N17–N19,N25–N27)	12.7	15.4	10.7	11.7	14.1	9.8	14.7	15.8	13.8	8.2	10.0	6.8	26.5	31.7	22.9	17.4	17.7	16.9	11.2	13.8	9.3
Pregnancy, childbirth and the puerperium (O00–O99)	0.4	...	0.9	0.4	...	0.8	0.8	...	1.6	0.2	...	0.4	1.0	...	2.1	*	...	*	0.3	...	0.7
Certain conditions originating in the perinatal period (P00–P96)	3.6	3.9	3.2	3.0	3.3	2.7	3.2	3.7	2.7	1.9	2.1	1.6	8.1	8.9	7.3	3.8	*	*	2.8	3.0	2.5
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	3.1	3.2	2.9	2.5	2.6	2.4	4.0	4.3	3.7	1.6	1.5	1.7	3.6	4.0	3.3	5.1	*	*	3.2	3.4	3.0
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	8.9	9.8	7.9	5.4	6.7	4.1	13.9	17.9	10.0	3.9	4.4	3.5	13.4	15.9	11.3	6.7	8.1	*	8.9	9.5	8.1
COVID-19 (U07.1)	85.0	107.7	66.6	155.5	214.5	107.5	175.9	208.8	147.9	63.1	86.3	44.9	142.0	185.5	112.6	112.4	145.7	81.3	66.6	82.0	54.3

See footnotes at end of table.

Table 10. Age-adjusted death rate for selected causes, by Hispanic origin and race and sex: United States, 2020—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 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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD–10)*; see Technical Notes]

Cause of death (based on ICD–10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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
Accidents (unintentional injuries) (V01–X59, Y85–Y86)	57.6	80.5	35.6	41.2	62.3	20.3	103.4	134.4	73.7	16.9	24.4	10.5	68.3	103.8	37.5	37.7	54.0	21.0	63.2	85.8	41.1
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)	12.5	18.4	6.8	11.7	17.5	5.8	26.6	35.0	18.6	3.9	5.5	2.5	18.6	28.6	9.6	9.2	13.3	*	12.2	17.7	6.8
Falls (W00–W19)	10.3	12.5	8.4	6.4	8.5	4.8	11.4	14.1	9.1	5.4	7.0	4.2	5.2	7.6	3.7	6.7	*	*	11.6	13.8	9.8
Accidental discharge of firearms (W32–W34)	0.2	0.3	0.0	0.1	0.2	*	*	*	*	*	*	*	0.3	0.6	*	*	*	*	0.2	0.3	0.1
Accidental drowning and submersion (W65–W74)	1.3	1.9	0.6	1.0	1.7	0.3	2.5	3.8	*	1.0	1.6	0.4	1.7	2.8	0.7	3.6	6.4	*	1.2	1.8	0.6
Accidental hanging, strangulation, and suffocation (W75–W84)	1.8	2.4	1.4	1.2	1.5	0.8	3.0	4.3	1.9	0.8	1.0	0.7	2.8	3.5	2.2	*	*	*	1.9	2.4	1.4
Accidental exposure to smoke, fire and flames. (X00–X09)	0.8	1.0	0.6	0.4	0.5	0.2	1.9	2.0	1.8	0.2	0.2	*	1.4	2.0	0.9	*	*	*	0.8	1.0	0.6
Accidental poisoning and exposure to noxious substances (X40–X49)	26.9	38.5	15.5	17.7	28.0	7.1	48.3	61.8	35.3	4.2	7.1	1.5	34.1	52.6	17.7	13.0	19.8	*	31.2	43.0	19.3
Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)	13.5	22.0	5.5	7.5	12.3	2.8	23.9	36.4	11.7	6.4	9.5	3.7	7.8	13.1	2.9	12.5	20.0	*	16.9	27.2	6.9
Intentional self-harm (suicide) by poisoning (X60–X69)	1.6	1.7	1.5	0.7	0.8	0.6	2.2	1.9	2.5	0.8	0.8	0.9	0.7	0.7	0.7	*	*	*	2.1	2.2	2.0

See footnotes at end of table.

Table 10. Age-adjusted death rate for selected causes, by Hispanic origin and race and sex: United States, 2020—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 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. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision (ICD–10)*; see Technical Notes]

Cause of death (based on ICD–10)	Non-Hispanic, single race																				
	Total ¹			Hispanic ²			American Indian or Alaska Native ³			Asian ³			Black ³			Native Hawaiian or Other Pacific Islander ³			White ³		
	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
Intentional self-harm (suicide) by hanging, strangulation and suffocation(X70)	3.9	6.1	1.7	3.1	4.9	1.3	11.3	16.1	6.5	2.7	3.9	1.7	2.0	3.1	0.9	7.5	12.4	*	4.6	7.2	1.9
Intentional self-harm (suicide) by discharge of firearms(X72–X74)	7.0	12.5	1.8	2.9	5.3	0.7	8.9	15.9	2.2	1.6	3.0	0.4	4.2	7.9	0.9	3.2	*	*	9.0	16.0	2.5
Assault (homicide)(*U01–*U02, X85–Y09, Y87.1)	7.8	12.6	2.9	6.2	10.1	2.1	14.4	22.4	6.6	1.4	2.2	0.8	32.0	56.5	8.4	7.5	12.7	*	3.2	4.5	2.0
Assault (homicide) by discharge of firearms(*U01.4,X93–X95)	6.2	10.4	1.9	4.6	7.8	1.2	7.9	12.9	2.9	0.9	1.4	0.3	28.0	50.4	6.3	5.4	9.2	*	2.2	3.1	1.2
Legal intervention(Y35,Y89.0)	0.3	0.5	0.0	0.3	0.5	*	*	*	*	*	*	*	0.5	0.9	*	*	*	*	0.2	0.4	0.0
Complications of medical and surgical care(Y40–Y84,Y88)	1.3	1.6	1.1	1.0	1.0	0.9	2.5	3.2	2.0	0.6	0.8	0.4	2.0	2.3	1.9	*	*	*	1.3	1.6	1.1
Dementia-related causes ⁴	73.3	60.5	81.1	54.3	46.1	59.3	43.0	32.6	49.9	36.8	30.0	41.1	74.7	66.4	78.2	40.3	37.4	42.1	77.8	63.7	86.8
Drug-induced deaths ⁴	29.5	41.1	17.9	18.4	28.5	7.9	45.1	54.2	36.4	4.9	7.7	2.2	37.3	57.3	19.7	14.6	22.1	6.9	34.5	46.3	22.5
Drug overdose deaths ⁴	28.3	39.5	17.1	17.6	27.3	7.5	42.5	51.2	34.0	4.6	7.2	2.2	35.8	54.8	18.9	13.7	20.8	6.6	33.1	44.5	21.5
Alcohol-induced deaths ⁴	13.1	19.2	7.5	12.6	20.9	4.7	74.0	88.8	60.3	2.9	5.3	1.0	9.7	15.0	5.5	4.5	*	*	14.3	20.2	8.7
Injury by firearms ⁴	13.6	23.8	3.8	7.9	13.8	1.9	18.1	31.2	5.3	2.6	4.5	0.8	33.1	59.9	7.3	9.1	15.7	*	11.6	19.9	3.7

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

... Category not applicable.

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

²Includes persons of Hispanic origin of any race; see Technical Notes.

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

⁴Included in selected categories above. 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 11. Number of deaths, death rate, and age-adjusted death rate for injury deaths, by mechanism and intent of death for all injury death and the leading causes of injury death: United States, 2020

[Totals for selected causes of death may 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 2010 census estimated as of July 1, 2020; see Technical Notes. Numbers in brackets [] apply to the code or range of codes preceding them. Asterisks (*) preceding cause-of-death codes indicate they are not part of 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)	278,345	84.5	80.9
Unintentional. (V01–X59,Y85–Y86)	200,955	61.0	57.6
Suicide (*U03,X60–X84,Y87.0)	45,979	14.0	13.5
Homicide (*U01–*U02,X85–Y09,Y87.1)	24,576	7.5	7.8
Undetermined (Y10–Y34,Y87.2,Y89.9)	6,042	1.8	1.8
Legal intervention/war (Y35–Y36,Y89[.0,.1])	793	0.2	0.3
Poisoning (*U01[.6–.7],X40–X49,X60–X69,X85–X90,Y10–Y19,Y35.2)	97,034	29.5	29.8
Unintentional. (X40–X49)	87,404	26.5	26.9
Suicide (X60–X69)	5,528	1.7	1.6
Homicide (*U01[.6–.7],X85–X90)	179	0.1	0.1
Undetermined (Y10–Y19)	3,923	1.2	1.2
Legal intervention/war (Y35.2)	–	*	*
Motor vehicle traffic (V02–V04[.1,.9],V09.2,V12–V14[.3–.9],V19[.4–.6],V20–V28[.3–.9],V29–V79[.4–.9],V80[.3–.5],V81.1,V82.1,V83–V86[.0–.3],V87[.0–.8],V89.2) ²	40,698	12.4	12.0
Occupant. (V30–V79[.4–.9],V83–V86[.0–.3]) ²	9,038	2.7	2.7
Motorcyclist (V20–V28[.3–.9],V29[.4–.9]) ²	5,289	1.6	1.6
Pedal cyclist (V12–V14[.3–.9],V19[.4–.6]) ²	806	0.2	0.2
Pedestrian (V02–V04[.1,.9],V09.2) ²	7,005	2.1	2.0
Other. (V80[.3–.5],V81.1,V82.1) ²	9	*	*
Unspecified. (V87[.0–.8],V89.2) ²	18,551	5.6	5.5
Firearm (*U01.4,W32–W34,X72–X74,X93–X95,Y22–Y24,Y35.0)	45,222	13.7	13.6
Unintentional. (W32–W34)	535	0.2	0.2
Suicide (X72–X74)	24,292	7.4	7.0
Homicide (*U01.4,X93–X95)	19,384	5.9	6.2
Undetermined (Y22–Y24)	400	0.1	0.1
Legal intervention/war (Y35.0)	611	0.2	0.2
Fall (W00–W19,X80,Y01,Y30)	43,292	13.1	10.6
Unintentional. (W00–W19)	42,114	12.8	10.3
Suicide (X80)	1,074	0.3	0.3
Homicide. (Y01)	14	*	*
Undetermined. (Y30)	90	0.0	0.0

– Quantity zero.

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

0.0 Quantity more than zero but less than 0.05.

¹For method of computation, see Technical Notes.

²Intent of death is unintentional.

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 major causes of death: United States, each state, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas, 2020

[Rates are per 100,000 population; age-adjusted rates are 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). Asterisks (*) preceding cause-of-death codes indicate they are not part of ICD-10; see Technical Notes]

Area	All causes			Malignant neoplasms (C00–C97)			Diseases of heart (I00–I09,I11,I13,I20–I51)			COVID-19 (U07.1)		
	Number	Rate	Age-adjusted rate ¹	Number	Rate	Age-adjusted rate ¹	Number	Rate	Age-adjusted rate ¹	Number	Rate	Age-adjusted rate ¹
United States ²	3,383,729	1,027.0	835.4	602,350	182.8	144.1	696,962	211.5	168.2	350,831	106.5	85.0
Alabama	64,779	1,316.2	1,057.8	10,456	212.5	161.6	14,739	299.5	237.5	6,544	133.0	103.6
Alaska	5,170	707.1	769.4	1,043	142.7	143.7	915	125.1	139.8	230	31.5	35.7
Arizona	75,747	1,020.7	800.3	12,676	170.8	127.7	14,196	191.3	144.8	8,447	113.8	87.6
Arkansas	38,108	1,257.5	1,002.4	6,496	214.4	163.8	8,621	284.5	222.5	3,523	116.3	90.2
California	319,808	812.4	705.3	59,778	151.8	130.3	66,538	169.0	144.0	31,335	79.6	68.7
Colorado	46,918	807.9	754.2	8,252	142.1	127.2	8,023	138.1	128.1	4,315	74.3	69.6
Connecticut	37,853	1,064.2	769.1	6,638	186.6	133.8	7,110	199.9	138.4	5,782	162.6	112.3
Delaware	11,072	1,122.0	835.9	2,141	217.0	151.1	2,171	220.0	159.6	1,008	102.1	73.4
District of Columbia	6,198	869.5	862.3	984	138.0	138.1	1,350	189.4	187.7	831	116.6	117.0
Florida	239,685	1,102.8	735.7	45,800	210.7	136.3	49,287	226.8	143.1	19,231	88.5	56.4
Georgia	103,075	962.4	902.1	17,827	166.5	147.6	21,116	197.2	183.7	9,453	88.3	81.7
Hawaii	12,033	855.2	588.0	2,519	179.0	123.8	2,623	186.4	125.0	342	24.3	16.8
Idaho	16,402	897.8	784.4	3,004	164.4	136.5	3,191	174.7	151.9	1,358	74.3	63.9
Illinois	132,663	1,053.9	850.7	24,015	190.8	150.9	27,460	218.2	171.4	15,735	125.0	99.2
Indiana	78,194	1,157.6	967.1	13,664	202.3	162.7	15,169	224.6	183.9	8,527	126.2	103.2
Iowa	35,981	1,137.4	848.6	6,304	199.3	147.8	7,499	237.0	172.9	4,336	137.1	99.0
Kansas	32,060	1,100.3	882.2	5,538	190.1	151.4	6,264	215.0	167.0	3,344	114.8	90.5
Kentucky	55,880	1,248.1	1,031.6	10,181	227.4	177.3	11,345	253.4	204.5	4,132	92.3	74.2
Louisiana	56,752	1,221.7	1,044.7	9,195	197.9	159.9	12,255	263.8	221.5	6,533	140.6	118.0
Maine	15,740	1,165.8	787.2	3,432	254.2	161.5	3,035	224.8	146.2	420	31.1	20.2
Maryland	60,072	992.0	820.5	10,799	178.3	142.3	12,624	208.5	168.3	6,000	99.1	80.9
Massachusetts	68,223	989.7	756.7	12,376	179.5	135.2	11,781	170.9	126.9	9,319	135.2	100.2
Michigan	117,106	1,175.0	907.7	21,158	212.3	157.3	27,127	272.2	205.0	11,391	114.3	85.9
Minnesota	52,372	925.7	739.6	9,944	175.8	138.7	8,562	151.3	118.1	5,215	92.2	71.9
Mississippi	40,190	1,354.7	1,138.7	6,582	221.9	176.0	8,809	296.9	245.6	4,466	150.5	123.5
Missouri	73,887	1,201.1	937.6	12,907	209.8	157.9	15,934	259.0	196.7	7,137	116.0	87.1
Montana	12,027	1,113.0	839.4	2,138	197.9	141.5	2,424	224.3	162.7	1,119	103.6	75.5
Nebraska	19,549	1,009.0	817.2	3,541	182.8	147.6	3,532	182.3	143.8	2,043	105.4	84.4
Nevada	30,618	975.6	853.3	5,450	173.7	144.1	7,285	232.1	201.3	3,238	103.2	88.4
New Hampshire	13,700	1,002.7	737.8	2,826	206.8	145.0	2,814	206.0	146.5	779	57.0	40.9
New Jersey	96,003	1,080.8	834.4	15,576	175.4	133.4	19,744	222.3	166.3	16,497	185.7	141.6
New Mexico	23,807	1,130.3	912.5	3,649	173.2	129.8	4,219	200.3	152.7	2,841	134.9	106.2
New York	203,341	1,051.6	797.1	32,955	170.4	128.8	48,546	251.1	183.9	35,736	184.8	139.1
North Carolina	109,449	1,032.5	856.4	19,996	188.6	148.4	20,373	192.2	156.2	7,892	74.4	60.4
North Dakota	8,052	1,052.1	848.8	1,308	170.9	139.5	1,449	189.3	147.3	1,210	158.1	121.9
Ohio	143,700	1,228.9	953.9	24,863	212.6	159.1	30,547	261.2	196.9	13,605	116.3	87.3
Oklahoma	47,809	1,201.0	1,011.6	8,368	210.2	171.1	11,758	295.4	244.1	4,847	121.8	100.3
Oregon	40,220	948.2	741.2	8,283	195.3	145.8	7,371	173.8	134.0	1,434	33.8	26.0
Pennsylvania	155,546	1,216.8	866.0	27,955	218.7	153.2	32,936	257.6	175.7	16,609	129.9	88.1
Rhode Island	11,819	1,118.0	806.6	2,076	196.4	141.6	2,319	219.4	150.5	1,585	149.9	104.3
South Carolina	61,223	1,173.3	937.6	10,786	206.7	153.9	11,385	218.2	170.9	5,277	101.1	77.7
South Dakota	9,861	1,104.6	868.1	1,730	193.8	148.1	1,820	203.9	155.2	1,496	167.6	127.0
Tennessee	84,205	1,222.7	1,015.1	14,436	209.6	164.4	17,943	260.5	212.0	6,838	99.3	80.3
Texas	250,339	852.6	862.1	42,142	143.5	139.8	50,281	171.3	173.9	30,840	105.0	105.2
Utah	21,497	661.5	765.3	3,460	106.5	119.5	4,251	130.8	155.6	1,365	42.0	48.6
Vermont	6,459	1,036.2	737.7	1,400	224.6	152.2	1,521	244.0	167.1	144	23.1	16.0
Virginia	80,596	938.2	792.8	15,499	180.4	146.6	15,678	182.5	152.0	5,821	67.8	56.3
Washington	63,146	820.8	711.2	12,796	166.3	138.7	12,084	157.1	134.6	3,284	42.7	36.7
West Virginia	26,106	1,462.7	1,055.8	4,725	264.7	177.0	5,123	287.0	197.8	1,483	83.1	56.2
Wisconsin	62,706	1,075.1	828.4	11,654	199.8	148.7	12,641	216.7	162.2	5,432	93.1	70.2
Wyoming	5,983	1,027.4	842.0	1,029	176.7	136.3	1,174	201.6	160.4	462	79.3	63.1
Puerto Rico	32,008	1,013.1	648.1	5,330	168.7	106.6	5,565	176.1	105.6	1,402	44.4	28.5
U.S. Virgin Islands	701	659.5	544.2	125	117.6	84.9	140	131.7	103.2	19	*	*
Guam	1,167	692.6	930.0	193	114.5	145.3	335	198.8	280.0	112	66.5	76.1
American Samoa	---	---	---	---	---	---	---	---	---	---	---	---
Northern Marianas	219	422.4	716.3	43	82.9	130.2	34	65.6	104.0	2	*	*

See footnotes at end of table.

Table 12. 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, 2020—Con.

[Rates are per 100,000 population; age-adjusted rates are 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)*. Asterisks (*) preceding cause-of-death codes indicate they are not part of ICD-10; see Technical Notes]

Area	Motor vehicle accidents ³			Drug overdose (X40–X44, X60–X64, X85, Y10–Y14)			Intentional self-harm (suicide) (*U03, X60–X84, Y87.0)			Assault (homicide) (*U01–*U02, X85–Y09, Y87.1)		
	Number	Rate	Age-adjusted rate ¹	Number	Rate	Age-adjusted rate ¹	Number	Rate	Age-adjusted rate ¹	Number	Rate	Age-adjusted rate ¹
United States ²	42,339	12.9	12.5	91,799	27.9	28.3	45,979	14.0	13.5	24,576	7.5	7.8
Alabama	983	20.0	19.9	1,029	20.9	22.3	793	16.1	16.0	654	13.3	14.2
Alaska	81	11.1	11.0	160	21.9	22.0	204	27.9	27.5	55	7.5	7.3
Arizona	1,041	14.0	13.6	2,550	34.4	35.8	1,363	18.4	17.6	525	7.1	7.5
Arkansas	683	22.5	22.5	546	18.0	19.1	583	19.2	19.0	371	12.2	13.0
California	4,462	11.3	10.9	8,908	22.6	21.8	4,144	10.5	10.0	2,368	6.0	6.1
Colorado	676	11.6	11.3	1,492	25.7	24.9	1,302	22.4	21.5	336	5.8	5.8
Connecticut	325	9.1	8.9	1,371	38.5	39.1	364	10.2	9.3	152	4.3	4.6
Delaware	124	12.6	12.0	444	45.0	47.3	124	12.6	12.3	86	8.7	9.9
District of Columbia	44	6.2	6.1	424	59.5	58.1	38	5.3	5.5	187	26.2	24.4
Florida	3,517	16.2	15.7	7,231	33.3	35.0	3,135	14.4	13.2	1,530	7.0	7.8
Georgia	1,793	16.7	16.3	1,916	17.9	18.0	1,491	13.9	13.7	1,093	10.2	10.5
Hawaii	88	6.3	5.8	274	19.5	18.3	184	13.1	12.9	46	3.3	3.3
Idaho	243	13.3	13.2	287	15.7	15.9	419	22.9	23.2	42	2.3	2.5
Illinois	1,318	10.5	10.2	3,549	28.2	28.1	1,362	10.8	10.5	1,353	10.7	11.2
Indiana	952	14.1	13.8	2,321	34.4	36.7	1,024	15.2	15.0	620	9.2	9.7
Iowa	366	11.6	11.4	432	13.7	14.3	552	17.4	18.0	106	3.4	3.6
Kansas	427	14.7	14.1	490	16.8	17.4	531	18.2	18.4	195	6.7	7.0
Kentucky	858	19.2	18.9	2,083	46.5	49.2	801	17.9	17.7	404	9.0	9.5
Louisiana	853	18.4	18.2	1,896	40.8	42.7	642	13.8	13.7	873	18.8	19.9
Maine	188	13.9	13.1	496	36.7	39.7	234	17.3	16.4	21	1.6	1.6
Maryland	632	10.4	10.2	2,771	45.8	44.6	585	9.7	9.2	649	10.7	11.4
Massachusetts	383	5.6	5.1	2,302	33.4	33.9	618	9.0	8.4	183	2.7	2.7
Michigan	1,218	12.2	11.8	2,759	27.7	28.6	1,444	14.5	14.0	811	8.1	8.7
Minnesota	496	8.8	8.5	1,050	18.6	19.0	758	13.4	13.1	198	3.5	3.6
Mississippi	843	28.4	28.6	586	19.8	21.1	410	13.8	13.9	576	19.4	20.5
Missouri	1,034	16.8	16.8	1,875	30.5	32.1	1,125	18.3	18.2	803	13.1	14.0
Montana	207	19.2	19.6	162	15.0	15.6	300	27.8	26.1	65	6.0	6.6
Nebraska	238	12.3	11.9	214	11.0	11.3	283	14.6	14.9	76	3.9	4.1
Nevada	361	11.5	11.1	832	26.5	26.0	603	19.2	18.2	217	6.9	7.3
New Hampshire	121	8.9	8.1	393	28.8	30.3	234	17.1	16.4	14	*	*
New Jersey	624	7.0	6.6	2,840	32.0	32.1	679	7.6	7.1	362	4.1	4.3
New Mexico	421	20.0	20.0	784	37.2	39.0	516	24.5	24.2	216	10.3	10.8
New York	1,204	6.2	6.0	4,965	25.7	25.4	1,642	8.5	8.0	875	4.5	4.7
North Carolina	1,771	16.7	16.3	3,146	29.7	30.9	1,441	13.6	13.2	884	8.3	8.6
North Dakota	104	13.6	13.3	114	14.9	15.6	135	17.6	18.2	30	3.9	4.4
Ohio	1,372	11.7	11.5	5,204	44.5	47.2	1,644	14.1	13.8	1,004	8.6	9.1
Oklahoma	717	18.0	17.7	762	19.1	19.4	869	21.8	21.9	342	8.6	9.0
Oregon	526	12.4	11.8	803	18.9	18.7	833	19.6	18.3	157	3.7	3.8
Pennsylvania	1,242	9.7	9.3	5,168	40.4	42.4	1,694	13.3	12.6	994	7.8	8.5
Rhode Island	74	7.0	6.2	397	37.6	38.2	94	8.9	8.5	29	2.7	3.0
South Carolina	1,115	21.4	21.3	1,739	33.3	34.9	868	16.6	16.3	622	11.9	12.7
South Dakota	153	17.1	16.8	83	9.3	10.3	186	20.8	21.0	52	5.8	6.5
Tennessee	1,265	18.4	18.2	3,034	44.1	45.6	1,220	17.7	17.2	753	10.9	11.5
Texas	4,070	13.9	13.8	4,172	14.2	14.1	3,924	13.4	13.3	2,212	7.5	7.6
Utah	322	9.9	10.2	622	19.1	20.5	651	20.0	20.8	95	2.9	2.9
Vermont	68	10.9	9.5	190	30.5	32.9	117	18.8	18.1	14	*	*
Virginia	931	10.8	10.4	2,240	26.1	26.6	1,202	14.0	13.5	531	6.2	6.4
Washington	683	8.9	8.6	1,733	22.5	22.0	1,212	15.8	15.2	322	4.2	4.2
West Virginia	303	17.0	16.3	1,330	74.5	81.4	354	19.8	19.4	114	6.4	7.0
Wisconsin	704	12.1	11.6	1,531	26.2	27.7	866	14.8	14.5	334	5.7	6.1
Wyoming	115	19.7	18.8	99	17.0	17.4	182	31.3	30.5	25	4.3	4.9

Table 12. 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, 2020—Con.

[Rates are per 100,000 population; age-adjusted rates are 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). Asterisks (*) preceding cause-of-death codes indicate they are not part of ICD–10; see Technical Notes]

Area	Motor vehicle accidents ³			Drug overdose (X40–X44, X60–X64, X85, Y10–Y14)			Intentional self-harm (suicide) (*U03, X60–X84, Y87.0)			Assault (homicide) (*U01–*U02, X85–Y09, Y87.1)		
	Number	Rate	Age-adjusted rate ¹	Number	Rate	Age-adjusted rate ¹	Number	Rate	Age-adjusted rate ¹	Number	Rate	Age-adjusted rate ¹
Puerto Rico	256	8.1	7.5	150	4.7	5.0	183	5.8	5.2	501	15.9	17.3
U.S. Virgin Islands	11	*	*	2	*	*	5	*	*	43	40.5	48.8
Guam	11	*	*	13	*	*	38	22.6	24.0	7	*	*
American Samoa	---	---	---	---	---	---	---	---	---	---	---	---
Northern Marianas	2	*	*	—	*	*	3	*	*	2	*	*

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

--- Data not available.

— Quantity zero.

¹Death 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.

²Excludes data for Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas.

³ICD–10 codes for Motor vehicle accidents are V02–V04, V09.0, V09.2, V12–V14, V19.0–V19.2, V19.4–V19.6, V20–V79, V80.3–V80.5, V81.0–V81.1, V82.0–V82.1, V83–V86, V87.0–V87.8, V88.0–V88.8, V89.0, and V89.2; see Technical Notes.

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

Table 13. Infant, neonatal, and postneonatal mortality rates, by Hispanic origin and race and sex: United States, 2010–2020

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

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 origins¹									
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
Hispanic^{2,3}									
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
Non-Hispanic, single race									
American Indian or Alaska Native^{2,4}:									
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^{2,4}:									
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^{2,4}:									
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^{2,4}:									
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^{2,4}:									
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
Non-Hispanic, bridged race									
Black^{2,5}:									
2020.....	10.76	11.67	9.82	6.66	7.21	6.10	4.10	4.46	3.72
2019.....	11.04	11.87	10.18	6.98	7.51	6.43	4.06	4.36	3.75
2018.....	10.97	12.19	9.73	7.02	7.78	6.23	3.96	4.40	3.50
2017.....	11.46	12.59	10.29	7.28	8.04	6.51	4.17	4.55	3.78
2016.....	11.76	12.67	10.82	7.64	8.32	6.95	4.11	4.35	3.87
2015.....	11.73	12.75	10.67	7.60	8.16	7.02	4.13	4.59	3.65
2014.....	11.37	12.33	10.39	7.51	8.13	6.87	3.86	4.21	3.51
2013.....	11.61	12.48	10.73	7.66	8.16	7.14	3.96	4.31	3.59
2012.....	11.59	12.80	10.35	7.58	8.30	6.83	4.02	4.49	3.52
2011.....	11.98	13.13	10.80	7.85	8.53	7.14	4.14	4.60	3.67
2010.....	11.99	13.08	10.85	7.71	8.32	7.09	4.28	4.77	3.77

See footnotes at end of table.

Table 13. Infant, neonatal, and postneonatal mortality rates, by Hispanic origin and race and sex: United States, 2010–2020—Con.

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

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, bridged race—Con.									
White ^{2,5} :									
2020	4.38	4.73	4.02	2.90	3.10	2.68	1.49	1.63	1.33
2019	4.44	4.90	3.97	2.93	3.19	2.66	1.52	1.71	1.32
2018	4.63	5.08	4.16	3.08	3.34	2.80	1.56	1.74	1.36
2017	4.61	5.07	4.12	3.05	3.34	2.74	1.56	1.73	1.38
2016	4.80	5.24	4.34	3.10	3.33	2.86	1.70	1.90	1.48
2015	4.82	5.27	4.36	3.16	3.37	2.92	1.67	1.89	1.43
2014	4.81	5.26	4.34	3.23	3.48	2.97	1.58	1.78	1.37
2013	4.96	5.53	4.36	3.33	3.67	2.97	1.63	1.86	1.38
2012	4.97	5.38	4.54	3.31	3.54	3.06	1.66	1.84	1.47
2011	5.05	5.52	4.56	3.34	3.62	3.06	1.71	1.90	1.50
2010	5.10	5.54	4.64	3.34	3.58	3.07	1.76	1.96	1.56

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

¹Includes race and origin groups not shown separately; see Technical Notes.²Infant 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.³Includes 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.⁴Only one race was reported on the birth and death certificates; see Technical Notes. Hispanic-origin and race categories are consistent with 1997 OMB standards.⁵Multiple-race data reported according to 1997 OMB standards were bridged to single-race categories of 1977 OMB standards. Hispanic-origin and race categories are consistent with 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.

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

Table 14. Number of infant deaths and infant mortality rate for selected causes, by Hispanic origin and race: United States, 2020

[Rates are infant deaths (under 1 year) 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 they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	Number ¹							Rate						
	Non-Hispanic, single race							Non-Hispanic, single race						
	Total ²	Hispanic ³	American Indian or Alaska Native ⁴	Asian ⁴	Black ⁴	Native Hawaiian or Other Pacific Islander ⁴	White ⁴	Total ²	Hispanic ³	American Indian or Alaska Native ⁴	Asian ⁴	Black ⁴	Native Hawaiian or Other Pacific Islander ⁴	White ⁴
All causes.	19,582	4,238	196	514	5,749	67	7,909	541.9	489.0	731.0	234.6	1,085.1	696.0	429.0
Certain intestinal infectious diseases (A00–A08)	11	2	–	–	4	–	5	*	*	*	*	*	*	*
Diarrhea and gastroenteritis of infectious origin (A09)	137	30	–	8	53	2	37	3.8	3.5	*	*	10.0	*	2.0
Tuberculosis. (A16–A19)	1	–	–	–	1	–	–	*	*	*	*	*	*	*
Tetanus (A33,A35)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Diphtheria (A36)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Whooping cough (A37)	2	1	–	–	–	–	1	*	*	*	*	*	*	*
Meningococcal infection (A39)	5	–	–	–	1	–	3	*	*	*	*	*	*	*
Septicemia (A40–A41)	117	35	2	1	40	1	32	3.2	4.0	*	*	7.5	*	1.7
Congenital syphilis (A50)	4	1	–	–	1	–	1	*	*	*	*	*	*	*
Gonococcal infection (A54)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Acute poliomyelitis. (A80)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Varicella (chickenpox) (B01)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Measles (B05)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Human immunodeficiency virus (HIV) disease. (B20–B24)	2	–	–	–	–	–	2	*	*	*	*	*	*	*
Mumps. (B26)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Candidiasis. (B37)	3	1	–	–	–	–	2	*	*	*	*	*	*	*
Malaria. (B50–B54)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Pneumocystosis. (B59)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Malignant neoplasms. (C00–C97)	54	14	2	2	8	–	26	1.5	*	*	*	*	*	1.4
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior. (D00–D48)	39	10	1	3	1	–	22	1.1	*	*	*	*	*	1.2
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	83	25	2	5	21	1	28	2.3	2.9	*	*	4.0	*	1.5
Short stature, not elsewhere classified (E34.3)	2	–	–	–	1	–	1	*	*	*	*	*	*	*
Nutritional deficiencies. (E40–E64)	17	2	–	2	5	–	7	*	*	*	*	*	*	*
Cystic fibrosis (E84)	3	–	–	–	–	–	3	*	*	*	*	*	*	*
Volume depletion, disorders of fluid, electrolyte and acid-base balance (E86–E87)	30	7	1	1	7	–	12	0.8	*	*	*	*	*	*
Meningitis (G00,G03)	46	9	–	5	11	–	19	1.3	*	*	*	*	*	*
Infantile spinal muscular atrophy, type I (Werdnig-Hoffman) (G12.0)	1	1	–	–	–	–	–	*	*	*	*	*	*	*
Infantile cerebral palsy (G80)	5	1	–	1	2	–	1	*	*	*	*	*	*	*

See footnotes at end of table.

Table 14. Number of infant deaths and infant mortality rate for selected causes, by Hispanic origin and race: United States, 2020—Con.

[Rates are infant deaths (under 1 year) 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 they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	Number ¹							Rate						
	Non-Hispanic, single race							Non-Hispanic, single race						
	Total ²	Hispanic ³	American Indian or Alaska Native ⁴	Asian ⁴	Black ⁴	Native Hawaiian or Other Pacific Islander ⁴	White ⁴	Total ²	Hispanic ³	American Indian or Alaska Native ⁴	Asian ⁴	Black ⁴	Native Hawaiian or Other Pacific Islander ⁴	White ⁴
Anoxic brain damage, not elsewhere classified (G93.1)	37	5	—	—	17	—	13	1.0	*	*	*	*	*	*
Diseases of the ear and mastoid process (H60–H93)	3	—	—	—	3	—	—	*	*	*	*	*	*	*
Diseases of the circulatory system (I00–I99)	386	82	1	6	105	—	177	10.7	9.5	*	*	19.8	*	9.6
Acute upper respiratory infections (J00–J06)	5	—	—	—	1	—	3	*	*	*	*	*	*	*
Influenza and pneumonia (J09–J18)	125	17	4	3	39	1	56	3.5	*	*	*	7.4	*	3.0
Acute bronchitis and acute bronchiolitis (J20–J21)	12	2	—	—	4	1	5	*	*	*	*	*	*	*
Bronchitis, chronic and unspecified (J40–J42)	5	—	1	—	3	—	1	*	*	*	*	*	*	*
Asthma (J45–J46)	2	1	—	—	1	—	—	*	*	*	*	*	*	*
Pneumonitis due to solids and liquids (J69)	7	3	—	1	2	—	1	*	*	*	*	*	*	*
Gastritis, duodenitis, and noninfective enteritis and colitis (K29,K50–K55)	21	7	1	—	5	—	7	0.6	*	*	*	*	*	*
Hernia of abdominal cavity and intestinal obstruction without hernia (K40–K46,K56)	38	11	1	—	13	1	12	1.1	*	*	*	*	*	*
Renal failure and other disorders of kidney (N17–N19,N25,N27)	42	11	—	3	12	—	13	1.2	*	*	*	*	*	*
Newborn affected by maternal hypertensive disorders (P00.0)	57	9	2	—	23	—	22	1.6	*	*	*	4.3	*	1.2
Newborn affected by other maternal conditions which may be unrelated to present pregnancy (P00.1–P00.9)	93	21	1	2	25	1	36	2.6	2.4	*	*	4.7	*	2.0
Newborn affected by maternal complications of pregnancy (P01)	1,116	288	8	33	343	3	384	30.9	33.2	*	15.1	64.7	*	20.8
Newborn affected by complications of placenta, cord and membranes (P02)	700	140	4	27	207	2	282	19.4	16.2	*	12.3	39.1	*	15.3
Newborn affected by other complications of labor and delivery (P03)	95	23	—	2	19	—	48	2.6	2.7	*	*	*	*	2.6
Newborn affected by noxious influences transmitted via placenta or breast milk (P04)	50	4	—	—	15	—	26	1.4	*	*	*	*	*	1.4
Slow fetal growth and fetal malnutrition (P05)	94	17	1	2	30	2	36	2.6	*	*	*	5.7	*	2.0
Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	3,141	669	25	84	1,158	7	1,025	86.9	77.2	93.2	38.3	218.6	*	55.6
Disorders related to long gestation and high birth weight (P08)	—	—	—	—	—	—	—	*	*	*	*	*	*	*
Birth trauma (P10–P15)	8	1	—	—	2	—	5	*	*	*	*	*	*	*

See footnotes at end of table.

Table 14. Number of infant deaths and infant mortality rate for selected causes, by Hispanic origin and race: United States, 2020—Con.

[Rates are infant deaths (under 1 year) 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 they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	Number ¹							Rate						
	Non-Hispanic, single race							Non-Hispanic, single race						
	Total ²	Hispanic ³	American Indian or Alaska Native ⁴	Asian ⁴	Black ⁴	Native Hawaiian or Other Pacific Islander ⁴	White ⁴	Total ²	Hispanic ³	American Indian or Alaska Native ⁴	Asian ⁴	Black ⁴	Native Hawaiian or Other Pacific Islander ⁴	White ⁴
Intrauterine hypoxia and birth asphyxia. (P20–P21)	307	74	3	6	92	1	117	8.5	8.5	*	*	17.4	*	6.3
Respiratory distress of newborn (P22)	388	76	1	12	119	1	160	10.7	8.8	*	*	22.5	*	8.7
Other respiratory conditions originating in the perinatal period (P23–P28)	698	159	3	13	199	2	289	19.3	18.3	*	*	37.6	*	15.7
Congenital pneumonia (P23)	34	7	1	1	5	–	19	0.9	*	*	*	*	*	*
Neonatal aspiration syndromes (P24)	28	6	–	–	10	1	11	0.8	*	*	*	*	*	*
Interstitial emphysema and related conditions originating in the perinatal period (P25)	65	17	–	4	13	–	30	1.8	*	*	*	*	*	1.6
Pulmonary hemorrhage originating in the perinatal period (P26)	122	20	1	1	41	1	50	3.4	2.3	*	*	7.7	*	2.7
Chronic respiratory disease originating in the perinatal period (P27)	127	22	1	–	57	–	46	3.5	2.5	*	*	10.8	*	2.5
Atelectasis (P28.0–P28.1)	247	70	–	3	56	–	99	6.8	8.1	*	*	10.6	*	5.4
Bacterial sepsis of newborn (P36)	542	113	–	16	194	1	201	15.0	13.0	*	*	36.6	*	10.9
Omphalitis of newborn with or without mild hemorrhage (P38)	3	1	–	–	–	–	2	*	*	*	*	*	*	*
Neonatal hemorrhage. (P50–P52,P54)	317	73	–	11	64	–	149	8.8	8.4	*	*	12.1	*	8.1
Hemorrhagic disease of newborn (P53)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice (P55–P59)	6	2	–	–	–	–	4	*	*	*	*	*	*	*
Hematological disorders (P60–P61)	111	24	–	3	35	–	44	3.1	2.8	*	*	6.6	*	2.4
Syndrome of infant of a diabetic mother and neonatal diabetes mellitus. (P70.0–P70.2)	7	3	–	–	2	–	1	*	*	*	*	*	*	*
Necrotizing enterocolitis of newborn (P77)	301	59	8	7	104	1	114	8.3	6.8	*	*	19.6	*	6.2
Hydrops fetalis not due to hemolytic disease. (P83.2)	174	37	1	6	17	–	104	4.8	4.3	*	*	*	*	5.6
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,043	1,040	43	132	723	24	1,932	111.9	120.0	160.4	60.3	136.5	249.3	104.8
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	2,490	435	33	30	939	6	931	68.9	50.2	123.1	13.7	177.2	*	50.5
Sudden infant death syndrome (R95)	1,389	239	24	15	521	6	522	38.4	27.6	89.5	*	98.3	*	28.3
COVID-19. (U07.1)	35	14	–	2	8	1	8	1.0	*	*	*	*	*	*

See footnotes at end of table.

Table 14. Number of infant deaths and infant mortality rate for selected causes, by Hispanic origin and race: United States, 2020—Con.

[Rates are infant deaths (under 1 year) 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 they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	Number ¹							Rate						
	Non-Hispanic, single race							Non-Hispanic, single race						
	Total ²	Hispanic ³	American Indian or Alaska Native ⁴	Asian ⁴	Black ⁴	Native Hawaiian or Other Pacific Islander ⁴	White ⁴	Total ²	Hispanic ³	American Indian or Alaska Native ⁴	Asian ⁴	Black ⁴	Native Hawaiian or Other Pacific Islander ⁴	White ⁴
Accidents (unintentional injuries). (V01–X59)	1,194	162	26	12	413	2	519	33.0	18.7	97.0	*	78.0	*	28.2
Assault (homicide) (*U01,X85–Y09)	246	39	2	3	89	1	92	6.8	4.5	*	*	16.8	*	5.0
Complications of medical and surgical care (Y40–Y84)	11	3	–	–	2	–	6	*	*	*	*	*	*	*

– Quantity zero.
 * Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes in this report.
¹Only selected causes of death are shown; as a result, subcategories do not add to totals; see Technical Notes.
²Includes race and Hispanic-origin groups not shown separately; see Technical Notes.
³Includes people of Hispanic origin of any race; see Technical Notes.
⁴Only 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 15. Number of infant deaths and 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, 2020

[Rates are infant (under 1 year) 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]

Area and sex	Non-Hispanic, single race													
	Total ¹		Hispanic ²		American Indian or Alaska Native ³		Asian ³		Black ³		Native Hawaiian or Other Pacific Islander ³		White ³	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
United States ⁴	19,582	5.42	4,238	4.89	196	7.31	514	2.35	5,749	10.85	67	6.96	7,909	4.29
Male	10,859	5.88	2,366	5.36	112	8.13	285	2.53	3,164	11.75	35	7.11	4,368	4.62
Female	8,723	4.94	1,872	4.40	84	6.44	229	2.15	2,585	9.92	32	6.80	3,541	3.94
Alabama	404	7.01	38	7.26	1	*	2	*	196	11.04	—	*	150	4.59
Alaska	49	5.17	6	*	14	*	1	*	2	*	2	*	16	*
Arizona	405	5.26	175	5.30	23	6.48	2	*	51	11.62	4	*	125	4.05
Arkansas	264	7.49	16	*	3	*	3	*	73	10.68	3	*	154	6.97
California	1,651	3.93	883	4.54	7	*	114	1.95	223	10.44	7	*	319	2.76
Colorado	294	4.78	102	5.63	—	*	6	*	35	11.13	1	*	126	3.61
Connecticut	144	4.30	49	5.53	—	*	10	*	38	9.37	1	*	45	2.53
Delaware	58	5.58	5	*	—	*	—	*	26	9.55	1	*	25	5.05
District of Columbia	40	4.51	7	*	—	*	—	*	28	7.01	—	*	4	*
Florida	1,214	5.79	309	4.67	3	*	11	*	479	10.51	—	*	372	4.22
Georgia	765	6.25	76	4.13	2	*	13	*	403	9.51	1	*	262	4.97
Hawaii	79	5.00	21	8.01	—	*	9	*	4	*	6	*	7	*
Idaho	109	5.06	16	*	2	*	1	*	2	*	1	*	85	5.16
Illinois	737	5.53	144	5.00	—	*	17	*	281	12.60	1	*	267	3.78
Indiana	527	6.70	51	6.01	1	*	7	*	134	13.61	2	*	319	5.67
Iowa	158	4.38	15	*	1	*	3	*	26	9.68	1	*	101	3.67
Kansas	236	6.87	43	7.20	—	*	4	*	41	17.00	—	*	126	5.32
Kentucky	327	6.33	19	*	1	*	2	*	68	13.19	1	*	220	5.40
Louisiana	430	7.50	23	4.59	1	*	3	*	253	11.74	—	*	142	4.96
Maine	72	6.24	1	*	1	*	—	*	5	*	—	*	62	6.06
Maryland	391	5.70	60	4.60	—	*	13	*	208	9.97	—	*	93	3.31
Massachusetts	261	3.93	62	4.40	—	*	9	*	54	8.21	—	*	116	3.11
Michigan	704	6.76	50	7.16	3	*	14	*	269	13.91	—	*	341	4.84
Minnesota	264	4.16	21	3.95	6	*	16	*	48	5.95	—	*	147	3.49
Mississippi	293	8.26	13	*	—	*	2	*	179	11.81	—	*	96	5.44
Missouri	392	5.66	24	5.37	1	*	6	*	119	11.72	2	*	226	4.50
Montana	57	5.28	4	*	12	*	1	*	3	*	—	*	32	3.70
Nebraska	137	5.64	14	*	7	*	—	*	20	12.26	—	*	93	5.66
Nevada	155	4.61	56	4.39	1	*	5	*	36	7.94	2	*	45	3.88
New Hampshire	52	4.41	6	*	—	*	—	*	1	*	—	*	45	4.47

See footnotes at end of table.

Table 15. Number of infant deaths and 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, 2020—Con.

[Rates are infant (under 1 year) 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]

Area and sex	Non-Hispanic, single race													
	Total ¹		Hispanic ²		American Indian or Alaska Native ³		Asian ³		Black ³		Native Hawaiian or Other Pacific Islander ³		White ³	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
New Jersey	393	4.01	102	3.75	—	*	22	2.11	122	9.42	—	*	138	3.09
New Mexico	115	5.25	70	5.64	14	*	4	*	6	*	1	*	17	*
New York	853	4.07	178	3.72	1	*	40	1.90	231	7.69	1	*	323	3.09
North Carolina	800	6.85	111	5.71	5	*	14	*	354	13.00	3	*	281	4.64
North Dakota	56	5.57	6	*	13	*	—	*	3	*	—	*	33	4.58
Ohio	864	6.69	41	5.35	1	*	15	*	292	13.61	1	*	469	5.10
Oklahoma	279	5.86	45	5.95	27	6.18	5	*	44	11.16	3	*	128	4.87
Oregon	169	4.24	36	4.54	3	*	6	*	12	*	3	*	94	3.58
Pennsylvania	726	5.56	92	5.50	1	*	17	*	197	11.51	—	*	382	4.44
Rhode Island	42	4.16	14	*	—	*	—	*	4	*	—	*	19	*
South Carolina	364	6.53	22	3.67	1	*	3	*	189	11.59	—	*	131	4.30
South Dakota	81	7.39	5	*	22	14.66	—	*	4	*	—	*	43	5.56
Tennessee	495	6.29	55	6.16	—	*	5	*	152	9.86	—	*	268	5.29
Texas	1,968	5.35	839	4.77	—	*	63	3.30	478	10.25	2	*	560	4.65
Utah	251	5.49	56	6.86	—	*	1	*	3	*	6	*	178	5.37
Vermont	18	*	—	*	—	*	1	*	1	*	—	*	16	*
Virginia	544	5.74	88	5.94	2	*	12	*	210	10.70	—	*	192	3.76
Washington	373	4.49	110	6.87	11	*	19	*	30	7.81	11	*	156	3.38
West Virginia	130	7.50	6	*	—	*	1	*	9	*	—	*	112	7.13
Wisconsin	361	5.96	51	7.92	2	*	12	*	102	15.87	—	*	183	4.28
Wyoming	31	5.06	2	*	3	*	—	*	1	*	—	*	25	5.25
Puerto Rico	138	7.29	137	7.39	—	*	—	*	—	*	—	*	1	*
U.S. Virgin Islands	4	*	—	*	—	*	—	*	3	*	—	*	—	*
Guam	24	8.18	—	*	—	*	2	*	—	*	20	10.79	1	*
American Samoa	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Northern Marianas	5	*	—	*	—	*	1	*	—	*	4	*	—	*

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

— Quantity zero.

--- Data not available.

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

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

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

⁴Excludes 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 16. Number of maternal deaths and maternal mortality rate for selected causes, by Hispanic origin and race: United States, 2020

[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 <i>International Classification of Diseases, 10th Revision</i>)	Total ¹	Hispanic ²	Non-Hispanic, single race				
			American Indian or Alaska Native ³	Asian ³	Black ³	Native Hawaiian or Other Pacific Islander ³	White ³
			Number				
Maternal causes (A34,000–095,098–099)	861	158	13	27	293	4	352
Direct obstetric causes (A34, 000–095)	598	114	7	19	209	2	235
Pregnancy with abortive outcome (000–007)	27	8	–	1	9	–	7
Ectopic pregnancy (000)	16	4	–	–	5	–	6
Spontaneous abortion (003)	4	1	–	1	2	–	–
Medical abortion (004)	–	–	–	–	–	–	–
Other abortion (005)	–	–	–	–	–	–	–
Other and unspecified pregnancy with abortive outcome (001–002,006–007)	7	3	–	–	2	–	1
Other direct obstetric causes (A34,010–092)	553	105	7	17	194	2	218
Eclampsia and pre-eclampsia (011,013–016)	45	9	–	2	20	–	13
Hemorrhage of pregnancy and childbirth and placenta previa (020,044–046,067,072)	38	12	–	2	8	–	16
Complications predominantly related to the puerperium (A34,085–092)	68	7	–	3	27	–	31
Obstetrical tetanus (A34)	–	–	–	–	–	–	–
Obstetric embolism (088)	33	5	–	1	13	–	14
Other complications predominantly related to the puerperium (085–087,089–092)	35	2	–	2	14	–	17
All other direct obstetric causes (010,012,021–043, 047–066,068–071,073–075)	402	77	7	10	139	2	158
Obstetric death of unspecified cause (095)	18	1	–	1	6	–	10
Indirect obstetric causes (098–099)	263	44	6	8	84	2	117
Death from any obstetric cause occurring more than 42 days but less than 1 year after delivery (096) ⁴	407	80	7	17	124	3	171

Table 16. Number of maternal deaths and maternal mortality rate for selected causes, by Hispanic origin and race: United States, 2020—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]

Cause of death (based on <i>International Classification of Diseases, 10th Revision</i>)	Total ¹	Hispanic ²	Non-Hispanic, single race				
			American Indian or Alaska Native ³	Asian ³	Black ³	Native Hawaiian or Other Pacific Islander ³	White ³
			Rate per 100,000 live births				
Maternal causes (A34,000–095,098–099)	23.8	18.2	*	12.3	55.3	*	19.1
Direct obstetric causes (A34, 000–095)	16.5	13.2	*	*	39.4	*	12.7
Pregnancy with abortive outcome (000–007)	0.7	*	*	*	*	*	*
Ectopic pregnancy (000)	*	*	*	*	*	*	*
Spontaneous abortion (003)	*	*	*	*	*	*	*
Medical abortion (004)	*	*	*	*	*	*	*
Other abortion (005)	*	*	*	*	*	*	*
Other and unspecified pregnancy with abortive outcome (001–002,006–007)	*	*		*	*		*
Other direct obstetric causes (A34,010–092)	15.3	12.1	*	*	36.6	*	11.8
Eclampsia and pre-eclampsia (011,013–016)	1.2	*	*	*	3.8	*	*
Hemorrhage of pregnancy and childbirth and placenta previa (020,044–046,067,072)	1.1	*	*	*	*		*
Complications predominantly related to the puerperium (A34,085–092)	1.9	*		*	5.1		1.7
Obstetrical tetanus (A34)	*	*	*	*	*	*	*
Obstetric embolism (088)	0.9	*	*	*	*	*	*
Other complications predominantly related to the puerperium (085–087,089–092)	1.0	*		*	*		*
All other direct obstetric causes (010,012,021–043, 047–066,068–071,073–075)	11.1	8.9	*	*	26.2	*	8.6
Obstetric death of unspecified cause (095)	*	*	*	*	*	*	*
Indirect obstetric causes (098–099)	7.3	5.1	*	*	15.9	*	6.3
Death from any obstetric cause occurring more than 42 days but less than 1 year after delivery (096) ⁴	11.3	9.2	*	*	23.4	*	9.3

– Quantity zero.

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

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

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

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

⁴Late maternal death.

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 2020 are based on records of deaths that occurred during 2020 and were received as of July 15, 2021. Data for earlier years can be obtained from the Centers for Disease Control and Prevention's CDC WONDER database (13).

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 2020 data year were not available at the time of file closing and, consequently, are not included in this report. In 2020, 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 2020 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) (38). 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 10th revisions, Eighth and Ninth revisions, Seventh and Eighth revisions, and Sixth and Seventh revisions may be found in other NCHS reports and independent tabulations (39–44).

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 (45,46). 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) (47), 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) (48) 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 (49), 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 2020, SuperMICAR was used to process all of the country's death records.

In this report, tabulations of cause-of-death statistics are based solely on the underlying cause of death. The underlying cause is defined by WHO as “the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced

the fatal injury” (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 (50–52).

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) (53). Two tabulation lists are used to rank leading causes of death (53): 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. Before the 2015 data year, annual reports of final data presented cause-of-death data based on these two tabulation lists. To streamline cause-of-death information shown in this report, beginning with the 2015 data year, cause-of-death data are presented only for selected causes of death. The selected causes include all rankable causes as well as other selected causes based on public health impact and future planning. Data for all causes on the “List of 113 Selected Causes of Death” and “List of 130 Selected Causes of Infant Death” are available from the NCHS website at: https://www.cdc.gov/nchs/data/nvsr/nvsr72/nvsr72_10_tables.pdf and through CDC WONDER (<https://wonder.cdc.gov/>). In the list of 113 causes, COVID-19 was added as a rankable cause in 2020. 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 2020” (2).

Leading cause-of-death trends discussed in this report are based on cause-of-death data according to ICD–10 for 1999–2020 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” (41) and “Deaths: Final Data for 1999” (54).

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 (39–41). 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 2020

Effective with data year 2020, ICD–10 code U07.1, COVID-19, was added as a new, valid underlying cause-of-death code. No other codes were added or deleted from the list of valid underlying cause-of-death codes in 2020. Information on the addition of U07.1 as well as codes added or deleted in previous years, is available from: <https://www.cdc.gov/nchs/data/dvs/Part9InstructionManual2020-508.pdf> (53).

Codes for terrorism

Beginning with data for 2001, NCHS introduced categories *U01–*U03 for classifying and coding deaths due to acts of terrorism. The asterisks before the category codes indicate that they are not part of ICD–10. Deaths classified to the terrorism categories are included in the 113 causes of death list in the categories for Assault (homicide) and Intentional self-harm (suicide), and in the 130 causes of death list for infants in the category for Assault (homicide). Additional information on these new categories is available from: https://www.cdc.gov/nchs/icd/terrorism_code.htm. This report includes one death assigned to a terrorism code in 2020. 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 aged over 1 year, COVID-19 was added as a rankable cause of death. For infants

(under 1 year), 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 selected causes, the placement of COVID-19 is determined alphabetically by ICD-10 code. For internet tables showing 113 selected causes, COVID-19 was added to the bottom of each 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 (55). Provisional data are underestimated 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 (56).

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 (57). 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 4,069 in 2020. Deaths from this cause increased dramatically from 793 deaths in 1999 to a high of 8,085 deaths in 2011 (13). Because of the increasing importance of this cause of death (26,27), beginning with data year 2006, *C. difficile* was added to the list of rankable causes.

Quality of reporting and processing cause of death

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, decreased from 1.14% in 2019 to 1.01% in 2020.

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 (45–47). 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 (45,58,59). In 2020, 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 (16). 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 or 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 D.C. by 2018 (Table I). In 2020, more than one race was reported for 0.5% of decedents of non-Hispanic origin and for 0.8% of decedents of Hispanic origin (Table II). Although still uncommon, multiple races were reported more often for younger decedents than for older decedents (3.3% of decedents under age 25 compared with 0.9% of decedents aged 25–64 and 0.4% of decedents aged 65 and over). In 2020, no more than four races were reported for any decedent.

During 2003–2017, both the 1989 and the 2003 standard death certificates were used. For this transitional period, states using the 1989 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 or Alaska 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 (15,16). 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).

Beginning with data year 2018, multiple-race data were collected and reported for the entire year by all 50 states and D.C. Previously, data by race for death certificates collecting only one race—the source of the numerators for death rates—were incompatible with the reporting in other states that had adopted the new standards and with population data collected in the 2000 and 2010 censuses, intercensal estimates for 1991–1999 and 2001–2009, and postcensal estimates for 2011–2017—the denominators for the rates. To produce death rates by race, the reported multiple-race data from death certificates and

Table I. Year state started reporting multiple race and year state began using the revised standard certificate of death: Each state, 2003–2020

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			

¹Indicates 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.

²Began reporting multiple race in March.

³Began implementing revised certificate in March.

⁴Began reporting multiple race in July.

⁵Began implementing revised certificate in July.

⁶Began implementing revised certificate in June.

⁷Began implementing revised certificate in September.

⁸Began reporting multiple race in September.

⁹Began reporting multiple race in mid-April.

¹⁰Began implementing revised certificate in mid-April.

¹¹Began reporting multiple race in November.

¹²Began implementing revised certificate in November.

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

population data for multiple-race people had to be “bridged” to single-race categories. The bridging procedures used for the mortality records and the multiple-race population estimates were similar (20,21). Multiracial decedents were imputed to a single race (White, Black, American Indian or Alaska Native, or Asian or Pacific Islander) according to their combination of races, Hispanic origin, sex, and geographic area indicated on the death certificate. The imputation procedure is described in detail in “NCHS Procedures for Multiple-Race and Hispanic Origin Data: Collection, Coding, Editing, and Transmitting,” available from: https://www.cdc.gov/nchs/data/dvs/Multiple_race_documentation_5-10-04.pdf. Similarly, when calculating infant mortality rates (IMRs), multiracial infants were bridged to a single race. The bridging procedure for multiple-race mothers and fathers was based on the procedure used to bridge the multiple-race population estimates (60). Beginning with the 2018 data year, use of the bridged-race process was no longer needed because all states collected data on race according to 1997 OMB

guidelines for the entire year; however, bridged estimates will be calculated through 2020 to inform the reporting of trends over time.

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.

Changing from bridged-race to single-race data had a relatively minor impact on age-adjusted death rates in 2020. Table A presents age-adjusted rates for 2020 based on 1977 bridged-race categories and 1997 race categories. Age-adjusted rates based on single-race data were higher than rates based on bridged data for the American Indian or Alaska Native non-Hispanic (subsequently, American Indian or Alaska Native) (by 2.8%), Black or African American non-Hispanic (subsequently, Black) (1.6%), and White non-Hispanic (subsequently, White) (0.4%) populations.

Table II. Deaths, by origin and race: United States, 2020

[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]

Origin and race	Deaths	Percent of deaths	Origin and race	Deaths	Percent of deaths
Non-Hispanic	3,069,147	100.0	Hispanic	305,708	100.0
One race	3,053,624	99.5	One race	303,156	99.2
American Indian or Alaska Native (AIAN)	24,725	0.8	American Indian or Alaska Native (AIAN)	1,430	0.5
Asian	91,175	3.0	Asian	790	0.3
Black	449,213	14.6	Black	5,251	1.7
Native Hawaiian or Other Pacific Islander (NHOPI)	4,439	0.1	Native Hawaiian or Other Pacific Islander (NHOPI)	397	0.1
White	2,484,072	80.9	White	295,288	96.6
Two or more races	15,523	0.5	Two or more races	2,552	0.8
Two races	14,623	0.5	Two races	2,340	0.8
AIAN and Asian	232	0.0	AIAN and Asian	20	0.0
AIAN and NHOPI	37	0.0	AIAN and NHOPI	5	0.0
AIAN and White	5,384	0.2	AIAN and White	926	0.3
Asian and NHOPI	1,159	0.0	Asian and NHOPI	27	0.0
Asian and White	2,922	0.1	Asian and White	570	0.2
Black and AIAN	860	0.0	Black and AIAN	31	0.0
Black and Asian	420	0.0	Black and Asian	23	0.0
Black and NHOPI	137	0.0	Black and NHOPI	10	0.0
Black and White	2,565	0.1	Black and White	595	0.2
NHOPI and White	907	0.0	NHOPI and White	133	0.0
Three races	879	0.0	Three races	207	0.1
AIAN, Asian and NHOPI	5	0.0	AIAN, Asian and NHOPI	1	0.0
AIAN, Asian and White	43	0.0	AIAN, Asian and White	24	0.0
AIAN, NHOPI and White	12	0.0	AIAN, NHOPI and White	5	0.0
Asian, NHOPI and White	534	0.0	Asian, NHOPI and White	113	0.0
Black, AIAN and Asian	13	0.0	Black, AIAN and Asian	—	—
Black, AIAN and NHOPI	4	0.0	Black, AIAN and NHOPI	—	—
Black, AIAN and White	191	0.0	Black, AIAN and White	50	0.0
Black, Asian and NHOPI	5	0.0	Black, Asian and NHOPI	—	—
Black, Asian and White	62	0.0	Black, Asian and White	13	0.0
Black, NHOPI and White	10	0.0	Black, NHOPI and White	1	0.0
Four races	21	0.0	Four races	5	0.0
AIAN, Asian, NHOPI and White	9	0.0	AIAN, Asian, NHOPI and White	3	0.0
Black, AIAN, Asian and NHOPI	1	0.0	Black, AIAN, Asian and NHOPI	—	—
Black, AIAN, Asian and White	8	0.0	Black, AIAN, Asian and White	1	0.0
Black, AIAN, NHOPI and White	1	0.0	Black, AIAN, NHOPI and White	—	—
Black, Asian, NHOPI and White	2	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.

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

Quality of race and Hispanic-origin data—Death rates for Hispanic, American Indian or 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 (17,61–63).

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 (17,61–63). 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 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 reported on a total of 38 Current Population Surveys (CPSs) conducted by the U.S. Census Bureau for 1979–2011 (17,61). 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 or 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 or 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 or 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 or 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 (64).

In addition, undercoverage of minority groups in the census and resultant population estimates introduces biases into death rates by Hispanic origin and race (17,61–63,65,66). 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%) (62). 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 Indian (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 (67).

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

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, supplemental [Table I–23](#) presents classification ratios by Hispanic origin and race, age, and sex, and supplemental [Table I–24](#) 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 non-Hispanic 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 2020, 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 (0.3% 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 2020, multiple race was reported on the revised birth certificates of all 50 states, D.C., Guam, Northern Marianas, and Puerto Rico using the 2003 revision of the U.S. Standard Certificate of Birth (68).

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 2020, the percentage of infant deaths of unknown origin was 1.0%, and the percentage of live births to mothers of unknown origin was 0.9%.

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 (36). 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, in contrast to the death certificate, where 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 (36,63).

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 (69). In addition, the age range for these life tables was limited to 5-year age groups ending with age group 85 and over. Beginning with final data reported for 1997, complete life tables were constructed by single years of age extending to age 100 (70), using a methodology similar to that of the 1989–1991 decennial life tables (71). The methodology was again revised for data years 2000–2007 using a methodology similar to that of the 1999–2001 decennial life tables (72).

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 (73), the life table methodology was refined by changing the smoothing technique used to estimate the life table functions at the oldest ages. Beginning with the 2008 data year, the methodology used to produce the life tables does not model the probabilities of death beginning at age 66, but rather at ages above 85 or so. See “United States Life Tables, 2008” for a detailed description of the new methodology (74). Life table data shown in this report for data years 2001–2020 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 (19), 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) (25), NCHS began producing life tables by Hispanic origin, 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 (17,61). 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 2020 presented in this report are based on the new OMB standard and show estimates for single-race groups. These estimates are the official life expectancies for these years and may not be comparable to those of previous years that are based on bridged-race groups. To document the impact of changing to the 1997 standards, trend life expectancy estimates for bridged-race categories are included in this report for 2010–2020 (Table 4) and in supplemental internet Table I–21 for 1940, 1950, 1960, 1970, 1980, 1990, and 2000–2020. Estimates for bridged-race categories will be discontinued in data year 2021 and will no longer be shown in this report. The Hispanic category 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 (75–77).

Injury mortality by mechanism and intent

Injury mortality data are presented using the external cause-of-injury mortality matrix for ICD–10 (Tables 11 and I–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 8) present external causes of death (ICD–10 codes *U01–*U03 and V01–Y89); in contrast, the matrix (Tables 11 and I–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 (78). Data for later years are available through CDC WONDER (<https://wonder.cdc.gov/>) or the agency's WISQARS (<https://www.cdc.gov/injury/wisqars/index.html>) databases. 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 2020. For more information on the latest ICD–10 external cause-of-injury codes included in the matrix, see https://www.cdc.gov/nchs/injury/injury_tools.htm.

Infant mortality

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 2020” (68). In contrast to IMRs based on live births, infant death rates are based on the estimated population under age 1 year. Infant death rates that appear in tabulations of age-specific death rates in this report are calculated by dividing the number of infant deaths by the July 1, 2020, population estimate of people under age 1, based on 2010 census populations. These rates are presented per 100,000 population in this age group. Because of differences in the denominators, infant death rates may differ from 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 (36), 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 female 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 females 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, 000–095, and 098–099.

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 (37).

Beginning in 2018, all 50 states and D.C. used the revised certificate for the entire year including its pregnancy checkbox (California implemented a different checkbox from that on the U.S. Standard Certificate of Death that specifies 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) (37). Because maternal mortality data among states became comparable, NCHS resumed publication of maternal mortality statistics in 2018.

NCHS recently adopted a new 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 (37). The 2018 method further restricts application of the pregnancy checkbox to decedents aged 10–44 (previously, application of the checkbox was restricted to age group 10–54). 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.

Other variables available online

Hispanic subgroup

Mortality data by Hispanic subgroup are available in [Table I–5](https://www.cdc.gov/nchs/data/nvsr/nvsr72/nvsr72-10-tables.pdf) (<https://www.cdc.gov/nchs/data/nvsr/nvsr72/nvsr72-10-tables.pdf>).

Marital status

Mortality data by marital status are available in [Table I–6](https://www.cdc.gov/nchs/data/nvsr/nvsr72/nvsr72-10-tables.pdf) (<https://www.cdc.gov/nchs/data/nvsr/nvsr72/nvsr72-10-tables.pdf>).

Educational attainment

Mortality data by educational attainment are available in [Table I–7](https://www.cdc.gov/nchs/data/nvsr/nvsr72/nvsr72-10-tables.pdf) (<https://www.cdc.gov/nchs/data/nvsr/nvsr72/nvsr72-10-tables.pdf>).

Injury at work

Mortality data by injury at work are available in [Tables I–8](#) and [I–9](#) (<https://www.cdc.gov/nchs/data/nvsr/nvsr72nvsr72-10-tables.pdf>)

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 2020 in [Tables A, C, 1, 2, 5, 7, and 9–12](#) are postcensal estimates based on the 2010 census, estimated as of July 1, 2020. Detailed populations from the 2020 census were not available when this report was prepared. Differences between the 2020 enumerated population and the population estimates for 2020 used in this report could result in underestimation or overestimation of death rates. 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.

Population estimates used to compute death rates for the United States for 2020 are shown for 5-year age groups by Hispanic origin and race in [Table III](#) (18).

Beginning with 2018, death rates are based on unbridged multiple-race data collected on death certificates according to the 1997 OMB standards. The denominator of the rates is unbridged multiple-race population data collected according to the same standards by the U.S. Census Bureau. Overall, changing from bridged-race to unbridged data had a relatively minor impact on mortality rates in 2018–2020 (10).

Populations used for computing death rates by state, shown in [Table IV](#), represent state postcensal population estimates based on the 2010 census, estimated as of July 1, 2020 (18). Rates for Puerto Rico also are based on population estimates from the 2010 census as of July 1, 2020, and are provided by the U.S. Census Bureau (79). Rates for Guam and Northern Marianas are based on population estimates provided by the U.S. Census Bureau's International Database (80). Population estimates for each state and territory are not subject to sampling variation because the sources used in demographic analysis are complete counts.

Bridged-race population estimates for 2000–2020 were produced under a collaborative arrangement with the U.S. Census Bureau, based on the 2000 and 2010 census counts by age, race, and sex, and were modified for consistency with 1977 OMB race categories and historical categories for death data (16,81). The modification procedures are described in detail elsewhere (20,21).

Rates for 2011–2020 are based on postcensal population estimates consistent with the 2010 census, estimated as of July 1 (79). Rates for 2010 are based on populations enumerated as of April 1, 2010 (79). Rates for 2001–2009 shown in this report

were revised using revised intercensal population estimates based on the 2010 census, estimated as of July 1 (19). Death rates for 2000 are based on populations enumerated as of April 1, 2000 (81). Rates for 1991–1999 are based on intercensal population estimates consistent with the 2000 census levels (82).

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 V](#)), as in

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

where P_{si} is the standard population for age group i and P_s 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” (83). Beginning with 2003 data, the traditional standard million population along with corresponding standard weights to six decimal places were replaced by the projected year 2000 population age distribution ([Table V](#)). The effect of the change is negligible and does not significantly affect comparability with age-adjusted rates calculated using the previous method. All age-adjusted rates shown in this report are based on the 2000 U.S. standard population.

Age-adjusted rates for Puerto Rico, Guam, 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 V](#).

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

Table III. Estimated population by 5-year age groups, according to Hispanic origin and race, by sex: United States, 2020

[Populations are postcensal estimates based on 2010 census estimated as of July 1, 2020; see Technical Notes in this report]

Hispanic origin and race and sex	Total	Under 1 year	Age group (years)							
			1–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39
Total ¹	329,484,123	3,735,010	15,566,282	20,237,711	20,754,423	20,960,929	21,594,755	23,231,243	22,838,403	21,828,304
Male	162,256,202	1,908,141	7,953,016	10,346,753	10,594,968	10,694,597	11,032,846	11,875,126	11,569,253	10,937,588
Female	167,227,921	1,826,869	7,613,266	9,890,958	10,159,455	10,266,332	10,561,909	11,356,117	11,269,150	10,890,716
Hispanic ²	61,312,879	970,381	4,029,420	5,172,470	5,368,702	5,106,426	4,907,287	4,962,142	4,665,181	4,513,399
Male	30,922,535	494,752	2,051,303	2,633,961	2,736,509	2,602,741	2,512,676	2,564,530	2,448,917	2,345,918
Female	30,390,344	475,629	1,978,117	2,538,509	2,632,193	2,503,685	2,394,611	2,397,612	2,216,264	2,167,481
Non-Hispanic, single race:										
American Indian or Alaska Native ³	2,432,338	28,154	119,843	165,935	175,476	175,915	181,390	197,916	181,510	160,442
Male	1,195,604	14,338	61,022	84,785	88,664	89,311	92,013	101,038	91,927	79,504
Female	1,236,734	13,816	58,821	81,150	86,812	86,604	89,377	96,878	89,583	80,938
Asian ³	19,367,197	201,653	886,849	1,135,208	1,057,249	1,108,791	1,237,726	1,531,610	1,683,958	1,629,573
Male	9,248,241	103,547	457,132	583,773	538,201	555,194	623,503	764,798	818,494	773,478
Female	10,118,956	98,106	429,717	551,435	519,048	553,597	614,223	766,812	865,464	856,095
Black ³	41,427,341	522,731	2,158,900	2,777,908	2,860,425	2,854,747	3,039,212	3,438,045	3,162,414	2,792,908
Male	19,808,567	265,722	1,091,590	1,407,552	1,448,656	1,444,637	1,537,476	1,739,206	1,558,338	1,340,215
Female	21,618,774	257,009	1,067,310	1,370,356	1,411,769	1,410,110	1,501,736	1,698,839	1,604,076	1,452,693
Native Hawaiian or Other Pacific Islander ³	613,507	8,467	35,791	43,795	42,224	41,807	42,916	49,711	53,354	50,031
Male	309,339	4,349	18,415	22,419	21,435	21,327	22,258	25,509	27,610	25,735
Female	304,168	4,118	17,376	21,376	20,789	20,480	20,658	24,202	25,744	24,296
White ³	196,773,390	1,806,934	7,540,986	9,959,335	10,342,236	10,897,824	11,494,014	12,443,335	12,623,723	12,296,527
Male	97,035,671	924,935	3,867,259	5,111,472	5,299,678	5,589,157	5,894,815	6,375,986	6,398,252	6,190,883
Female	99,737,719	881,999	3,673,727	4,847,863	5,042,558	5,308,667	5,599,199	6,067,349	6,225,471	6,105,644
Age group (years)										
	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79	80–84	85 and over
Total ¹	20,307,888	19,970,606	20,395,527	21,603,099	20,800,578	17,873,667	14,675,731	9,986,833	6,464,714	6,658,420
Male	10,108,280	9,872,904	10,051,788	10,511,928	9,977,506	8,390,351	6,793,189	4,473,684	2,749,591	2,414,693
Female	10,199,608	10,097,702	10,343,739	11,091,171	10,823,072	9,483,316	7,882,542	5,513,149	3,715,123	4,243,727
Hispanic ²	4,229,491	3,862,201	3,388,031	2,926,665	2,329,263	1,725,067	1,253,519	820,153	548,313	534,768
Male	2,168,659	1,944,387	1,708,133	1,449,037	1,124,680	802,899	565,014	350,136	223,488	194,795
Female	2,060,832	1,917,814	1,679,898	1,477,628	1,204,583	922,168	688,505	470,017	324,825	339,973
Non-Hispanic, single race:										
American Indian or Alaska Native ³	145,650	140,258	142,590	155,170	144,543	114,759	86,663	54,076	33,178	28,870
Male	72,052	68,616	69,040	73,846	67,157	52,692	40,108	24,394	14,223	10,874
Female	73,598	71,642	73,550	81,324	77,386	62,067	46,555	29,682	18,955	17,996
Asian ³	1,464,535	1,423,370	1,240,000	1,125,808	1,021,363	869,190	691,915	448,599	300,460	309,340
Male	681,817	664,847	575,956	518,615	460,570	381,530	302,672	197,022	130,265	116,827
Female	782,718	758,523	664,044	607,193	560,793	487,660	389,243	251,577	170,195	192,513
Black ³	2,602,941	2,521,896	2,520,576	2,597,447	2,392,646	1,875,220	1,371,154	862,143	551,363	524,665
Male	1,230,235	1,179,744	1,178,096	1,201,095	1,085,387	814,831	576,819	343,616	204,501	160,851
Female	1,372,706	1,342,152	1,342,480	1,396,352	1,307,259	1,060,389	794,335	518,527	346,862	363,814
Native Hawaiian or Other Pacific Islander ³	42,796	37,629	35,693	34,819	30,138	23,285	17,732	10,694	6,515	6,110
Male	21,643	19,151	17,683	17,024	14,769	11,081	8,545	5,044	2,881	2,461
Female	21,153	18,478	18,010	17,795	15,369	12,204	9,187	5,650	3,634	3,649
White ³	11,498,214	11,708,316	12,824,273	14,528,254	14,671,824	13,103,149	11,133,708	7,714,273	4,977,652	5,208,813
Male	5,781,746	5,866,300	6,387,775	7,141,978	7,125,485	6,251,093	5,244,156	3,519,162	2,153,784	1,911,755
Female	5,716,468	5,842,016	6,436,498	7,386,276	7,546,339	6,852,056	5,889,552	4,195,111	2,823,868	3,297,058

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

SOURCE: National Center for Health Statistics, estimates of July 1, 2020, U.S. resident population by age, sex, race, and Hispanic origin prepared by U.S. Census Bureau, 2021.

Table IV. Estimated population for the United States, each state, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas, 2020

[Populations are postcensal estimates based on 2010 census, estimated as of July 1, 2020]

Area	Total	Area	Total
United States	329,484,123	New Jersey	8,882,371
Alabama	4,921,532	New Mexico	2,106,319
Alaska	731,158	New York	19,336,776
Arizona	7,421,401	North Carolina	10,600,823
Arkansas	3,030,522	North Dakota	765,309
California	39,368,078	Ohio	11,693,217
Colorado	5,807,719	Oklahoma	3,980,783
Connecticut	3,557,006	Oregon	4,241,507
Delaware	986,809	Pennsylvania	12,783,254
District of Columbia	712,816	Rhode Island	1,057,125
Florida	21,733,312	South Carolina	5,218,040
Georgia	10,710,017	South Dakota	892,717
Hawaii	1,407,006	Tennessee	6,886,834
Idaho	1,826,913	Texas	29,360,759
Illinois	12,587,530	Utah	3,249,879
Indiana	6,754,953	Vermont	623,347
Iowa	3,163,561	Virginia	8,590,563
Kansas	2,913,805	Washington	7,693,612
Kentucky	4,477,251	West Virginia	1,784,787
Louisiana	4,645,318	Wisconsin	5,832,655
Maine	1,350,141	Wyoming	582,328
Maryland	6,055,802	Puerto Rico	3,159,343
Massachusetts	6,893,574	U.S. Virgin Islands	106,290
Michigan	9,966,555	Guam	168,489
Minnesota	5,657,342	American Samoa	47,392
Mississippi	2,966,786	Northern Marianas	51,851
Missouri	6,151,548		
Montana	1,080,577		
Nebraska	1,937,552		
Nevada	3,138,259		
New Hampshire	1,366,275		

SOURCES: U.S. Census Bureau. 2020 population estimates. Table 1. Annual Estimates of the Resident Population for the United States, Regions, States, the District of Columbia, and Puerto Rico: April 1, 2010 to July 1, 2020 (available from: <https://www2.census.gov/programs-surveys/decennial/2010/technical-documentation/methodology/g-series/g01.pdf>); and International Database, 2020 (available from: https://www.census.gov/data-tools/demo/ibd/#/country?YR_ANIM=2020&FIPS_SINGLE=*&dashPages=DASH&COUNTRY_YEAR=2020).

Table V. U.S. standard population

Age group (years)	Population
All ages	274,633,642
Under 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 over	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.

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 (84,85). When the number of deaths is small, perhaps fewer than 100, random variation tends to be relatively large. As a result, 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 conceptually and computationally simple, and provides reasonable, conservative variance estimates for mortality statistics when the probability of dying is relatively low (84). Using

the properties of the Poisson distribution, the SE associated with the number of deaths (D) is

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

where $\text{var}(D)$ 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

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

The coefficient of variation or relative standard error (RSE) is a useful measure of relative variation. 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,

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

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

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

where:

- R_i is the age-specific rate for the i th age group.
- P_{si} is the age-specific standard population for the i th age group from the U.S. standard population age distribution (see [Table V](#) 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 i th 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:

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

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

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

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 1–5 through 1–7](#), which are calculated using population figures that are subject to sampling error, and for rates adjusted for misclassification in [Table 1–24](#).

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

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

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

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

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:

- $\hat{R}_i$ is the age-specific rate adjusted for Hispanic origin and race misclassification on death certificates for the i th age group.
- P_i is the age-specific population for the i th age group.
- D_i is the age-specific number of deaths for the i th age group.
- CR_i is the age-specific classification ratio for the i th age group (see [Table 1–23](#)).
- P_{si} is the age-specific standard population for the i th age group from the U.S. standard age distribution (see [Table V](#)).
- P_s is the total U.S. standard population (all ages combined).

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.

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 (14,85). Formula 9 is used to calculate 95% confidence limits for the death rate when the normal approximation is appropriate:

$$L(R) = R - 1.96(SE(R)) \text{ and } U(R) = R + 1.96(SE(R)) \quad [9]$$

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 9 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 9 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

$$z = \frac{R_1 - R_2}{\sqrt{SE(R_1)^2 + SE(R_2)^2}} \quad [10]$$

If $|z| \geq 1.96$, then the difference between the rates is statistically significant at the 0.05 level. If $|z| < 1.96$, then the difference is not statistically significant. Formula 10 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 10 can determine if the decrease in the age-adjusted rate is statistically significant:

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

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

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

Calculations using the gamma method can be made using commonly available spreadsheet programs or statistical software (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:

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

and

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

Confidence limits for the death rate are then calculated by dividing $L(D)$ and $U(D)$ by the population (P) at risk of dying (see Formula 17).

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

$$L(D) = L \cdot D \text{ and } U(D) = U \cdot D \quad [11]$$

$$L(R) = L \cdot R \text{ and } U(R) = U \cdot R \quad [12]$$

where L and U in both formulas are the lower and upper confidence limit factors that correspond to the appropriate number of deaths, D , in Table VI. For example, suppose that the death rate for American Indian or Alaska Native females aged 1–4 years is 39.5 per 100,000 and based on 50 deaths. Applying Formula 12, values for L and U from Table VI for 50 deaths are multiplied by the death rate, 39.5, such that

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

Number of deaths (<i>D</i>)	Lower confidence limit (<i>L</i>)	Upper confidence limit (<i>U</i>)	Number of deaths (<i>D</i>)	Lower confidence limit (<i>L</i>)	Upper confidence limit (<i>U</i>)
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			

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.

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

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 or Alaska Native females aged 1–4 years 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 (14,85).

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

When comparing the difference between two rates (R_1 and R_2), where one or both of the rates are based on fewer than 100 deaths, a comparison of 95% confidence intervals may be used as a statistical test. If the 95% confidence intervals do not overlap, then the difference can be said to be statistically significant at the 0.05 level. A simple rule of thumb is: If $R_1 > R_2$, then test if $L(R_1) > U(R_2)$, or if $R_2 > R_1$, then test if $L(R_2) > U(R_1)$. Positive tests denote statistical significance at the 0.05 level. For example, suppose that American Indian or Alaska Native females aged 1–4 years have a death rate (R_1) of 39.5 based on 50 deaths, and Asian females aged 1–4 have a death rate (R_2) of 20.1 per 100,000 based on 86 deaths. The 95% confidence limits for R_1 and R_2 calculated using Formula 12 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 or Alaska Native females aged 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 aged 1–4 have a death rate significantly lower than that for American Indian or 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 (86). 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 (86), $E(X) = yz$ and $\text{Var}(X) = yz^2$. For the number of deaths, D , $E(D) = D$ and $\text{Var}(D) = D$. It follows that $y = D$ and $z = 1$, and thus,

$$D \sim \Gamma(D, 1) \quad [13]$$

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

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

$$R \sim \Gamma(D, P^{-1}) \quad [14]$$

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

$$R/P^{-1} = D \sim \Gamma(D, 1) \quad [15]$$

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

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

$$L(D) = \Gamma^{-1}_{(D,1)}(\alpha/2) \text{ and } U(D) = \Gamma^{-1}_{(D+1,1)}(1 - \alpha/2) \quad [16]$$

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

$$L(R) = L(D)/P \text{ and } U(R) = U(D)/P \quad [17]$$

For more detail regarding the derivation of the gamma method and its application to age-adjusted death rates and other mortality statistics, see References (13,84,87).

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 under age 1 year.

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

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

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