

Deaths: Preliminary Data for 2011

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Abstract

Objectives—This report presents preliminary U.S. data on deaths, death rates, life expectancy, leading causes of death, and infant mortality for 2011 by selected characteristics such as age, sex, race, and Hispanic origin.

Methods—Data in this report are based on death records comprising more than 98 percent of the demographic and medical files for all deaths in the United States in 2011. The records are weighted to independent control counts for 2011. Comparisons are made with 2010 final data.

Results—The age-adjusted death rate decreased from 747.0 deaths per 100,000 population in 2010 to 740.6 deaths per 100,000 population in 2011. From 2010 to 2011, age-adjusted death rates decreased significantly for 5 of the 15 leading causes of death: Diseases of heart, Malignant neoplasms, Cerebrovascular diseases, Alzheimer's disease, and Nephritis, nephrotic syndrome and nephrosis. The age-adjusted death rate increased for six leading causes of death: Chronic lower respiratory diseases, Diabetes mellitus, Influenza and pneumonia, Chronic liver disease and cirrhosis, Parkinson's disease, and Pneumonitis due to solids and liquids. Life expectancy remained the same in 2011 as it had been in 2010 at 78.7 years.

Keywords: death rates • life expectancy • vital statistics • mortality

Introduction

This report presents preliminary mortality data for the United States based on vital records for a substantial proportion of deaths occurring in 2011. Statistics in preliminary reports are generally considered reliable; past analyses reveal that most statistics shown in preliminary reports were confirmed by the final statistics for each of those years (1–3).

Data Sources and Methods

Preliminary data in this report are based on records of deaths that occurred in calendar year 2011, which were received from state

vital statistics offices and processed by the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS) as of June 12, 2012. Estimates of the level of completeness of preliminary data for each state are shown in [Table I](#) (see [Technical Notes](#)). Detailed information on the nature, sources, and qualifications of the preliminary data is given in the [Technical Notes](#).

Each state vital statistics office reported to NCHS the number of deaths registered and processed for calendar year 2011. Those state counts were used as independent control counts for NCHS' 2011 preliminary national mortality file. A comparison of a) the number of 2011 death records received from the states for processing by NCHS with b) the state's independent control counts of the number of deaths in 2011 indicates that demographic information from death certificates for the United States was available for an estimated 98.9 percent of infant deaths (under age 1 year) and 99.4 percent of deaths of persons aged 1 year and over occurring in calendar year 2011 (see [Table I](#) in the [Technical Notes](#)). Medical (or cause-of-death) information, processed separately, was available for an estimated 97.3 percent of infant deaths and 98.1 percent of deaths of persons aged 1 year and over in 2011.

Cause-of-death information is not always available when preliminary data are sent to NCHS, but is available later for final data processing. As a result, estimates of cause of death based on preliminary mortality data may differ from statistics developed from the final mortality data (see [Tables II](#) and [III](#) in the [Technical Notes](#)). Such differences may affect certain causes of death where the cause is pending investigation, such as for Assault (homicide), Intentional self-harm (suicide), Accidents (unintentional injuries), Drug-induced deaths, and Sudden infant death syndrome (SIDS); see "Nonsampling error" in the [Technical Notes](#).

Tabulations by race and ethnic group are based on the race and ethnic group reported for the decedent. Race and Hispanic origin are reported as separate items on the death certificate. Data are shown for the following race and ethnic groups: white, non-Hispanic white, black, non-Hispanic black, American Indian or Alaska Native (AIAN), Asian or Pacific Islander (API), and Hispanic populations. Death rates for AIAN, API, and, to a lesser extent, Hispanic populations are known to be too low because of reporting problems (see "Race and Hispanic origin" in the [Technical Notes](#)).



All comparisons in this report are between the 2010 final data (3) and the 2011 preliminary data. Changes in death rates from 2010 to 2011 were tested for statistical significance. Differences in death rates across demographic groups (but occurring in 2011 only) were also tested for statistical significance. Unless otherwise specified, reported differences in death rates are statistically significant.

Age-adjusted death rates are better indicators than crude death rates for showing changes in the risk of death over time when the age distribution of the population is changing, and for comparing the mortality of population subgroups that have different age compositions. All age-adjusted death rates are standardized to the year 2000 population (see “Computing rates and percentages” in the [Technical Notes](#)).

Life expectancy data shown in this report for data years 2010–2011 are based on methodology similar to that of the 1999–2001 decennial life tables. Beginning with final data reported for 2008, the life table methodology was revised by changing the smoothing technique used to estimate the life table functions at the oldest ages; see [Technical Notes](#) (1). The methodology used to produce life expectancies adjusts for misclassification for Hispanic and for race and ethnicity for the non-Hispanic populations (see “Life tables” in the [Technical Notes](#)). Adjustments do not account for other sources of error such as return migration (4). Note that adjustments for misclassification are applied to the production of the life tables, but not to the death rates shown in this report.

Two measures of infant mortality are shown: the infant death rate and the infant mortality rate (see “Infant mortality” in the [Technical Notes](#)). These measures typically are similar, although they can differ because they have different denominators.

Results

Trends in numbers and rates

The preliminary number of deaths in the United States for 2011 was 2,513,171 ([Tables A and 1](#)). The crude death rate of 806.6 per 100,000 population was 0.9 percent higher than the rate of 799.5 per 100,000 in 2010. The estimated age-adjusted death rate, which accounts for changes in the age distribution of the population, reached a record low of 740.6 per 100,000 U.S. standard population, 0.9 percent lower than the 2010 rate of 747.0 ([Tables A and 1](#)). [Figure 1](#) illustrates the general pattern of decline in both crude and age-adjusted death rates since 1980. The age-adjusted death rate decreased from 2010 to 2011 by 1.4 percent for males and 0.5 percent for females. The relative magnitudes of significant changes in age-adjusted death rates by sex, race, and Hispanic origin ([Table 1](#)) are:

- White males—1.0 percent decrease
- Non-Hispanic white males—0.6 percent decrease
- Black males—3.3 percent decrease
- Black females—1.6 percent decrease
- Non-Hispanic black males—2.7 percent decrease
- Non-Hispanic black females—1.2 percent decrease
- AIAN males—5.9 percent decrease
- AIAN females—3.7 percent decrease
- API males—4.2 percent decrease
- API females—2.6 percent decrease

- Hispanic males—4.8 percent decrease
- Hispanic females—2.5 percent decrease

Rates for the AIAN and API populations should be interpreted with caution because of inconsistencies between reporting race on death certificates and on censuses, surveys, and birth certificates. Note that mortality for races other than white and black may be seriously understated in some cases due to underreporting for some race groups and Hispanic origin on death certificates (4–6).

Statistically significant decreases in mortality from 2010 to 2011 were registered for those under age 1 year and across age groups over 65 years. Decedents aged 25–34 experienced the only statistically significant increase. Mortality for age groups 1–4 years, 5–14 years, 15–24 years, 35–44 years, 45–54 years, and 55–64 years did not change significantly. The magnitude of the significant changes in mortality by age group is ([Table 1](#)):

- Under 1 year—4.0 percent decrease
- 25–34 years—1.5 percent increase
- 65–74 years—1.6 percent decrease
- 75–84 years—0.8 percent decrease
- 85 years and over—1.2 percent decrease

The death rate for “under 1 year” shown above is based on a population estimate and is different from the infant mortality rate, which is based on live births (see “Infant mortality”).

The preliminary estimate of life expectancy at birth for the total population in 2011 is 78.7 years. This is the same as in 2010 ([Tables A and 6](#)). Life expectancy for males increased 0.1 year, from 76.2 in 2010 to 76.3 in 2011. Female life expectancy also increased 0.1 year, from 81.0 years to 81.1 years. (Life expectancy from 2010 to 2011 differed for the male and female populations but was unchanged for both sexes combined due to rounding.)

The difference between male and female life expectancy at birth has generally been decreasing since its peak of 7.8 years in 1979 (1,7). The gap between male and female life expectancy was 4.8 years in 2011, unchanged from the difference between the sexes in 2010. The difference in life expectancy between the white and black populations in 2011 was 3.7 years, a 0.1-year decrease from the 2010 gap between the two races ([Table A](#)).

Life expectancy for the Hispanic population increased 0.2 year in 2011 to 81.4 years compared with 2010 ([Table 6](#)). In 2011, the life expectancy for the Hispanic female population was 83.7 years. The life expectancy for the Hispanic male population in 2011 was 78.9. The difference in life expectancy between the sexes for the Hispanic population was 4.8 years.

Among the six Hispanic origin-race-sex groups ([Table 6 and Figure 2](#)), Hispanic females have the highest life expectancy at birth (83.7 years), followed by non-Hispanic white females (81.1 years), Hispanic males (78.9 years), non-Hispanic black females (77.8 years), non-Hispanic white males (76.4 years), and non-Hispanic black males (71.6 years). [Figure 2](#) also shows that this pattern has not changed since 2006 although life expectancy for all groups has generally increased.

By state of residence, Hawaii had the lowest mortality in 2011 with an age-adjusted death rate of 584.8 deaths per 100,000 standard population ([Table 3](#)). Mortality was highest in Mississippi, with an age-adjusted death rate of 956.2 per 100,000 standard population.

Table A. Deaths, age-adjusted death rates, and life expectancy at birth, by race and sex; and infant deaths and mortality rates, by race: United States, final 2010 and preliminary 2011

[Data are based on a continuous file of records received from the states. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Measure and sex	All races ¹		White ²		Black ²	
	2011	2010	2011	2010	2011	2010
All deaths	2,513,171	2,468,435	2,153,864	2,114,749	290,135	286,959
Male	1,253,716	1,232,432	1,070,817	1,051,514	146,843	145,802
Female	1,259,456	1,236,003	1,083,046	1,063,235	143,292	141,157
Age-adjusted death rate ³	740.6	747.0	738.1	741.8	877.4	898.2
Male	874.5	887.1	869.3	878.5	1,067.3	1,104.0
Female	631.9	634.9	629.7	630.8	740.1	752.5
Life expectancy at birth (in years)	78.7	78.7	79.0	78.9	75.3	75.1
Male	76.3	76.2	76.6	76.5	72.1	71.8
Female	81.1	81.0	81.3	81.3	78.2	78.0
All infant deaths	23,910	24,586	15,438	15,954	7,234	7,401
Infant mortality rate ⁴	6.05	6.15	5.11	5.20	11.42	11.63

¹Includes races other than white and black.

²Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported for deaths by 38 states and the District of Columbia in 2011 and by 37 states and the District of Columbia in 2010, and were reported for births (used as the denominator in computing infant mortality rates), by 40 states and the District of Columbia in 2011 and by 38 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these reporting areas were bridged to the single-race categories of the 1977 OMB standards for comparability with other reporting areas; see Technical Notes.

³Age-adjusted death rates are per 100,000 U.S. standard population, based on the year 2000 standard.

⁴Infant mortality rates are deaths under age 1 year per 1,000 live births in specified group.

Causes of death

The leading causes of death in 2011 remained the same as in 2010 for the 15 leading causes, although two causes exchanged ranks. Nephritis, nephrotic syndrome and nephrosis, the eighth leading cause in 2010, became the ninth leading cause in 2011, while Influenza and pneumonia, the ninth leading cause in 2010, became the eighth leading cause of death in 2011. The 15 leading causes of death in 2011 (Table B) were as follows:

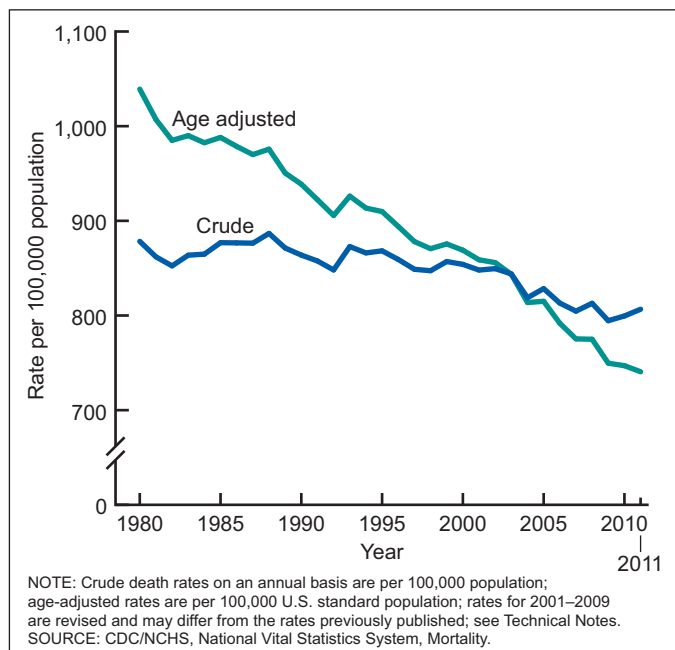


Figure 1. Crude and age-adjusted death rates: United States, 1980–2010 final and 2011 preliminary

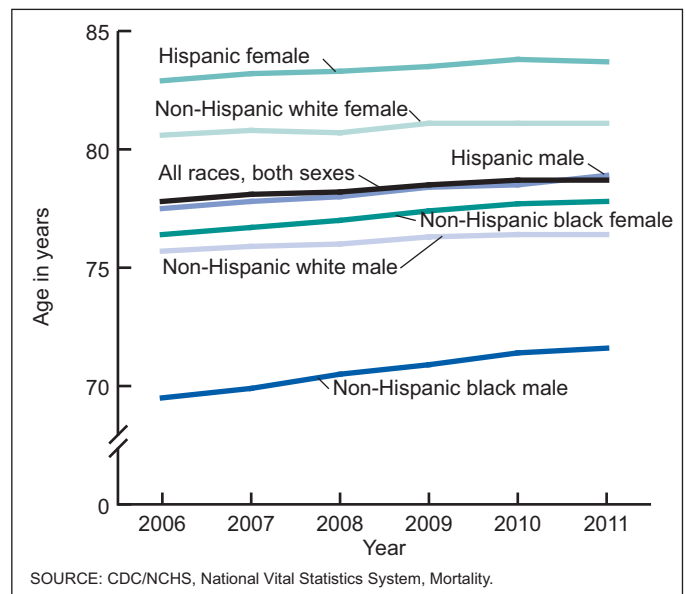


Figure 2. Life expectancy at birth, by Hispanic origin, race for non-Hispanic population, and sex: United States, 2006–2010 final and 2011 preliminary

1. Diseases of heart
2. Malignant neoplasms
3. Chronic lower respiratory diseases
4. Cerebrovascular diseases
5. Accidents (unintentional injuries)
6. Alzheimer's disease
7. Diabetes mellitus

Table B. Deaths and death rates for 2011 and age-adjusted death rates and percentage changes in age-adjusted rates from 2010 to 2011 for the 15 leading causes of death in 2011: United States, final 2010 and preliminary 2011

[Data are based on a continuous file of records received from the states. Rates are per 100,000 population; age-adjusted rates per 100,000 U.S. standard population based on the year 2000 standard; see Technical Notes. For explanation of asterisks (*) preceding cause-of-death codes, see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Rank ¹	Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	Number	Death rate	Age-adjusted death rate		
				2011	2010	Percent change
...	All causes	2,512,873	806.5	740.6	747.0	-0.9
1	Diseases of heart (I00–I09,I11,I13,I20–I51)	596,339	191.4	173.7	179.1	-3.0
2	Malignant neoplasms (C00–C97)	575,313	184.6	168.6	172.8	-2.4
3	Chronic lower respiratory diseases (J40–J47)	143,382	46.0	42.7	42.2	1.2
4	Cerebrovascular diseases (I60–I69)	128,931	41.4	37.9	39.1	-3.1
5	Accidents (unintentional injuries) (V01–X59,Y85–Y86) ^{2,3}	122,777	39.4	38.0	38.0	0.0
6	Alzheimer's disease (G30)	84,691	27.2	24.6	25.1	-2.0
7	Diabetes mellitus (E10–E14)	73,282	23.5	21.5	20.8	3.4
8	Influenza and pneumonia (J09–J18) ⁴	53,667	17.2	15.7	15.1	4.0
9	Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27) ⁵	45,731	14.7	13.4	15.3	-12.4
10	Intentional self-harm (suicide) (*U03,X60–X84,Y87.0) ²	38,285	12.3	12.0	12.1	-0.8
11	Septicemia (A40–A41)	35,539	11.4	10.5	10.6	-0.9
12	Chronic liver disease and cirrhosis (K70,K73–K74)	33,539	10.8	9.7	9.4	3.2
13	Essential hypertension and hypertensive renal disease (I10,I12,I15)	27,477	8.8	8.0	8.0	0.0
14	Parkinson's disease (G20–G21) ⁶	23,107	7.4	7.0	6.8	2.9
15	Pneumonitis due to solids and liquids (J69)	18,090	5.8	5.3	5.1	3.9
...	All other causes (residual)	512,723	164.6	...	...	...

... Category not applicable.

¹Rank based on number of deaths.

²For unintentional injuries, suicides, preliminary and final data may differ significantly because of the truncated nature of the preliminary file.

³New ICD-10 subcategories were introduced for the existing X34 (Victim of earthquake); see Technical Notes.

⁴New ICD-10 code J12.3 (Human metapneumovirus pneumonia) was added to the category in 2011; see Technical Notes.

⁵New subcategories replaced previous ones for N18 (Chronic kidney disease) in 2011. Changes affect comparability with previous year's data; see Technical Notes.

⁶New ICD-10 code G21.4 (Vascular parkinsonism) was added to the category in 2011; see Technical Notes.

NOTES: Data are subject to sampling and random variation. For information regarding the calculation of standard errors and further discussion of the variability of the data, see Technical Notes.

8. Influenza and pneumonia
9. Nephritis, nephrotic syndrome and nephrosis
10. Intentional self-harm (suicide)
11. Septicemia
12. Chronic liver disease and cirrhosis
13. Essential hypertension and hypertensive renal disease
14. Parkinson's disease
15. Pneumonitis due to solids and liquids

From 2010 to 2011, the age-adjusted death rate declined significantly for 5 of the 15 leading causes of death. The age-adjusted death rate for the leading cause of death, Diseases of heart, decreased by 3.0 percent. The age-adjusted death rate for Malignant neoplasms decreased by 2.4 percent (Tables B and 2). Deaths from these two diseases combined accounted for 47 percent of deaths in the United States in 2011. Heart disease mortality has exhibited a fairly steady decline since 1980, and cancer mortality began to decline in the early 1990s (8). Of the 15 leading causes of death, the age-adjusted death rate also decreased significantly for Cerebrovascular diseases (3.1 percent), Alzheimer's disease (2.0 percent), and Nephritis, nephrotic syndrome and nephrosis (12.4 percent).

The decrease in deaths from Nephritis, nephrotic syndrome and nephrosis from 2010 to 2011 needs to be interpreted with caution, however. Changes in classification and coding were made in 2011 that

contributed to the decrease. Renal failure, for example, mentioned on death certificates was more likely to be treated as a renal complication of other diseases on the death certificate in 2011. As a result, more of these records shift from the Nephritis, nephrotic syndrome and nephrosis category to other diseases (e.g., Diabetes mellitus with renal complications, which is part of the broader Diabetes mellitus category).

The age-adjusted death rate increased significantly from 2010 to 2011 for six leading causes: Chronic lower respiratory diseases (1.2 percent), Diabetes mellitus (3.4 percent), Influenza and pneumonia (4.0 percent), Chronic liver disease and cirrhosis (3.2 percent), Parkinson's disease (2.9 percent), and Pneumonitis due to solids and liquids (3.9 percent).

The observed changes in the age-adjusted death rates from 2010 to 2011 were not significant for Accidents (unintentional injuries), Intentional self-harm (suicide), Septicemia, and Essential hypertension and hypertensive renal disease.

Although Human immunodeficiency virus (HIV) disease was not among the 15 leading causes of death in 2011 for all ages combined, it remains a public health concern, especially for those between the ages of 15 and 64. The age-adjusted death rate for HIV disease declined by 7.7 percent from 2010 to 2011 (Table 2). Following a period of increase from 1987 through 1994, HIV disease mortality reached a plateau in 1995. Subsequently, the rate for this disease decreased an average of 33.0 percent per year from 1995 through 1998 (9), and 6.5 percent per year from 1999 through 2010 (data not shown). For all races combined in the age group 15–24, HIV disease was the 12th leading cause of death in 2010 and 2011. HIV disease dropped from

the seventh leading cause of death in 2010 to the eighth leading cause in 2011 for the age group 25–44. Among decedents aged 45–64, HIV disease remained the 13th leading cause in 2011, unchanged from its rank in 2010.

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, has become a concern in recent years. The disease is often acquired by long-term patients or residents in hospitals or other health-care facilities and accounted for an increasing number of deaths between 1999 and 2008 (1,10,11). In 1999, 793 deaths were due to *C. difficile*, compared with 7,476 *C. difficile* deaths in 2008 (1). The number of deaths dropped slightly to 7,251 in 2009 and increased to 7,994 in 2011. The age-adjusted death rate for this cause in 2011 was 2.4 deaths per 100,000 standard population, an increase of 9.1 percent from the rate in 2010. In 2011, *C. difficile* ranked as the 17th leading cause of death for the population aged 65 and over. Approximately 91 percent of deaths from *C. difficile* occurred to people aged 65 and over (data not shown).

The age-adjusted death rate for drug-induced deaths did not change significantly, according to preliminary data. However, the final number of drug-induced deaths in 2011 may be substantially higher because information on cause of death in these cases is often delayed pending investigation. Additional information based on toxicology or autopsy reports is often not available in the preliminary file. Mortality from firearm injuries and alcohol-induced deaths in 2011 was unchanged from 2010. The age-adjusted death rate for injury at work in 2011 decreased 5.9 percent from the final rate of 1.7 in 2010 to 1.6 in 2011 (Table 2).

Infant mortality

The preliminary infant mortality rate for 2011 was 6.05 infant deaths per 1,000 live births (Tables A and 4). This was not significantly different from the final 2010 rate of 6.15. Few observed changes in infant mortality from 2010 to 2011 were statistically significant. With the exception of 2002, the infant mortality rate has statistically remained the same or decreased significantly each successive year from 1958 through 2011 (1,12). The neonatal (i.e., infants under age 28 days) mortality rate was 4.04 per 1,000 live births in 2011, which also was not significantly different from 2010. The postneonatal (i.e., infants aged 28 days–11 months) mortality rate decreased by 4.3 percent from 2.10 deaths per 1,000 live births in 2010 to 2.01 deaths per 1,000 live births in 2011.

Infant mortality did not change significantly from 2010 to 2011 for either black or white infants. The mortality rate of 11.42 deaths per 1,000 live births for black infants was 2.2 times the rate of 5.11 deaths per 1,000 live births for white infants (Tables A and 4). Because of inconsistencies in the reporting of race groups on birth and death certificates (especially for races other than white and black and for Hispanic origin), infant mortality rates for these groups are likely to be underestimated (4). The linked birth/infant death data set provides a better source of data for infant deaths and mortality rates by maternal race and ethnicity (13).

Although the infant mortality rate is the preferred indicator of the risk of dying during the first year of life, the infant death rate is also shown in this report. While similar, these two rates vary based on differences in their denominators. The denominator of the 2011 infant death rate is the estimated population under age 1 year as of the

reference date, July 1, 2011 (14). This population estimate includes a combination of infants born in 2010 who had not reached their first birthday before July 1, 2011, and infants born in 2011 before July 1, 2011. In contrast, the denominator of the 2011 infant mortality rate is all live births occurring during 2011 (15). For example, the preliminary number of live births for 2011 ($n = 3,953,593$) is 1.1 percent lower than the July 1 infant population in 2011 ($n = 3,996,537$). Therefore, the infant mortality rate for 2011 (604.7 deaths per 100,000 live births) is higher than the infant death rate for 2011 (598.3 deaths per 100,000 population). For 2011, only the infant death rate decreased significantly from 2010.

The 10 leading causes of infant mortality for 2011 were:

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

The leading causes of infant death in 2011 were the same as in 2009. They were the same as in 2010 for 9 of the 10 leading causes (Table 8). Dropping from among the 10 leading causes of infant death in 2011 was Necrotizing enterocolitis of newborn, replaced by Neonatal hemorrhage as the 10th leading cause of infant death in 2011. The infant mortality rate decreased for only 1 of the 10 leading causes of death from 2010 to 2011 (Tables 5 and 8). The infant mortality rate decreased by 16.1 percent for SIDS (Tables 5 and 8).

Deaths due to SIDS, currently the third leading cause of infant death, have been declining since 1988 (1,16). Because SIDS deaths often involve lengthy investigations, the mortality rate due to SIDS is typically lower based on preliminary data than that based on the final data. Recent declines in mortality due to SIDS also may reflect a change in the way SIDS is diagnosed and reported by medical examiners and coroners (17).

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Table 1. Deaths and death rates, by age, sex, race, and Hispanic origin, and age-adjusted death rates, by sex, race, and Hispanic origin: United States, final 2010 and preliminary 2011

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals. Race and Hispanic origin are reported separately on the death certificate. Data for Hispanic origin and specified races other than white and black should be interpreted with caution because of inconsistencies between reporting Hispanic origin and race on death certificates and on censuses and surveys; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 38 states and the District of Columbia in 2011 and by 37 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see Technical Notes]

Age, sex, race, and Hispanic origin	2011		2010	
	Number	Rate	Number	Rate
All races, both sexes				
All ages	2,513,171	806.6	2,468,435	799.5
Under 1 year ¹	23,910	598.3	24,586	623.4
1-4 years	4,236	26.2	4,316	26.5
5-14 years	5,377	13.1	5,279	12.9
15-24 years	29,624	67.6	29,551	67.7
25-34 years	43,631	104.4	42,259	102.9
35-44 years	69,746	171.7	70,033	170.5
45-54 years	182,994	409.2	183,207	407.1
55-64 years	323,015	848.7	310,802	851.9
65-74 years	414,792	1,845.0	407,151	1,875.1
75-84 years	625,860	4,750.3	625,651	4,790.2
85 years and over	789,854	13,767.3	765,474	13,934.3
Not stated	132	...	126	...
Age-adjusted rate ² . . . . .	...	740.6	...	747.0
All races, male				
All ages	1,253,716	817.9	1,232,432	812.0
Under 1 year ¹	13,259	648.8	13,702	680.2
1-4 years	2,393	29.0	2,460	29.6
5-14 years	3,163	15.1	3,054	14.6
15-24 years	21,894	97.6	21,790	97.6
25-34 years	30,003	142.6	29,192	141.5
35-44 years	43,152	213.4	43,434	212.5
45-54 years	111,552	506.6	112,018	505.9
55-64 years	196,424	1,070.0	189,295	1,075.5
65-74 years	234,102	2,234.6	229,704	2,275.1
75-84 years	312,543	5,608.1	311,830	5,693.7
85 years and over	285,134	15,054.4	275,866	15,414.3
Not stated	96	...	87	...
Age-adjusted rate ² . . . . .	...	874.5	...	887.1
All races, female				
All ages	1,259,456	795.6	1,236,003	787.4
Under 1 year ¹	10,651	545.4	10,884	564.0
1-4 years	1,843	23.3	1,856	23.3
5-14 years	2,214	11.0	2,225	11.1
15-24 years	7,730	36.2	7,761	36.4
25-34 years	13,628	65.7	13,067	64.0
35-44 years	26,594	130.3	26,599	128.9
45-54 years	71,442	314.7	71,189	311.4
55-64 years	126,591	642.5	121,507	643.5
65-74 years	180,690	1,505.1	177,447	1,527.5
75-84 years	313,317	4,121.4	313,821	4,137.7
85 years and over	504,720	13,133.0	489,608	13,219.2
Not stated	36	...	39	...
Age-adjusted rate ² . . . . .	...	631.9	...	634.9

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, race, and Hispanic origin, and age-adjusted death rates, by sex, race, and Hispanic origin: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals. Race and Hispanic origin are reported separately on the death certificate. Data for Hispanic origin and specified races other than white and black should be interpreted with caution because of inconsistencies between reporting Hispanic origin and race on death certificates and on censuses and surveys; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 38 states and the District of Columbia in 2011 and by 37 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see Technical Notes]

Age, sex, race, and Hispanic origin	2011		2010	
	Number	Rate	Number	Rate
Total white, both sexes				
All ages	2,153,864	871.7	2,114,749	861.7
Under 1 year ¹	15,438	515.5	15,954	537.2
1–4 years	2,973	24.5	3,015	24.6
5–14 years	3,907	12.5	3,841	12.3
15–24 years	21,610	64.9	21,509	64.7
25–34 years	32,605	101.2	31,425	99.2
35–44 years	52,857	166.8	53,060	165.0
45–54 years	143,215	397.4	143,049	392.9
55–64 years	259,396	820.3	249,583	820.3
65–74 years	349,774	1,823.5	342,977	1,846.7
75–84 years	551,575	4,794.0	552,508	4,818.2
85 years and over	720,413	14,016.6	697,733	14,147.6
Not stated	100	...	95	...
Age-adjusted rate ² . . . . .	...	738.1	...	741.8
White male				
All ages	1,070,817	875.4	1,051,514	866.1
Under 1 year ¹	8,555	558.8	8,871	584.3
1–4 years	1,680	27.0	1,718	27.4
5–14 years	2,306	14.4	2,222	13.8
15–24 years	15,810	92.4	15,661	91.8
25–34 years	22,603	137.5	21,883	135.6
35–44 years	33,326	208.5	33,486	206.6
45–54 years	88,664	494.5	89,017	491.9
55–64 years	159,175	1,032.1	153,296	1,033.0
65–74 years	198,530	2,197.8	194,793	2,232.4
75–84 years	278,190	5,647.4	277,543	5,703.6
85 years and over	261,903	15,318.1	252,958	15,640.3
Not stated	74	...	66	...
Age-adjusted rate ² . . . . .	...	869.3	...	878.5
White female				
All ages	1,083,046	868.0	1,063,235	857.3
Under 1 year ¹	6,883	470.3	7,083	488.0
1–4 years	1,293	21.8	1,297	21.6
5–14 years	1,601	10.5	1,619	10.6
15–24 years	5,800	35.9	5,848	36.2
25–34 years	10,002	63.4	9,542	61.4
35–44 years	19,532	124.4	19,574	122.8
45–54 years	54,550	301.2	54,032	295.1
55–64 years	100,221	618.6	96,287	617.8
65–74 years	151,244	1,490.3	148,184	1,504.9
75–84 years	273,385	4,155.1	274,965	4,165.4
85 years and over	458,510	13,367.8	444,775	13,419.3
Not stated	26	...	29	...
Age-adjusted rate ² . . . . .	...	629.7	...	630.8

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, race, and Hispanic origin, and age-adjusted death rates, by sex, race, and Hispanic origin: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals. Race and Hispanic origin are reported separately on the death certificate. Data for Hispanic origin and specified races other than white and black should be interpreted with caution because of inconsistencies between reporting Hispanic origin and race on death certificates and on censuses and surveys; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 38 states and the District of Columbia in 2011 and by 37 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see Technical Notes]

Age, sex, race, and Hispanic origin	2011		2010	
	Number	Rate	Number	Rate
Non-Hispanic white, both sexes				
All ages	2,005,481	1,000.6	1,969,916	984.3
Under 1 year ¹	10,872	523.2	11,025	529.3
1–4 years	2,051	24.1	2,139	24.7
5–14 years	2,890	12.7	2,910	12.6
15–24 years	16,934	67.1	16,847	66.4
25–34 years	26,672	108.8	25,486	105.6
35–44 years	44,817	180.1	44,999	176.2
45–54 years	127,733	414.0	128,034	407.2
55–64 years	238,404	837.6	229,265	834.2
65–74 years	325,851	1,855.6	319,805	1,876.2
75–84 years	519,151	4,871.2	520,983	4,886.8
85 years and over	690,048	14,207.2	668,361	14,286.1
Not stated	60	...	62	...
Age-adjusted rate ² . . . . .	...	753.9	...	755.0
Non-Hispanic white male				
All ages	989,421	1,003.7	971,604	987.5
Under 1 year ¹	6,078	572.2	6,144	575.9
1–4 years	1,172	26.9	1,219	27.5
5–14 years	1,714	14.7	1,691	14.3
15–24 years	12,207	94.7	12,079	93.4
25–34 years	18,237	147.5	17,483	143.6
35–44 years	27,944	223.7	28,070	219.1
45–54 years	78,416	512.0	79,295	508.1
55–64 years	145,958	1,049.5	140,552	1,046.2
65–74 years	184,956	2,226.6	181,567	2,256.9
75–84 years	262,163	5,728.0	261,723	5,770.3
85 years and over	250,530	15,558.4	241,741	15,816.6
Not stated	45	...	40	...
Age-adjusted rate ² . . . . .	...	886.8	...	892.5
Non-Hispanic white female				
All ages	1,016,060	997.7	998,312	981.2
Under 1 year ¹	4,793	471.9	4,881	480.4
1–4 years	879	21.1	920	21.8
5–14 years	1,176	10.6	1,219	10.9
15–24 years	4,726	38.3	4,768	38.4
25–34 years	8,435	69.4	8,003	66.8
35–44 years	16,872	136.2	16,929	133.1
45–54 years	49,317	317.5	48,739	307.7
55–64 years	92,446	635.1	88,713	631.5
65–74 years	140,894	1,522.6	138,238	1,535.9
75–84 years	256,988	4,226.4	259,260	4,232.6
85 years and over	439,517	13,537.1	426,620	13,543.5
Not stated	15	...	22	...
Age-adjusted rate ² . . . . .	...	644.3	...	643.3

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, race, and Hispanic origin, and age-adjusted death rates, by sex, race, and Hispanic origin: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals. Race and Hispanic origin are reported separately on the death certificate. Data for Hispanic origin and specified races other than white and black should be interpreted with caution because of inconsistencies between reporting Hispanic origin and race on death certificates and on censuses and surveys; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 38 states and the District of Columbia in 2011 and by 37 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see Technical Notes]

Age, sex, race, and Hispanic origin	2011		2010	
	Number	Rate	Number	Rate
Total black, both sexes				
All ages	290,135	679.8	286,959	682.2
Under 1 year ¹	7,234	1,051.3	7,401	1,102.1
1–4 years	1,049	38.2	1,041	38.1
5–14 years	1,179	17.6	1,145	17.1
15–24 years	6,695	92.4	6,675	93.2
25–34 years	9,064	151.1	8,920	152.0
35–44 years	13,792	248.6	14,016	250.3
45–54 years	33,504	579.3	34,093	591.5
55–64 years	53,804	1,257.8	51,816	1,286.0
65–74 years	53,303	2,465.2	52,491	2,526.1
75–84 years	57,973	5,217.6	57,543	5,371.8
85 years and over	52,510	12,886.4	51,795	13,187.2
Not stated	28	...	23	...
Age-adjusted rate ² . . . . .	...	877.4	...	898.2
Black male				
All ages	146,843	719.2	145,802	725.4
Under 1 year ¹	4,018	1,138.9	4,116	1,206.5
1–4 years	594	42.6	595	42.9
5–14 years	701	20.5	667	19.6
15–24 years	5,126	140.4	5,129	142.8
25–34 years	6,097	212.0	6,071	216.7
35–44 years	7,972	305.2	8,115	307.5
45–54 years	19,162	705.2	19,393	716.3
55–64 years	31,583	1,622.6	30,458	1,662.1
65–74 years	28,919	3,128.4	28,395	3,205.6
75–84 years	26,376	6,361.1	26,602	6,721.5
85 years and over	16,274	14,176.8	16,243	14,715.3
Not stated	20	...	18	...
Age-adjusted rate ² . . . . .	...	1,067.3	...	1,104.0
Black female				
All ages	143,292	643.7	141,157	642.7
Under 1 year ¹	3,216	959.1	3,285	994.4
1–4 years	455	33.7	446	33.2
5–14 years	477	14.5	478	14.5
15–24 years	1,569	43.6	1,546	43.3
25–34 years	2,967	95.0	2,849	92.9
35–44 years	5,819	198.3	5,901	199.3
45–54 years	14,342	467.7	14,700	481.0
55–64 years	22,222	953.2	21,358	972.2
65–74 years	24,384	1,970.0	24,096	2,021.2
75–84 years	31,596	4,536.6	30,941	4,580.9
85 years and over	36,236	12,380.3	35,552	12,589.9
Not stated	8	...	5	...
Age-adjusted rate ² . . . . .	...	740.1	...	752.5

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, race, and Hispanic origin, and age-adjusted death rates, by sex, race, and Hispanic origin: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals. Race and Hispanic origin are reported separately on the death certificate. Data for Hispanic origin and specified races other than white and black should be interpreted with caution because of inconsistencies between reporting Hispanic origin and race on death certificates and on censuses and surveys; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 38 states and the District of Columbia in 2011 and by 37 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see Technical Notes]

Age, sex, race, and Hispanic origin	2011		2010	
	Number	Rate	Number	Rate
Non-Hispanic black, both sexes				
All ages	287,482	719.7	283,438	718.7
Under 1 year ¹	6,973	1,130.4	7,071	1,170.4
1–4 years	1,007	40.7	993	40.2
5–14 years	1,149	18.7	1,118	18.1
15–24 years	6,590	97.8	6,546	98.3
25–34 years	8,959	161.6	8,786	161.9
35–44 years	13,650	262.2	13,807	261.9
45–54 years	33,204	601.2	33,698	610.9
55–64 years	53,415	1,295.1	51,288	1,318.8
65–74 years	52,890	2,531.5	51,930	2,582.2
75–84 years	57,512	5,344.5	56,942	5,477.8
85 years and over	52,108	13,175.5	51,242	13,385.7
Not stated	23	...	17	...
Age-adjusted rate ² . . . . .	...	903.9	...	920.4
Non-Hispanic black male				
All ages	145,391	762.2	143,824	764.5
Under 1 year ¹	3,872	1,224.8	3,931	1,281.5
1–4 years	571	45.4	570	45.4
5–14 years	685	21.9	649	20.7
15–24 years	5,048	148.8	5,033	150.8
25–34 years	6,018	226.7	5,971	230.8
35–44 years	7,895	322.2	7,975	321.1
45–54 years	18,962	731.0	19,146	739.1
55–64 years	31,335	1,671.1	30,138	1,705.0
65–74 years	28,691	3,213.9	28,060	3,274.7
75–84 years	26,146	6,519.6	26,281	6,849.1
85 years and over	16,153	14,566.3	16,055	14,974.2
Not stated	16	...	15	...
Age-adjusted rate ² . . . . .	...	1,101.2	...	1,131.7
Non-Hispanic black female				
All ages	142,091	680.8	139,614	676.9
Under 1 year ¹	3,102	1,031.5	3,140	1,055.7
1–4 years	436	35.8	423	34.8
5–14 years	463	15.3	469	15.5
15–24 years	1,542	46.1	1,513	45.6
25–34 years	2,942	101.8	2,815	99.1
35–44 years	5,755	208.9	5,832	209.1
45–54 years	14,242	486.2	14,552	497.4
55–64 years	22,080	981.7	21,150	996.9
65–74 years	24,200	2,022.5	23,870	2,068.1
75–84 years	31,367	4,646.6	30,661	4,675.5
85 years and over	35,955	12,633.6	35,187	12,767.7
Not stated	7	...	2	...
Age-adjusted rate ² . . . . .	...	761.7	...	770.8

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, race, and Hispanic origin, and age-adjusted death rates, by sex, race, and Hispanic origin: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals. Race and Hispanic origin are reported separately on the death certificate. Data for Hispanic origin and specified races other than white and black should be interpreted with caution because of inconsistencies between reporting Hispanic origin and race on death certificates and on censuses and surveys; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 38 states and the District of Columbia in 2011 and by 37 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see Technical Notes]

Age, sex, race, and Hispanic origin	2011		2010	
	Number	Rate	Number	Rate
Total AIAN ^{3,4} both sexes				
All ages	15,875	365.2	15,565	365.1
Under 1 year ¹	357	444.8	354	455.3
1–4 years	86	27.3	93	29.4
5–14 years	94	12.4	108	14.4
15–24 years	587	77.0	615	81.3
25–34 years	837	125.7	795	122.0
35–44 years	1,194	207.4	1,163	203.2
45–54 years	2,266	415.5	2,203	409.7
55–64 years	2,779	747.5	2,704	782.1
65–74 years	2,845	1,618.9	2,803	1,709.9
75–84 years	2,777	3,675.3	2,685	3,833.0
85 years and over	2,052	8,669.2	2,042	9,615.3
Not stated	1	...	–	...
Age-adjusted rate ² . . . . .	...	598.3	...	628.3
AIAN ^{3,4} male				
All ages	8,582	392.6	8,516	397.5
Under 1 year ¹	196	479.2	213	542.5
1–4 years	46	28.8	55	34.3
5–14 years	48	12.5	69	18.1
15–24 years	421	106.7	456	116.4
25–34 years	553	160.5	525	156.2
35–44 years	731	249.9	749	258.2
45–54 years	1,340	498.0	1,311	496.1
55–64 years	1,600	891.4	1,590	951.2
65–74 years	1,560	1,896.0	1,507	1,971.0
75–84 years	1,339	4,209.1	1,298	4,451.8
85 years and over	747	9,084.3	743	10,268.1
Not stated	1	...	–	...
Age-adjusted rate ² . . . . .	...	687.0	...	730.2
AIAN ^{3,4} female				
All ages	7,292	337.4	7,049	332.4
Under 1 year ¹	160	406.5	141	366.4
1–4 years	40	25.8	38	24.4
5–14 years	46	12.3	39	10.5
15–24 years	166	45.1	159	43.6
25–34 years	284	88.4	270	85.6
35–44 years	463	163.5	414	146.6
45–54 years	926	335.1	892	326.2
55–64 years	1,179	613.1	1,114	623.8
65–74 years	1,285	1,375.0	1,296	1,481.7
75–84 years	1,437	3,284.8	1,387	3,391.9
85 years and over	1,305	8,448.2	1,299	9,277.9
Not stated	–	...	–	...
Age-adjusted rate ² . . . . .	...	521.4	...	541.7

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, race, and Hispanic origin, and age-adjusted death rates, by sex, race, and Hispanic origin: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals. Race and Hispanic origin are reported separately on the death certificate. Data for Hispanic origin and specified races other than white and black should be interpreted with caution because of inconsistencies between reporting Hispanic origin and race on death certificates and on censuses and surveys; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 38 states and the District of Columbia in 2011 and by 37 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see Technical Notes]

Age, sex, race, and Hispanic origin	2011		2010	
	Number	Rate	Number	Rate
Total API, ⁵ both sexes				
All ages	53,298	305.1	51,162	301.1
Under 1 year ¹	882	377.7	877	389.3
1–4 years	128	13.5	167	17.9
5–14 years	197	8.5	185	8.2
15–24 years	731	29.3	752	30.2
25–34 years	1,124	38.6	1,119	39.2
35–44 years	1,904	67.4	1,794	65.3
45–54 years	4,009	170.7	3,862	168.0
55–64 years	7,036	393.4	6,699	398.5
65–74 years	8,869	921.9	8,880	987.4
75–84 years	13,535	2,802.0	12,915	2,853.1
85 years and over	14,880	8,947.8	13,904	9,418.1
Not stated	3	...	8	...
Age-adjusted rate ² . . . . .	...	410.1	...	424.3
API ⁵ male				
All ages	27,473	328.4	26,600	327.0
Under 1 year ¹	490	411.6	502	434.4
1–4 years	73	15.1	92	19.3
5–14 years	107	9.2	96	8.4
15–24 years	537	42.3	544	43.0
25–34 years	749	53.9	713	52.6
35–44 years	1,123	84.2	1,084	83.5
45–54 years	2,385	216.5	2,297	213.7
55–64 years	4,066	502.3	3,951	519.0
65–74 years	5,094	1,166.9	5,009	1,226.0
75–84 years	6,637	3,308.2	6,387	3,438.7
85 years and over	6,210	10,140.1	5,922	10,824.5
Not stated	1	...	3	...
Age-adjusted rate ² . . . . .	...	490.4	...	512.1
API ⁵ female				
All ages	25,825	283.6	24,562	277.3
Under 1 year ¹	392	342.5	375	341.8
1–4 years	55	11.8	75	16.3
5–14 years	89	7.8	89	7.9
15–24 years	194	15.8	208	17.0
25–34 years	375	24.6	406	27.1
35–44 years	781	52.4	710	49.0
45–54 years	1,624	130.2	1,565	127.9
55–64 years	2,970	303.3	2,748	298.8
65–74 years	3,776	718.6	3,871	788.7
75–84 years	6,898	2,442.5	6,528	2,445.5
85 years and over	8,670	8,252.8	7,982	8,590.1
Not stated	2	...	5	...
Age-adjusted rate ² . . . . .	...	349.6	...	359.0

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, race, and Hispanic origin, and age-adjusted death rates, by sex, race, and Hispanic origin: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals. Race and Hispanic origin are reported separately on the death certificate. Data for Hispanic origin and specified races other than white and black should be interpreted with caution because of inconsistencies between reporting Hispanic origin and race on death certificates and on censuses and surveys; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 38 states and the District of Columbia in 2011 and by 37 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see Technical Notes]

Age, sex, race, and Hispanic origin	2011		2010	
	Number	Rate	Number	Rate
Hispanic, ⁶ both sexes				
All ages	149,234	286.7	144,490	286.2
Under 1 year ¹	4,806	457.9	5,170	510.7
1–4 years	972	23.5	930	22.7
5–14 years	1,053	11.0	951	10.2
15–24 years	4,822	53.2	4,795	54.2
25–34 years	6,041	70.2	6,022	71.4
35–44 years	8,166	108.8	8,142	111.6
45–54 years	15,506	271.3	14,915	273.0
55–64 years	20,895	604.3	20,066	624.4
65–74 years	23,914	1,362.2	22,962	1,392.7
75–84 years	32,524	3,574.8	31,364	3,637.3
85 years and over	30,529	10,052.8	29,166	10,777.9
Not stated	7	...	7	...
Age-adjusted rate ² . . . . .	...	539.3	...	558.6
Hispanic ⁶ male				
All ages	81,632	308.7	79,622	310.8
Under 1 year ¹	2,611	486.3	2,870	556.8
1–4 years	538	25.4	524	25.0
5–14 years	607	12.5	543	11.4
15–24 years	3,720	78.4	3,689	79.4
25–34 years	4,450	98.1	4,461	100.9
35–44 years	5,452	141.8	5,460	146.2
45–54 years	10,244	356.4	9,627	351.9
55–64 years	13,072	788.6	12,509	815.1
65–74 years	13,493	1,716.4	13,040	1,775.0
75–84 years	16,032	4,290.4	15,723	4,461.9
85 years and over	11,408	10,676.0	11,171	11,779.8
Not stated	6	...	5	...
Age-adjusted rate ² . . . . .	...	645.3	...	677.7
Hispanic ⁶ female				
All ages	67,602	264.0	64,868	260.9
Under 1 year ¹	2,195	428.2	2,300	462.9
1–4 years	434	21.4	406	20.2
5–14 years	445	9.5	408	8.9
15–24 years	1,103	25.6	1,106	26.3
25–34 years	1,591	39.1	1,561	38.9
35–44 years	2,714	74.1	2,682	75.2
45–54 years	5,262	185.2	5,288	193.9
55–64 years	7,823	434.6	7,557	450.1
65–74 years	10,421	1,075.0	9,922	1,085.5
75–84 years	16,492	3,076.1	15,641	3,067.4
85 years and over	19,120	9,714.0	17,995	10,237.3
Not stated	1	...	2	...
Age-adjusted rate ² . . . . .	...	451.8	...	463.4

... Category not applicable.

– Quantity zero.

¹Death rates for “Under 1 year” (based on population estimates) differ from infant mortality rates (based on live births). See text for additional information on the infant mortality rate.

²For method of computation, see Technical Notes.

³AIAN is American Indian or Alaska Native.

⁴Includes deaths among Aleut and Eskimo persons.

⁵API is Asian or Pacific Islander.

⁶Includes all persons of Hispanic origin of any race; see Technical Notes.

NOTE: Data are subject to sampling or random variation. For information regarding the calculation of standard errors and further discussion of the variability of the data, see Technical Notes.

Table 2. Deaths, death rates, and age-adjusted death rates for 113 selected causes, Injury by firearms, Drug-induced deaths, Alcohol-induced deaths, Injury at work, and Enterocolitis due to *Clostridium difficile*: United States, final 2010 and preliminary 2011

[Data are based on a continuous file of records received from the states. Rates per 100,000 population. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. For explanation of asterisks (*) preceding cause-of-death codes; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	2011			2010		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
All causes	2,512,873	806.5	740.6	2,468,435	799.5	747.0
Salmonella infections (A01–A02)	42	0.0	0.0	28	0.0	0.0
Shigellosis and amebiasis (A03,A06)	8	*	*	3	*	*
Certain other intestinal infections (A04,A07–A09)	10,972	3.5	3.3	10,276	3.3	3.1
Tuberculosis (A16–A19)	536	0.2	0.2	569	0.2	0.2
Respiratory tuberculosis (A16)	392	0.1	0.1	423	0.1	0.1
Other tuberculosis (A17–A19)	144	0.0	0.0	146	0.0	0.0
Whooping cough (A37)	8	*	*	26	0.0	0.0
Scarlet fever and erysipelas (A38,A46)	4	*	*	3	*	*
Meningococcal infection (A39)	85	0.0	0.0	79	0.0	0.0
Septicemia (A40–A41)	35,539	11.4	10.5	34,812	11.3	10.6
Syphilis (A50–A53)	45	0.0	0.0	28	0.0	0.0
Acute poliomyelitis (A80)	–	*	*	–	*	*
Arthropod-borne viral encephalitis (A83–A84,A85.2)	5	*	*	9	*	*
Measles (B05)	1	*	*	2	*	*
Viral hepatitis (B15–B19) ¹	7,794	2.5	2.1	7,564	2.4	2.1
Human immunodeficiency virus (HIV) disease (B20–B24)	7,638	2.5	2.4	8,369	2.7	2.6
Malaria (B50–B54)	1	*	*	10	*	*
Other and unspecified infectious and parasitic diseases and their sequelae (A00,A05,A20–A36,A42–A44,A48–A49,A54–A79,A81–A82,A85.0–A85.1,A85.8,A86–B04,B06–B09,B25–B49,B55–B99)	5,713	1.8	1.7	5,805	1.9	1.8
Malignant neoplasms (C00–C97)	575,313	184.6	168.6	574,743	186.2	172.8
Malignant neoplasms of lip, oral cavity and pharynx (C00–C14)	8,625	2.8	2.5	8,474	2.7	2.5
Malignant neoplasm of esophagus (C15)	14,413	4.6	4.1	14,490	4.7	4.3
Malignant neoplasm of stomach (C16)	10,995	3.5	3.2	11,390	3.7	3.4
Malignant neoplasms of colon, rectum and anus (C18–C21)	52,243	16.8	15.3	52,622	17.0	15.8
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	21,519	6.9	6.1	20,305	6.6	6.0
Malignant neoplasm of pancreas (C25)	37,371	12.0	10.9	36,888	11.9	11.0
Malignant neoplasm of larynx (C32)	3,710	1.2	1.1	3,691	1.2	1.1
Malignant neoplasms of trachea, bronchus and lung (C33–C34)	156,614	50.3	45.9	158,318	51.3	47.6
Malignant melanoma of skin (C43)	9,126	2.9	2.7	9,154	3.0	2.8
Malignant neoplasm of breast (C50)	41,271	13.2	12.0	41,435	13.4	12.4
Malignant neoplasm of cervix uteri (C53)	4,080	1.3	1.2	3,939	1.3	1.2
Malignant neoplasms of corpus uteri and uterus, part unspecified (C54–C55)	8,615	2.8	2.5	8,402	2.7	2.5
Malignant neoplasm of ovary (C56)	14,312	4.6	4.2	14,572	4.7	4.4
Malignant neoplasm of prostate (C61)	27,929	9.0	8.3	28,561	9.3	8.7
Malignant neoplasms of kidney and renal pelvis (C64–C65)	13,520	4.3	4.0	13,219	4.3	3.9
Malignant neoplasm of bladder (C67)	14,969	4.8	4.4	14,731	4.8	4.5
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	14,492	4.7	4.3	14,164	4.6	4.3
Malignant neoplasms of lymphoid, hematopoietic and related tissue (C81–C96)	56,263	18.1	16.8	55,590	18.0	17.0
Hodgkin's disease (C81)	1,172	0.4	0.4	1,231	0.4	0.4
Non-Hodgkin's lymphoma (C82–C85)	20,221	6.5	6.0	20,294	6.6	6.2
Leukemia (C91–C95)	22,982	7.4	6.9	22,569	7.3	6.9
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	11,808	3.8	3.5	11,428	3.7	3.4

See footnotes at end of table.

Table 2. Deaths, death rates, and age-adjusted death rates for 113 selected causes, Injury by firearms, Drug-induced deaths, Alcohol-induced deaths, Injury at work, and Enterocolitis due to *Clostridium difficile*: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Rates per 100,000 population. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. For explanation of asterisks (*) preceding cause-of-death codes; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	2011			2010		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue. (C96)	79	0.0	0.0	68	0.0	0.0
All other and unspecified malignant neoplasms (C17,C23–C24,C26–C31,C37–C41,C44–C49,C51–C52,C57–C60,C62–C63,C66,C68–C69,C73–C80,C97)	65,248	20.9	19.2	64,798	21.0	19.5
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	14,992	4.8	4.5	14,917	4.8	4.6
Anemias (D50–D64)	4,956	1.6	1.5	4,852	1.6	1.5
Diabetes mellitus (E10–E14)	73,282	23.5	21.5	69,071	22.4	20.8
Nutritional deficiencies (E40–E64)	3,177	1.0	0.9	2,948	1.0	0.9
Malnutrition (E40–E46)	2,993	1.0	0.9	2,790	0.9	0.8
Other nutritional deficiencies (E50–E64)	184	0.1	0.0	158	0.1	0.0
Meningitis. (G00,G03)	606	0.2	0.2	608	0.2	0.2
Parkinson's disease. (G20–G21) ²	23,107	7.4	7.0	22,032	7.1	6.8
Alzheimer's disease. (G30)	84,691	27.2	24.6	83,494	27.0	25.1
Major cardiovascular diseases. (I00–I78)	778,503	249.8	227.1	780,213	252.7	234.2
Diseases of heart. (I00–I09,I11,I13,I20–I51)	596,339	191.4	173.7	597,689	193.6	179.1
Acute rheumatic fever and chronic rheumatic heart diseases. (I00–I09)	3,070	1.0	0.9	2,987	1.0	0.9
Hypertensive heart disease (I11)	33,383	10.7	9.6	33,678	10.9	10.0
Hypertensive heart and renal disease (I13)	3,598	1.2	1.0	2,807	0.9	0.8
Ischemic heart diseases (I20–I25)	374,601	120.2	109.0	379,559	122.9	113.6
Acute myocardial infarction (I21–I22)	119,732	38.4	34.9	122,071	39.5	36.5
Other acute ischemic heart diseases (I24)	3,952	1.3	1.1	4,170	1.4	1.3
Other forms of chronic ischemic heart disease. (I20,I25)	250,916	80.5	72.9	253,318	82.0	75.9
Atherosclerotic cardiovascular disease, so described. (I25.0)	58,261	18.7	16.7	57,438	18.6	17.0
All other forms of chronic ischemic heart disease. (I20,I25.1–I25.9)	192,656	61.8	56.2	195,880	63.4	58.9
Other heart diseases (I26–I51)	181,686	58.3	53.1	178,658	57.9	53.7
Acute and subacute endocarditis. (I33)	1,165	0.4	0.3	1,103	0.4	0.3
Diseases of pericardium and acute myocarditis (I30–I31,I40)	790	0.3	0.2	776	0.3	0.2
Heart failure (I50)	59,544	19.1	17.3	57,757	18.7	17.3
All other forms of heart disease (I26–I28,I34–I38,I42–I49,I51)	120,188	38.6	35.2	119,022	38.6	35.9
Essential hypertension and hypertensive renal disease. (I10,I12,I15)	27,477	8.8	8.0	26,634	8.6	8.0
Cerebrovascular diseases. (I60–I69)	128,931	41.4	37.9	129,476	41.9	39.1
Atherosclerosis (I70)	7,011	2.3	2.0	7,230	2.3	2.2
Other diseases of circulatory system (I71–I78) ³	18,746	6.0	5.5	19,184	6.2	5.8
Aortic aneurysm and dissection (I71)	10,030	3.2	3.0	10,431	3.4	3.2
Other diseases of arteries, arterioles and capillaries (I72–I78) ³	8,716	2.8	2.5	8,753	2.8	2.6
Other disorders of circulatory system (I80–I99)	4,317	1.4	1.3	4,241	1.4	1.3
Influenza and pneumonia (J09–J18) ⁴	53,667	17.2	15.7	50,097	16.2	15.1
Influenza (J09–J11)	1,532	0.5	0.4	500	0.2	0.1
Pneumonia (J12–J18) ⁴	52,136	16.7	15.2	49,597	16.1	14.9
Other acute lower respiratory infections (J20–J22,U04) ⁵	241	0.1	0.1	213	0.1	0.1
Acute bronchitis and bronchiolitis (J20–J21) ⁵	210	0.1	0.0	177	0.1	0.0
Other and unspecified acute lower respiratory infections. (J22,U04)	31	0.0	0.0	36	0.0	0.0
Chronic lower respiratory diseases (J40–J47)	143,382	46.0	42.7	138,080	44.7	42.2

See footnotes at end of table.

Table 2. Deaths, death rates, and age-adjusted death rates for 113 selected causes, Injury by firearms, Drug-induced deaths, Alcohol-induced deaths, Injury at work, and Enterocolitis due to *Clostridium difficile*: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Rates per 100,000 population. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. For explanation of asterisks (*) preceding cause-of-death codes; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	2011			2010		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Bronchitis, chronic and unspecified (J40–J42)	594	0.2	0.2	620	0.2	0.2
Emphysema (J43)	9,418	3.0	2.8	10,034	3.2	3.1
Asthma (J45–J46)	3,311	1.1	1.0	3,404	1.1	1.0
Other chronic lower respiratory diseases (J44, J47)	130,059	41.7	38.7	124,022	40.2	37.9
Pneumoconioses and chemical effects (J60–J66, J68)	774	0.2	0.2	845	0.3	0.3
Pneumonitis due to solids and liquids (J69)	18,090	5.8	5.3	17,011	5.5	5.1
Other diseases of respiratory system (J00–J06, J30–J39, J67, J70–J98)	32,693	10.5	9.7	31,187	10.1	9.5
Peptic ulcer (K25–K28)	2,981	1.0	0.8	2,977	1.0	0.9
Diseases of appendix (K35–K38) ⁶	387	0.1	0.1	415	0.1	0.1
Hernia (K40–K46)	1,884	0.6	0.6	1,832	0.6	0.5
Chronic liver disease and cirrhosis (K70, K73–K74)	33,539	10.8	9.7	31,903	10.3	9.4
Alcoholic liver disease (K70)	16,634	5.3	4.8	15,990	5.2	4.7
Other chronic liver disease and cirrhosis (K73–K74)	16,905	5.4	4.9	15,913	5.2	4.7
Cholelithiasis and other disorders of gallbladder (K80–K82)	3,324	1.1	1.0	3,332	1.1	1.0
Nephritis, nephrotic syndrome and nephrosis (N00–N07, N17–N19, N25–N27) ⁷	45,731	14.7	13.4	50,476	16.3	15.3
Acute and rapidly progressive nephritic and nephrotic syndrome (N00–N01, N04)	315	0.1	0.1	203	0.1	0.0
Chronic glomerulonephritis, nephrosis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified (N02–N03, N05–N07, N26)	1,710	0.5	0.5	5,894	1.9	1.8
Renal failure (N17–N19) ⁷	43,682	14.0	12.8	44,362	14.4	13.4
Other disorders of kidney (N25, N27)	24	0.0	0.0	17	*	*
Infections of kidney (N10–N12, N13.6, N15.1)	648	0.2	0.2	608	0.2	0.2
Hyperplasia of prostate (N40)	517	0.2	0.2	489	0.2	0.1
Inflammatory diseases of female pelvic organs (N70–N76)	133	0.0	0.0	137	0.0	0.0
Pregnancy, childbirth and the puerperium (O00–O99) ⁸	940	0.3	0.3	825	0.3	0.3
Pregnancy with abortive outcome (O00–O07)	28	0.0	0.0	37	0.0	0.0
Other complications of pregnancy, childbirth and the puerperium (O10–O99) ⁸	912	0.3	0.3	788	0.3	0.3
Certain conditions originating in the perinatal period (P00–P96)	11,969	3.8	4.1	12,128	3.9	4.2
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	9,646	3.1	3.2	9,673	3.1	3.2
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	47,747	15.3	14.2	38,360	12.4	11.7
All other diseases (residual)	288,936	92.7	84.4	269,844	87.4	81.1
Accidents (unintentional injuries) (V01–X59, Y85–Y86) ⁹	122,777	39.4	38.0	120,859	39.1	38.0
Transport accidents (V01–V99, Y85)	37,275	12.0	11.7	37,961	12.3	12.1
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)	34,677	11.1	10.9	35,332	11.4	11.3
Other land transport accidents (V01, V05–V06, V09.1, V09.3–V09.9, V10–V11, V15–V18, V19.3, V19.8–V19.9, V80.0–V80.2, V80.6–V80.9, V81.2–V81.9, V82.2–V82.9, V87.9, V88.9, V89.1, V89.3, V89.9)	952	0.3	0.3	1,029	0.3	0.3
Water, air and space, and other and unspecified transport accidents and their sequelae (V90–V99, Y85)	1,647	0.5	0.5	1,600	0.5	0.5
Nontransport accidents (W00–X59, Y86) ⁹	85,502	27.4	26.2	82,898	26.8	25.9
Falls (W00–W19)	26,631	8.5	7.8	26,009	8.4	7.9
Accidental discharge of firearms (W32–W34)	851	0.3	0.3	606	0.2	0.2
Accidental drowning and submersion (W65–W74)	3,555	1.1	1.1	3,782	1.2	1.2
Accidental exposure to smoke, fire and flames (X00–X09)	2,621	0.8	0.8	2,782	0.9	0.9

See footnotes at end of table.

Table 2. Deaths, death rates, and age-adjusted death rates for 113 selected causes, Injury by firearms, Drug-induced deaths, Alcohol-induced deaths, Injury at work, and Enterocolitis due to *Clostridium difficile*: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Rates per 100,000 population. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. For explanation of asterisks (*) preceding cause-of-death codes; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	2011			2010		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Accidental poisoning and exposure to noxious substances (X40–X49)	33,554	10.8	10.7	33,041	10.7	10.6
Other and unspecified nontransport accidents and their sequelae (W20–W31, W35–W64, W75–W99, X10–X39, X50–X59, Y86) ⁹	18,289	5.9	5.5	16,678	5.4	5.2
Intentional self-harm (suicide) (*U03, X60–X84, Y87.0)	38,285	12.3	12.0	38,364	12.4	12.1
Intentional self-harm (suicide) by discharge of firearms (X72–X74)	19,766	6.3	6.1	19,392	6.3	6.1
Intentional self-harm (suicide) by other and unspecified means and their sequelae (*U03, X60–X71, X75–X84, Y87.0)	18,519	5.9	5.9	18,972	6.1	6.0
Assault (homicide) (*U01–*U02, X85–Y09, Y87.1)	15,953	5.1	5.2	16,259	5.3	5.3
Assault (homicide) by discharge of firearms (*U01.4, X93–X95)	11,101	3.6	3.6	11,078	3.6	3.6
Assault (homicide) by other and unspecified means and their sequelae (*U01.0–*U01.3, *U01.5–*U01.9, *U02, X85–X92, X96–Y09, Y87.1)	4,852	1.6	1.6	5,181	1.7	1.7
Legal intervention (Y35, Y89.0)	258	0.1	0.1	412	0.1	0.1
Events of undetermined intent (Y10–Y34, Y87.2, Y89.9)	4,446	1.4	1.4	4,908	1.6	1.6
Discharge of firearms, undetermined intent (Y22–Y24)	222	0.1	0.1	252	0.1	0.1
Other and unspecified events of undetermined intent and their sequelae (Y10–Y21, Y25–Y34, Y87.2, Y89.9)	4,224	1.4	1.3	4,656	1.5	1.5
Operations of war and their sequelae (Y36, Y89.1)	9	*	*	9	*	*
Complications of medical and surgical care (Y40–Y84, Y88)	2,580	0.8	0.8	2,490	0.8	0.8
Injury by firearms (*U01.4, W32–W34, X72–X74, X93–X95, Y22–Y24, Y35.0) ¹⁰	32,163	10.3	10.1	31,672	10.3	10.1
Drug-induced deaths (D52.1, D59.0, D59.2, D61.1, D64.2, E06.4, E16.0, E23.1, E24.2, E27.3, E66.1, F11.0–F11.5, F11.7–F11.9, F12.0–F12.5, F12.7–F12.9, F13.0–F13.5, F13.7–F13.9, F14.0–F14.5, F14.7–F14.9, F15.0–F15.5, F15.7–F15.9, F16.0–F16.5, F16.7–F16.9, F17.0, F17.3–F17.5, F17.7–F17.9, F18.0–F18.5, F18.7–F18.9, F19.0–F19.5, F19.7–F19.9, G21.1, G24.0, G25.1, G25.4, G25.6, G44.4, G62.0, G72.0, I95.2, J70.2–J70.4, K85.3, L10.5, L27.0–L27.1, M10.2, M32.0, M80.4, M81.4, M83.5, M87.1, R50.2, R78.1–R78.5, X40–X44, X60–X64, X85, Y10–14) ¹⁰	40,239	12.9	12.8	40,393	13.1	12.9
Alcohol-induced deaths (E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, R78.0, X45, X65, Y15) ¹⁰	26,256	8.4	7.6	25,692	8.3	7.6
Injury at work ¹¹	4,160	1.7	1.6	4,157	1.7	1.7
Enterocolitis due to <i>Clostridium difficile</i> (A04.7) ¹²	7,994	2.6	2.4	7,298	2.4	2.2

0.0 Quantity more than zero but less than 0.05.

* Figure does not meet standards of reliability or precision; see Technical Notes.

– Quantity zero.

¹New ICD–10 code B17.9 (Acute viral hepatitis, unspecified) was added to the category in 2011; see Technical Notes.

²New ICD–10 code G21.4 (Vascular parkinsonism) was added to the category in 2011; see Technical Notes.

³New ICD–10 code I72.5 (Aneurysm and dissection of other precerebral arteries) was added to the category in 2011; see Technical Notes.

⁴New ICD–10 code J12.3 (Human metapneumovirus pneumonia) was added to the category in 2011; see Technical Notes.

⁵New ICD–10 code J21.1 (Acute bronchiolitis due to human metapneumovirus) was added to the category in 2011; see Technical Notes.

⁶New subcategories replace previous ones for K35 (Acute appendicitis) in 2011; see Technical Notes.

⁷New subcategories replace previous ones for N18 (Chronic kidney disease) in 2011. Changes affect comparability with previous year's data; see Technical Notes.

⁸New ICD–10 codes O14.2 (HELLP syndrome), O43.2 (Morbidly adherent placenta) were added to the category and new ICD–10 subcategories were introduced for the existing O96 (Death from any obstetric cause occurring during pregnancy but less than one year after delivery) and O97 (Death from sequelae of direct obstetric causes); see Technical Notes.

⁹New ICD–10 subcategories were introduced for the existing X34 (Victim of earthquake); see Technical Notes.

¹⁰Included in selected categories above.

¹¹Injury at work is described in Technical Notes.

¹²Included in "Certain other intestinal infections (A04, A07–A09)" shown above; see Technical Notes.

NOTES: For certain causes of death such as unintentional injuries, homicides, suicides, and respiratory diseases, preliminary and final data differ because of the truncated nature of the preliminary file. Data are subject to sampling or random variation. For information regarding the calculation of standard errors and further discussion of the variability of the data, see Technical Notes.

Table 3. Deaths, death rates, and age-adjusted death rates: United States, and each state and territory, final 2010 and preliminary 2011

[By place of residence. Data are based on a continuous file of records received from the states. Rates are per 100,000 population. Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Area	2011			2010		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
United States ¹	2,513,171	806.6	740.6	2,468,435	799.5	747.0
Alabama	48,683	1,013.7	933.7	48,038	1,005.0	939.7
Alaska	3,849	532.6	747.9	3,728	524.9	771.5
Arizona	48,381	746.3	688.9	46,762	731.6	693.1
Arkansas	29,632	1,008.6	894.6	28,916	991.7	892.7
California	238,993	634.1	638.8	234,012	628.2	646.7
Colorado	32,563	636.4	677.8	31,465	625.6	682.7
Connecticut	29,548	825.2	660.9	28,692	802.8	652.9
Delaware	7,840	864.3	763.4	7,706	858.2	769.9
District of Columbia	4,589	742.6	756.0	4,672	776.4	792.4
Florida	173,961	912.8	677.1	173,791	924.4	701.1
Georgia	70,401	717.3	806.2	71,263	735.6	845.4
Hawaii	9,921	721.6	584.8	9,617	707.0	589.6
Idaho	12,026	758.7	744.9	11,429	729.1	731.6
Illinois	101,898	791.8	737.3	99,931	778.8	736.9
Indiana	58,195	893.0	825.0	56,743	875.2	820.6
Iowa	28,184	920.4	722.7	27,745	910.8	721.7
Kansas	25,119	874.8	767.2	24,502	858.8	762.2
Kentucky	42,624	975.5	910.3	41,983	967.5	915.0
Louisiana	40,680	889.2	882.1	40,667	897.1	903.8
Maine	13,031	981.1	749.5	12,750	959.8	749.6
Maryland	43,750	750.6	715.9	43,325	750.4	728.6
Massachusetts	53,699	815.2	676.1	52,583	803.1	675.0
Michigan	89,496	906.2	784.2	88,021	890.6	786.2
Minnesota	39,822	745.1	659.2	38,972	734.8	661.5
Mississippi	29,278	983.0	956.2	28,965	976.1	962.0
Missouri	55,813	928.6	811.4	55,281	923.1	819.5
Montana	9,117	913.3	760.7	8,827	892.1	754.7
Nebraska	15,477	839.9	719.8	15,171	830.7	717.8
Nevada	20,340	746.9	789.6	19,623	726.6	795.4
New Hampshire	10,821	820.9	710.0	10,201	774.9	690.4
New Jersey	70,553	799.8	690.6	69,495	790.4	691.1
New Mexico	16,434	789.3	748.0	15,931	773.7	749.0
New York	148,903	765.0	664.2	146,432	755.7	665.5
North Carolina	79,875	827.2	790.8	78,773	826.1	804.9
North Dakota	5,964	872.0	697.3	5,944	883.7	704.3
Ohio	111,444	965.3	822.0	108,711	942.3	815.7
Oklahoma	37,142	979.6	910.1	36,529	973.8	915.5
Oregon	32,786	846.8	724.1	31,890	832.4	723.1
Pennsylvania	128,290	1,006.8	776.1	124,596	980.9	765.9
Rhode Island	9,585	911.7	707.6	9,579	910.1	721.7
South Carolina	42,093	899.6	839.9	41,614	899.7	854.8
South Dakota	7,313	887.4	720.4	7,100	872.0	715.1
Tennessee	60,544	945.5	879.1	59,578	938.8	890.8
Texas	168,643	656.8	751.6	166,527	662.3	772.3
Utah	15,265	541.8	699.0	14,776	534.6	703.2
Vermont	5,434	867.5	711.0	5,380	859.8	718.7
Virginia	60,807	751.0	741.6	59,032	737.8	741.6
Washington	49,692	727.6	690.4	48,146	716.0	692.3
West Virginia	21,868	1,178.6	953.3	21,275	1,148.1	933.6
Wisconsin	48,419	847.7	721.3	47,308	831.9	719.0
Wyoming	4,387	772.1	754.6	4,438	787.4	778.8
Puerto Rico	29,641	799.7	708.7	29,153	783.3	712.8
Virgin Islands	---	---	---	715	672.8	663.2
Guam	825	516.9	756.1	857	537.5	810.6
American Samoa	276	500.0	1,090.3	224	403.8	932.9
Northern Marianas	---	---	---	174	325.1	863.3

--- Data not available.

¹Excludes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas.

NOTE: Data are subject to sampling or random variation. For information regarding the calculation of standard errors and further discussion of the variability of the data, see Technical Notes.

Table 4. Infant deaths and infant mortality rates, by age, race, and Hispanic origin: United States, final 2010 and preliminary 2011

[Data are based on the continuous file of records received from the states. Rates per 1,000 live births. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals. Race and Hispanic origin are reported separately on both the birth and death certificate. Rates for Hispanic origin should be interpreted with caution because of the inconsistencies between reporting Hispanic origin on birth and death certificates; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported for deaths by 38 states and District of Columbia in 2011, and by 37 states and the District of Columbia in 2010, and were reported for births, by 40 states and District of Columbia in 2011, and by 38 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes]

Age, race, and Hispanic origin	2011		2010	
	Number	Rate	Number	Rate
All races ¹				
Under 1 year	23,910	6.05	24,586	6.15
Under 28 days	15,954	4.04	16,188	4.05
28 days–11 months	7,956	2.01	8,398	2.10
Total white				
Under 1 year	15,438	5.11	15,954	5.20
Under 28 days	10,422	3.45	10,612	3.46
28 days–11 months	5,016	1.66	5,342	1.74
Non-Hispanic white				
Under 1 year	10,872	5.05	11,025	5.10
Under 28 days	7,191	3.34	7,212	3.34
28 days–11 months	3,681	1.71	3,813	1.76
Total black				
Under 1 year	7,234	11.42	7,401	11.63
Under 28 days	4,719	7.45	4,769	7.49
28 days–11 months	2,515	3.97	2,632	4.14
Hispanic ²				
Under 1 year	4,806	5.27	5,170	5.47
Under 28 days	3,353	3.68	3,524	3.73
28 days–11 months	1,453	1.59	1,646	1.74

¹Includes races other than white and black.

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

NOTES: Data are subject to sampling or random variation. For information regarding the calculation of standard errors and further discussion of the variability of the data, see Technical Notes. Although the infant mortality rate is the preferred indicator of the risk of dying during the first year of life, another measure of infant mortality, the infant death rate, is shown elsewhere in this report. The two measures typically are similar, yet they can differ because the denominators used for these measures are different. For more information on these measures of risk, see "Infant mortality" section in the Technical Notes.

Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2010 and preliminary 2011

[Data are based on a continuous file of records from the states. Rates per 100,000 live births. For explanation of asterisks (*) preceding cause-of-death codes, see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	2011		2010	
	Number	Rate	Number	Rate
All causes	23,907	604.7	24,586	614.7
Certain infectious and parasitic diseases (A00–B99) ¹	552	14.0	696	17.4
Certain intestinal infectious diseases (A00–A08)	3	*	7	*
Diarrhea and gastroenteritis of infectious origin (A09)	257	6.5	316	7.9
Tuberculosis (A16–A19)	2	*	–	*
Tetanus (A33,A35)	–	*	–	*
Diphtheria (A36)	–	*	–	*
Whooping cough (A37)	8	*	25	0.6
Meningococcal infection (A39)	6	*	11	*
Septicemia (A40–A41)	173	4.4	215	5.4
Congenital syphilis (A50)	2	*	2	*
Gonococcal infection (A54)	–	*	–	*
Viral diseases (A80–B34) ¹	68	1.7	92	2.3
Acute poliomyelitis (A80)	–	*	–	*
Varicella (chickenpox) (B01)	–	*	–	*
Measles (B05)	–	*	–	*
Human immunodeficiency virus (HIV) disease (B20–B24)	3	*	–	*
Mumps (B26)	–	*	–	*
Other and unspecified viral diseases (A81–B00,B02–B04,B06–B19,B25,B27–B34) ¹	65	1.6	92	2.3
Candidiasis (B37)	2	*	6	*
Malaria (B50–B54)	–	*	–	*
Pneumocystosis (B59)	2	*	–	*
All other and unspecified infectious and parasitic diseases (A20–A32,A38,A42–A49, A51–A53,A55–A79,B35–B36,B38–B49,B55–B58,B60–B99)	29	0.7	22	0.6
Neoplasms (C00–D48)	128	3.2	110	2.8
Malignant neoplasms (C00–C97)	71	1.8	62	1.6
Hodgkin's disease and non-Hodgkin's lymphomas (C81–C85)	2	*	2	*
Leukemia (C91–C95)	23	0.6	25	0.6
Other and unspecified malignant neoplasms (C00–C80,C88,C90,C96–C97)	47	1.2	35	0.9
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	57	1.4	48	1.2
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	94	2.4	95	2.4
Anemias (D50–D64)	12	*	15	*
Hemorrhagic conditions and other diseases of blood and blood-forming organs (D65–D76)	63	1.6	60	1.5
Certain disorders involving the immune mechanism (D80–D89)	19	*	20	0.5
Endocrine, nutritional and metabolic diseases (E00–E88)	177	4.5	188	4.7
Short stature, not elsewhere classified (E34.3)	2	*	2	*
Nutritional deficiencies (E40–E64)	12	*	3	*
Cystic fibrosis (E84)	4	*	5	*
Volume depletion, disorders of fluid, electrolyte and acid-base balance (E86–E87)	40	1.0	48	1.2
All other endocrine, nutritional and metabolic diseases (E00–E32,E34.0–E34.2, E34.4–E34.9,E65–E83,E85,E88)	118	3.0	130	3.3
Diseases of the nervous system (G00–G98) ²	314	7.9	345	8.6
Meningitis (G00,G03)	56	1.4	58	1.5
Infantile spinal muscular atrophy, type I (Werdnig-Hoffman) (G12.0)	–	*	4	*

See footnotes at end of table.

Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records from the states. Rates per 100,000 live births. For explanation of asterisks (*) preceding cause-of-death codes, see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	2011		2010	
	Number	Rate	Number	Rate
Infantile cerebral palsy (G80)	6	*	3	*
Anoxic brain damage, not elsewhere classified (G93.1)	46	1.2	39	1.0
Other diseases of nervous system (G04,G06–G11,G12.1–G12.9,G20–G72,G81–G92,G93.0, G93.2–G93.9,G95–G98) ²	206	5.2	241	6.0
Diseases of the ear and mastoid process (H60–H93)	3	*	3	*
Diseases of the circulatory system (I00–I99) ³	496	12.5	507	12.7
Pulmonary heart disease and diseases of pulmonary circulation (I26–I28)	94	2.4	90	2.3
Pericarditis, endocarditis and myocarditis (I30,I33,I40)	9	*	14	*
Cardiomyopathy (I42)	88	2.2	79	2.0
Cardiac arrest (I46)	16	*	18	*
Cerebrovascular diseases (I60–I69)	130	3.3	130	3.3
All other diseases of circulatory system (I00–I25,I31,I34–I38,I44–I45,I47–I51,I70–I99) ³	159	4.0	176	4.4
Diseases of the respiratory system (J00–J98,U04) ^{4,5}	548	13.9	574	14.4
Acute upper respiratory infections (J00–J06)	9	*	15	*
Influenza and pneumonia (J09–J18) ⁴	181	4.6	195	4.9
Influenza (J09–J11)	25	0.6	16	*
Pneumonia (J12–J18) ⁴	157	4.0	179	4.5
Acute bronchitis and acute bronchiolitis (J20–J21) ⁵	37	0.9	27	0.7
Bronchitis, chronic and unspecified (J40–J42)	17	*	25	0.6
Asthma (J45–J46)	4	*	6	*
Pneumonitis due to solids and liquids (J69)	8	*	18	*
Other and unspecified diseases of respiratory system (J22,J30–J39,J43–J44,J47–J68,J70–J98,U04)	292	7.4	288	7.2
Diseases of the digestive system (K00–K92) ⁶	188	4.8	204	5.1
Gastritis, duodenitis, and noninfective enteritis and colitis (K29,K50–K55)	37	0.9	29	0.7
Hernia of abdominal cavity and intestinal obstruction without hernia (K40–K46,K56)	49	1.2	51	1.3
All other and unspecified diseases of digestive system (K00–K28,K30–K38,K57–K92) ⁶	102	2.6	124	3.1
Diseases of the genitourinary system (N00–N95) ⁷	87	2.2	126	3.2
Renal failure and other disorders of kidney (N17–N19,N25,N27) ⁷	66	1.7	100	2.5
Other and unspecified diseases of genitourinary system (N00–N15,N20–N23,N26,N28–N95)	20	0.5	26	0.7
Certain conditions originating in the perinatal period (P00–P96)	11,846	299.6	12,008	300.2
Newborn affected by maternal factors and by complications of pregnancy, labor and delivery (P00–P04)	2,887	73.0	2,920	73.0
Newborn affected by maternal hypertensive disorders (P00.0)	85	2.1	85	2.1
Newborn affected by other maternal conditions which may be unrelated to present pregnancy (P00.1–P00.9)	72	1.8	87	2.2
Newborn affected by maternal complications of pregnancy (P01)	1,578	39.9	1,561	39.0
Newborn affected by incompetent cervix (P01.0)	433	11.0	431	10.8
Newborn affected by premature rupture of membranes (P01.1)	800	20.2	781	19.5
Newborn affected by multiple pregnancy (P01.5)	168	4.2	163	4.1
Newborn affected by other maternal complications of pregnancy (P01.2–P01.4,P01.6–P01.9)	177	4.5	186	4.7
Newborn affected by complications of placenta, cord and membranes (P02)	992	25.1	1,030	25.8
Newborn affected by complications involving placenta (P02.0–P02.3)	456	11.5	492	12.3
Newborn affected by complications involving cord (P02.4–P02.6)	38	1.0	39	1.0
Newborn affected by chorioamnionitis (P02.7)	495	12.5	497	12.4
Newborn affected by other and unspecified abnormalities of membranes (P02.8–P02.9)	2	*	2	*
Newborn affected by other complications of labor and delivery (P03)	120	3.0	110	2.8
Newborn affected by noxious influences transmitted via placenta or breast milk (P04)	40	1.0	47	1.2

See footnotes at end of table.

Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records from the states. Rates per 100,000 live births. For explanation of asterisks (*) preceding cause-of-death codes, see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	2011		2010	
	Number	Rate	Number	Rate
Disorders related to length of gestation and fetal malnutrition (P05–P08)	4,195	106.1	4,233	105.8
Slow fetal growth and fetal malnutrition (P05)	78	2.0	85	2.1
Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	4,116	104.1	4,148	103.7
Extremely low birth weight or extreme immaturity (P07.0,P07.2)	3,169	80.2	3,176	79.4
Other low birth weight or preterm (P07.1,P07.3)	948	24.0	972	24.3
Disorders related to long gestation and high birth weight (P08)	–	*	–	*
Birth trauma (P10–P15)	20	0.5	19	*
Intrauterine hypoxia and birth asphyxia (P20–P21)	308	7.8	314	7.9
Intrauterine hypoxia (P20)	119	3.0	136	3.4
Birth asphyxia (P21)	189	4.8	178	4.5
Respiratory distress of newborn (P22)	514	13.0	514	12.9
Other respiratory conditions originating in the perinatal period (P23–P28)	802	20.3	812	20.3
Congenital pneumonia (P23)	68	1.7	71	1.8
Neonatal aspiration syndromes (P24)	47	1.2	51	1.3
Interstitial emphysema and related conditions originating in the perinatal period (P25)	86	2.2	106	2.7
Pulmonary hemorrhage originating in the perinatal period (P26)	167	4.2	167	4.2
Chronic respiratory disease originating in the perinatal period (P27)	105	2.7	106	2.7
Atelectasis (P28.0–P28.1)	260	6.6	248	6.2
All other respiratory conditions originating in the perinatal period (P28.2–P28.9)	70	1.8	63	1.6
Infections specific to the perinatal period (P35–P39)	717	18.1	745	18.6
Bacterial sepsis of newborn (P36)	526	13.3	583	14.6
Omphalitis of newborn with or without mild hemorrhage (P38)	4	*	1	*
All other infections specific to the perinatal period (P35,P37,P39)	187	4.7	161	4.0
Hemorrhagic and hematological disorders of newborn (P50–P61)	541	13.7	556	13.9
Neonatal hemorrhage (P50–P52,P54)	444	11.2	469	11.7
Hemorrhagic disease of newborn (P53)	–	*	1	*
Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice (P55–P59)	16	*	7	*
Hematological disorders (P60–P61)	80	2.0	79	2.0
Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (P70.0–P70.2)	8	*	3	*
Necrotizing enterocolitis of newborn (P77)	386	9.8	472	11.8
Hydrops fetalis not due to hemolytic disease (P83.2)	170	4.3	150	3.8
Other perinatal conditions (P29,P70.3–P76,P78–P81,P83.0–P83.1,P83.3–P96)	1,298	32.8	1,270	31.8
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,984	126.1	5,107	127.7
Anencephaly and similar malformations (Q00)	276	7.0	293	7.3
Congenital hydrocephalus (Q03)	84	2.1	105	2.6
Spina bifida (Q05)	19	*	15	*
Other congenital malformations of nervous system (Q01–Q02,Q04,Q06–Q07)	299	7.6	318	8.0
Congenital malformations of heart (Q20–Q24)	1,173	29.7	1,148	28.7
Other congenital malformations of circulatory system (Q25–Q28)	179	4.5	176	4.4
Congenital malformations of respiratory system (Q30–Q34)	366	9.3	399	10.0
Congenital malformations of digestive system (Q35–Q45)	63	1.6	88	2.2
Congenital malformations of genitourinary system (Q50–Q64)	462	11.7	457	11.4
Congenital malformations and deformations of musculoskeletal system, limbs and integument (Q65–Q85)	534	13.5	577	14.4
Down's syndrome (Q90)	87	2.2	85	2.1
Edward's syndrome (Q91.0–Q91.3)	472	11.9	470	11.8
Patau's syndrome (Q91.4–Q91.7)	251	6.3	244	6.1
Other congenital malformations and deformations (Q10–Q18,Q86–Q89)	534	13.5	542	13.6

See footnotes at end of table.

Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records from the states. Rates per 100,000 live births. For explanation of asterisks (*) preceding cause-of-death codes, see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	2011		2010	
	Number	Rate	Number	Rate
Other chromosomal abnormalities, not elsewhere classified (Q92–Q99)	185	4.7	190	4.8
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	3,053	77.2	3,052	76.3
Sudden infant death syndrome (R95)	1,711	43.3	2,063	51.6
Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R53,R55–R94,R96–R99)	1,341	33.9	989	24.7
All other diseases (residual)	19	*	20	0.5
External causes of mortality (*U01,V01–Y84) [§]	1,420	35.9	1,551	38.8
Accidents (unintentional injuries) (V01–X59) [§]	1,089	27.5	1,110	27.8
Transport accidents (V01–V99)	93	2.4	81	2.0
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)	92	2.3	79	2.0
Other and unspecified transport accidents (V01,V05–V06,V09.1,V09.3–V09.9,V10–V11, V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2,V80.6–V80.9,V81.2–V81.9,V82.2–V82.9, V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99)	1	*	2	*
Falls (W00–W19)	9	*	10	*
Accidental discharge of firearms (W32–W34)	2	*	–	*
Accidental drowning and submersion (W65–W74)	47	1.2	39	1.0
Accidental suffocation and strangulation in bed (W75)	479	12.1	629	15.7
Other accidental suffocation and strangulation (W76–W77,W81–W84)	305	7.7	218	5.5
Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract (W78–W80)	52	1.3	58	1.5
Accidents caused by exposure to smoke, fire and flames (X00–X09)	19	*	21	0.5
Accidental poisoning and exposure to noxious substances (X40–X49)	16	*	6	*
Other and unspecified accidents (W20–W31,W35–W64,W85–W99,X10–X39,X50–X59) [§]	66	1.7	48	1.2
Assault (homicide) (*U01,X85–Y09)	256	6.5	311	7.8
Assault (homicide) by hanging, strangulation and suffocation (X91)	21	0.5	15	*
Assault (homicide) by discharge of firearms (*U01.4,X93–X95)	6	*	11	*
Neglect, abandonment and other maltreatment syndromes (Y06–Y07)	78	2.0	82	2.1
Assault (homicide) by other and unspecified means (*U01.0–*U01.3, *U01.5–*U01.9,X85–X90,X92,X96–X99,Y00–Y05,Y08–Y09)	151	3.8	203	5.1
Complications of medical and surgical care (Y40–Y84)	17	*	22	0.6
Other external causes (Y10–Y36)	59	1.5	108	2.7

* Figure does not meet standards of reliability or precision; see Technical Notes.

– Quantity zero.

¹New ICD-code B17.9 (Acute viral hepatitis, unspecified) was added to the category in 2011; see Technical Notes.

²New ICD-10 code G21.4 (Vascular parkinsonism) was added to the category in 2011; see Technical Notes.

³New ICD-10 code I72.5 (Aneurysm and dissection of other precerebral arteries) was added to the category in 2011; see Technical Notes.

⁴New ICD-10 code J12.3 (Human metapneumovirus pneumonia) was added to the category in 2011; see Technical Notes.

⁵New ICD-10 code J21.1 (Acute bronchiolitis due to human metapneumovirus) was added to the category in 2011; see Technical Notes.

⁶New subcategories replaced previous ones for K35 (Acute appendicitis) in 2011; see Technical Notes.

⁷New subcategories replaced previous ones for N18 (Chronic kidney disease) in 2011. Changes affect comparability with previous year's data; see Technical Notes.

⁸New ICD-10 subcategories were introduced for the existing X34 (Victim of earthquake); see Technical Notes.

NOTES: For certain causes of death such as unintentional injuries, homicides, sudden infant death syndrome, and respiratory diseases, preliminary and final data differ because of the truncated nature of the preliminary file. Data are subject to sampling or random variation. For information regarding the calculation of standard errors and further discussion of the variability of the data, see Technical Notes. Although the infant mortality rate is the preferred indicator of the risk of dying during the first year of life, another measure of infant mortality, the infant death rate, is shown elsewhere in this report. The two measures typically are similar, yet they can differ because the denominators used for these measures are different. For more information on these measures of risk, see "Infant mortality" section in the Technical Notes.

Table 6. Expectation of life at selected ages, by race, Hispanic origin, race for non-Hispanic population, and sex: United States, final 2010 and preliminary 2011

[Data are based on a continuous file of records from the states. Calculations of life expectancy employ populations estimated as of July 1 for 2011 and April 1 for 2010; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 38 states and the District of Columbia in 2011 and by 37 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Race and Hispanic origin are reported separately on the death certificate. Persons of Hispanic origin may be of any race. Data for Hispanic persons are not tabulated separately by race; data for non-Hispanic persons are tabulated by race; see Technical Notes. The methodology used to produce life expectancies adjusts for misclassification for Hispanic and for race and ethnicity for the non-Hispanic populations (see "Life tables" in Technical Notes). Adjustments do not account for other sources of error such as return migration (37)]

Age in years, and race	Both sexes		Male		Female	
	2011	2010	2011	2010	2011	2010
All races and origins ¹						
0	78.7	78.7	76.3	76.2	81.1	81.0
1	78.2	78.1	75.8	75.7	80.5	80.5
5	74.3	74.2	71.9	71.8	76.6	76.6
10	69.3	69.3	66.9	66.8	71.6	71.6
15	64.4	64.3	62.0	61.9	66.7	66.6
20	59.5	59.5	57.2	57.1	61.8	61.7
25	54.8	54.7	52.5	52.4	56.9	56.9
30	50.0	50.0	47.9	47.8	52.0	52.0
35	45.3	45.2	43.2	43.1	47.2	47.2
40	40.6	40.5	38.6	38.5	42.5	42.4
45	36.0	35.9	34.0	33.9	37.8	37.7
50	31.5	31.4	29.6	29.6	33.2	33.2
55	27.2	27.2	25.5	25.4	28.8	28.8
60	23.1	23.1	21.5	21.5	24.5	24.5
65	19.2	19.1	17.8	17.7	20.4	20.3
70	15.5	15.5	14.3	14.2	16.5	16.5
75	12.1	12.1	11.0	11.0	12.9	12.9
80	9.1	9.1	8.2	8.2	9.7	9.7
85	6.5	6.5	5.9	5.8	6.9	6.9
90	4.6	4.6	4.1	4.1	4.8	4.8
95	3.2	3.2	2.9	2.9	3.3	3.3
100	2.3	2.3	2.1	2.1	2.3	2.3
White						
0	79.0	78.9	76.6	76.5	81.3	81.3
1	78.4	78.4	76.0	76.0	80.7	80.7
5	74.4	74.4	72.1	72.1	76.7	76.7
10	69.5	69.5	67.1	67.1	71.8	71.8
15	64.5	64.5	62.2	62.1	66.8	66.8
20	59.7	59.7	57.4	57.3	61.9	61.9
25	54.9	54.9	52.7	52.7	57.0	57.0
30	50.2	50.1	48.0	48.0	52.2	52.2
35	45.4	45.4	43.4	43.3	47.4	47.4
40	40.7	40.7	38.7	38.7	42.6	42.6
45	36.1	36.0	34.2	34.1	37.9	37.9
50	31.6	31.6	29.8	29.7	33.3	33.3
55	27.3	27.3	25.6	25.5	28.9	28.8
60	23.2	23.1	21.6	21.6	24.5	24.5
65	19.2	19.2	17.8	17.8	20.4	20.3
70	15.5	15.5	14.3	14.2	16.5	16.4
75	12.1	12.1	11.0	11.0	12.9	12.8
80	9.1	9.0	8.2	8.2	9.6	9.6
85	6.5	6.5	5.8	5.8	6.9	6.9
90	4.5	4.5	4.0	4.0	4.8	4.8
95	3.2	3.2	2.8	2.8	3.3	3.3
100	2.3	2.3	2.0	2.0	2.3	2.3

See footnotes at end of table.

Table 6. Expectation of life at selected ages, by race, Hispanic origin, race for non-Hispanic population, and sex: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records from the states. Calculations of life expectancy employ populations estimated as of July 1 for 2011 and April 1 for 2010; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 38 states and the District of Columbia in 2011 and by 37 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Race and Hispanic origin are reported separately on the death certificate. Persons of Hispanic origin may be of any race. Data for Hispanic persons are not tabulated separately by race; data for non-Hispanic persons are tabulated by race; see Technical Notes. The methodology used to produce life expectancies adjusts for misclassification for Hispanic and for race and ethnicity for the non-Hispanic populations (see "Life tables" in Technical Notes). Adjustments do not account for other sources of error such as return migration (37)]

Age in years, and race	Both sexes		Male		Female	
	2011	2010	2011	2010	2011	2010
Non-Hispanic white						
0	78.8	78.8	76.4	76.4	81.1	81.1
1	78.2	78.2	75.8	75.8	80.5	80.5
5	74.3	74.3	71.9	71.9	76.5	76.6
10	69.3	69.3	67.0	67.0	71.6	71.6
15	64.3	64.4	62.0	62.0	66.6	66.6
20	59.5	59.5	57.2	57.2	61.7	61.7
25	54.7	54.7	52.6	52.5	56.8	56.9
30	50.0	50.0	47.9	47.9	52.0	52.0
35	45.3	45.3	43.2	43.2	47.2	47.2
40	40.6	40.6	38.6	38.6	42.4	42.5
45	36.0	36.0	34.1	34.0	37.8	37.8
50	31.5	31.5	29.7	29.7	33.2	33.2
55	27.2	27.2	25.6	25.5	28.8	28.8
60	23.1	23.1	21.6	21.5	24.5	24.4
65	19.2	19.1	17.8	17.7	20.3	20.3
70	15.4	15.4	14.2	14.2	16.4	16.4
75	12.1	12.0	11.0	11.0	12.8	12.8
80	9.0	9.0	8.2	8.1	9.6	9.6
85	6.5	6.5	5.8	5.8	6.9	6.9
90	4.5	4.5	4.0	4.0	4.8	4.8
95	3.2	3.2	2.8	2.8	3.3	3.3
100	2.3	2.3	2.0	2.1	2.3	2.3
Black						
0	75.3	75.1	72.1	71.8	78.2	78.0
1	75.2	75.0	72.0	71.8	78.0	77.8
5	71.3	71.1	68.2	67.9	74.1	73.9
10	66.3	66.1	63.2	62.9	69.1	69.0
15	61.4	61.2	58.3	58.0	64.2	64.0
20	56.6	56.4	53.6	53.3	59.3	59.1
25	51.9	51.7	49.0	48.8	54.4	54.3
30	47.3	47.1	44.5	44.3	49.6	49.5
35	42.6	42.4	40.0	39.7	44.9	44.7
40	38.0	37.8	35.5	35.2	40.2	40.1
45	33.6	33.4	31.0	30.8	35.7	35.5
50	29.3	29.1	26.8	26.6	31.3	31.1
55	25.2	25.1	22.9	22.7	27.1	27.0
60	21.5	21.3	19.3	19.2	23.2	23.0
65	18.0	17.8	16.1	15.9	19.4	19.3
70	14.7	14.6	13.1	12.9	15.8	15.8
75	11.7	11.6	10.3	10.2	12.5	12.5
80	9.0	9.0	7.9	7.8	9.6	9.6
85	6.8	6.8	5.9	5.9	7.2	7.1
90	5.0	5.0	4.4	4.4	5.3	5.2
95	3.7	3.7	3.3	3.3	3.8	3.8
100	2.8	2.8	2.5	2.5	2.8	2.8

See footnotes at end of table.

Table 6. Expectation of life at selected ages, by race, Hispanic origin, race for non-Hispanic population, and sex: United States, final 2010 and preliminary 2011—Con.

[Data are based on a continuous file of records from the states. Calculations of life expectancy employ populations estimated as of July 1 for 2011 and April 1 for 2010; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 38 states and the District of Columbia in 2011 and by 37 states and the District of Columbia in 2010; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Race and Hispanic origin are reported separately on the death certificate. Persons of Hispanic origin may be of any race. Data for Hispanic persons are not tabulated separately by race; data for non-Hispanic persons are tabulated by race; see Technical Notes. The methodology used to produce life expectancies adjusts for misclassification for Hispanic and for race and ethnicity for the non-Hispanic populations (see "Life tables" in Technical Notes). Adjustments do not account for other sources of error such as return migration (37)]

Age in years, and race	Both sexes		Male		Female	
	2011	2010	2011	2010	2011	2010
Non-Hispanic black						
0	74.8	74.7	71.6	71.4	77.8	77.7
1	74.7	74.6	71.5	71.3	77.6	77.5
5	70.9	70.7	67.7	67.5	73.8	73.6
10	65.9	65.8	62.7	62.5	68.8	68.7
15	61.0	60.8	57.8	57.6	63.9	63.7
20	56.2	56.0	53.1	52.9	59.0	58.8
25	51.5	51.4	48.6	48.4	54.1	54.0
30	46.9	46.7	44.1	43.9	49.3	49.2
35	42.3	42.1	39.6	39.4	44.6	44.5
40	37.7	37.6	35.1	34.9	40.0	39.8
45	33.3	33.1	30.7	30.5	35.4	35.3
50	29.0	28.8	26.5	26.3	31.1	31.0
55	25.0	24.9	22.7	22.5	26.9	26.8
60	21.3	21.2	19.2	19.0	23.0	22.9
65	17.8	17.7	16.0	15.8	19.2	19.1
70	14.6	14.5	13.0	12.8	15.7	15.7
75	11.6	11.6	10.2	10.1	12.5	12.5
80	9.0	8.9	7.8	7.8	9.6	9.6
85	6.7	6.7	5.9	5.9	7.1	7.1
90	5.1	5.0	4.4	4.4	5.2	5.2
95	3.8	3.8	3.3	3.3	3.8	3.8
100	2.9	2.9	2.5	2.6	2.8	2.8
Hispanic						
0	81.4	81.2	78.9	78.5	83.7	83.8
1	80.9	80.7	78.3	78.0	83.1	83.2
5	77.0	76.7	74.4	74.0	79.2	79.2
10	72.0	71.8	69.4	69.1	74.2	74.3
15	67.0	66.8	64.5	64.1	69.3	69.3
20	62.2	62.0	59.6	59.3	64.3	64.4
25	57.3	57.1	54.9	54.6	59.4	59.5
30	52.5	52.3	50.2	49.8	54.5	54.6
35	47.7	47.5	45.4	45.1	49.6	49.7
40	42.9	42.7	40.7	40.4	44.8	44.8
45	38.2	38.0	36.1	35.7	40.0	40.0
50	33.6	33.5	31.5	31.2	35.3	35.3
55	29.2	29.0	27.2	26.9	30.7	30.8
60	24.9	24.7	23.1	22.8	26.2	26.3
65	20.8	20.6	19.1	18.8	21.9	22.0
70	16.9	16.8	15.4	15.1	17.8	18.0
75	13.3	13.2	12.0	11.7	14.0	14.1
80	10.0	9.9	8.9	8.7	10.5	10.7
85	7.2	7.1	6.3	6.1	7.5	7.7
90	5.0	5.0	4.4	4.2	5.2	5.4
95	3.5	3.5	3.1	2.9	3.5	3.7
100	2.5	2.4	2.2	2.1	2.4	2.6

¹Includes races other than white and black.

NOTE: Data are subject to sampling or random variation.

Table 7. Deaths and death rates for the 10 leading causes of death in specified age groups: United States, preliminary 2011

[Data are based on a continuous file of records received from the states. Rates are per 100,000 population in specified group. For explanation of asterisks (*) preceding cause-of-death codes, see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Rank ¹	Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>) and age	Number	Rate
All ages ²			
...	All causes	2,512,873	806.5
1	Diseases of heart (I00–I09,I11,I13,I20–I51)	596,339	191.4
2	Malignant neoplasms (C00–C97)	575,313	184.6
3	Chronic lower respiratory diseases (J40–J47)	143,382	46.0
4	Cerebrovascular diseases (I60–I69)	128,931	41.4
5	Accidents (unintentional injuries) (V01–X59,Y85–Y86) ³	122,777	39.4
...	Motor vehicle accidents (V02–V04,V09.0,V09.2,V12–V14,V19.0–V19.2,V19.4–V19.6,V20–V79,V80.3–V80.5,V81.0–V81.1,V82.0–V82.1,V83–V86,V87.0–V87.8,V88.0–V88.8,V89.0,V89.2)	34,676	11.1
...	All other accidents (V01,V05–V06,V09.1,V09.3–V09.9,V10–V12,V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2,V80.6–V80.9,V81.2–V81.9,V82.2–V82.9,V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99,W00–X59,Y85–Y86) ³	88,101	28.3
6	Alzheimer's disease (G30)	84,691	27.2
7	Diabetes mellitus (E10–E14)	73,282	23.5
8	Influenza and pneumonia (J09–J18) ⁴	53,667	17.2
9	Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27) ⁵	45,731	14.7
10	Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)	38,285	12.3
...	All other causes (residual)	650,475	208.8
1–4 years			
...	All causes	4,214	26.1
1	Accidents (unintentional injuries) (V01–X59,Y85–Y86) ³	1,346	8.3
...	Motor vehicle accidents (V02–V04,V09.0,V09.2,V12–V14,V19.0–V19.2,V19.4–V19.6,V20–V79,V80.3–V80.5,V81.0–V81.1,V82.0–V82.1,V83–V86,V87.0–V87.8,V88.0–V88.8,V89.0,V89.2)	416	2.6
...	All other accidents (V01,V05–V06,V09.1,V09.3–V09.9,V10–V12,V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2,V80.6–V80.9,V81.2–V81.9,V82.2–V82.9,V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99,W00–X59,Y85–Y86) ³	930	5.8
2	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	483	3.0
3	Assault (homicide) (*U01–*U02,X85–Y09,Y87.1)	370	2.3
4	Malignant neoplasms (C00–C97)	352	2.2
5	Diseases of heart (I00–I09,I11,I13,I20–I51)	158	1.0
6	Influenza and pneumonia (J09–J18) ⁴	96	0.6
7	Septicemia (A40–A41)	59	0.4
8	Chronic lower respiratory diseases (J40–J47)	44	0.3
9	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	43	0.3
9	Cerebrovascular diseases (I60–I69)	43	0.3
...	All other causes (residual)	1,220	7.5
5–14 years			
...	All causes	5,395	13.1
1	Accidents (unintentional injuries) (V01–X59,Y85–Y86) ³	1,613	3.9
...	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)	867	2.1
...	All other accidents (V01,V05–V06,V09.1,V09.3–V09.9,V10–V12,V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2,V80.6–V80.9,V81.2–V81.9,V82.2–V82.9,V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99,W00–X59,Y85–Y86) ³	746	1.8
2	Malignant neoplasms (C00–C97)	865	2.1
3	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	356	0.9
4	Intentional self harm (suicide) (*U03,X60–X84,Y87.0)	281	0.7
5	Assault (homicide) (*U01–*U02,X85–Y09,Y87.1)	269	0.7
6	Diseases of heart (I00–I09,I11,I13,I20–I51)	185	0.5
7	Chronic lower respiratory diseases (J40–J47)	134	0.3
8	Influenza and pneumonia (J09–J18) ⁴	112	0.3
9	Cerebrovascular diseases (I60–I69)	83	0.2
10	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	72	0.2
...	All other causes (residual)	1,425	3.5

See footnotes at end of table.

Table 7. Deaths and death rates for the 10 leading causes of death in specified age groups: United States, preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Rates are per 100,000 population in specified group. For explanation of asterisks (*) preceding cause-of-death codes, see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Rank ¹	Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>) and age	Number	Rate
15–24 years			
...	All causes	29,605	67.6
1	Accidents (unintentional injuries) (V01–X59, Y85–Y86) ³	12,032	27.5
...	Motor vehicle accidents . . (V02–V04, V09.0, V09.2, V12–V14, V19.0–V19.2, V19.4–V19.6, V20–V79, V80.3–V80.5, V81.0–V81.1, V82.0–V82.1, V83–V86, V87.0–V87.8, V88.0–V88.8, V89.0, V89.2)	6,984	15.9
...	All other accidents . . (V01, V05–V06, V09.1, V09.3–V09.9, V10–V12, V15–V18, V19.3, V19.8–V19.9, V80.0–V80.2, V80.6–V80.9, V81.2–V81.9, V82.2–V82.9, V87.9, V88.9, V89.1, V89.3, V89.9, V90–V99, W00–X59, Y85–Y86) ³	5,048	11.5
2	Intentional self harm (suicide) (*U03, X60–X84, Y87.0)	4,688	10.7
3	Assault (homicide) (*U01–*U02, X85–Y09, Y87.1)	4,508	10.3
4	Malignant neoplasms (C00–C97)	1,609	3.7
5	Diseases of heart (I00–I09, I11, I13, I20–I51)	948	2.2
6	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	429	1.0
7	Influenza and pneumonia (J09–J18) ⁴	213	0.5
8	Cerebrovascular diseases (I60–I69)	186	0.4
9	Pregnancy, childbirth and the puerperium (O00–O99)	166	0.4
10	Chronic lower respiratory diseases (J40–J47)	160	0.4
...	All other causes (residual)	4,666	10.7
25–44 years			
...	All causes	113,341	137.5
1	Accidents (unintentional injuries) (V01–X59, Y85–Y86) ³	29,424	35.7
...	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)	10,181	12.4
...	All other accidents . . (V01, V05–V06, V09.1, V09.3–V09.9, V10–V12, V15–V18, V19.3, V19.8–V19.9, V80.0–V80.2, V80.6–V80.9, V81.2–V81.9, V82.2–V82.9, V87.9, V88.9, V89.1, V89.3, V89.9, V90–V99, W00–X59, Y85–Y86) ³	19,243	23.3
2	Malignant neoplasms (C00–C97)	15,210	18.5
3	Diseases of heart (I00–I09, I11, I13, I20–I51)	13,479	16.4
4	Intentional self harm (suicide) (*U03, X60–X84, Y87.0)	12,269	14.9
5	Assault (homicide) (*U01–*U02, X85–Y09, Y87.1)	6,639	8.1
6	Chronic liver disease and cirrhosis (K70, K73–K74)	2,919	3.5
7	Diabetes mellitus (E10–E14)	2,474	3.0
8	Human immunodeficiency virus (HIV) disease (B20–B24)	2,262	2.7
9	Cerebrovascular diseases (I60–I69)	2,245	2.7
10	Influenza and pneumonia (J09–J18) ⁴	1,341	1.6
...	All other causes (residual)	25,079	30.4
45–64 years			
...	All causes	505,730	610.9
1	Malignant neoplasms (C00–C97)	161,072	194.6
2	Diseases of heart (I00–I09, I11, I13, I20–I51)	105,013	126.9
3	Accidents (unintentional injuries) (V01–X59, Y85–Y86) ³	34,621	41.8
...	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)	9,701	11.7
...	All other accidents . . (V01, V05–V06, V09.1, V09.3–V09.9, V10–V12, V15–V18, V19.3, V19.8–V19.9, V80.0–V80.2, V80.6–V80.9, V81.2–V81.9, V82.2–V82.9, V87.9, V88.9, V89.1, V89.3, V89.9, V90–V99, W00–X59, Y85–Y86) ³	24,920	30.1
4	Chronic lower respiratory diseases (J40–J47)	19,646	23.7
5	Chronic liver disease and cirrhosis (K70, K73–K74)	19,551	23.6
6	Diabetes mellitus (E10–E14)	18,548	22.4
7	Cerebrovascular diseases (I60–I69)	16,848	20.4
8	Intentional self harm (suicide) (*U03, X60–X84, Y87.0)	14,852	17.9
9	Septicemia (A40–A41)	7,365	8.9
10	Nephritis, nephrotic syndrome and nephrosis (N00–N07, N17–N19, N25–N27) ⁵	6,758	8.2
...	All other causes (residual)	101,456	122.6

See footnotes at end of table.

Table 7. Deaths and death rates for the 10 leading causes of death in specified age groups: United States, preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Rates are per 100,000 population in specified group. For explanation of asterisks (*) preceding cause-of-death codes, see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Rank ¹	Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>) and age	Number	Rate
65 years and over			
...	All causes	1,830,553	4,422.3
1	Diseases of heart (I00–I09,I11,I13,I20–I51)	476,220	1,150.5
2	Malignant neoplasms (C00–C97)	396,126	957.0
3	Chronic lower respiratory diseases (J40–J47)	122,381	295.6
4	Cerebrovascular diseases (I60–I69)	109,393	264.3
5	Alzheimer's disease (G30)	83,746	202.3
6	Diabetes mellitus (E10–E14)	52,068	125.8
7	Influenza and pneumonia (J09–J18) ⁴	45,321	109.5
8	Accidents (unintentional injuries) (V01–X59,Y85–Y86) ³	42,635	103.0
...	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)	6,432	15.5
...	All other accidents . . (V01,V05–V06,V09.1,V09.3–V09.9,V10–V12,V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2, V80.6–V80.9,V81.2–V81.9,V82.2–V82.9,V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99,W00–X59,Y85–Y86) ³	36,203	87.5
9	Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27) ⁵	37,927	91.6
10	Septicemia (A40–A41)	26,596	64.3
...	All other causes (residual)	438,140	1,058.5

... Category not applicable.

¹Rank based on number of deaths; see Technical Notes.

²Includes deaths under age 1 year.

³New ICD-10 subcategories were introduced for the existing X34 (Victim of earthquake); see Technical Notes.

⁴New ICD-10 code J12.3 (Human metapneumovirus pneumonia) was added to the category in 2011; see Technical Notes.

⁵New subcategories replaced previous ones for N18 (Chronic kidney disease) in 2011. Changes affect comparability with previous year's data; see Technical Notes.

NOTES: For certain causes of death such as unintentional injuries, homicides, suicides, and respiratory diseases, preliminary and final data differ because of the truncated nature of the preliminary file. Data are subject to sampling or random variation. For information regarding the calculation of standard errors and further discussion of the variability of the data, see Technical Notes.

Table 8. Infant deaths and infant mortality rates for the 10 leading causes of infant death, by race and Hispanic origin: United States, preliminary 2011

[Data are based on a continuous file of records received from the states. Rates are per 100,000 live births. Figures are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals. Race and Hispanic origin are reported separately on both the birth and death certificate. Rates for Hispanic origin should be interpreted with caution because of inconsistencies between reporting Hispanic origin on birth and death certificates; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported for deaths by 38 states and District of Columbia and for births by 40 states and District of Columbia; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see Technical Notes]

Rank ¹	Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>), race, and Hispanic origin	Number	Rate
All races ²			
...	All causes	23,907	604.7
1	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,984	126.1
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	4,116	104.1
3	Sudden infant death syndrome (R95)	1,711	43.3
4	Newborn affected by maternal complications of pregnancy (P01)	1,578	39.9
5	Accidents (unintentional injuries) (V01–X59) ³	1,089	27.5
6	Newborn affected by complications of placenta, cord and membranes (P02)	992	25.1
7	Bacterial sepsis of newborn (P36)	526	13.3
8	Respiratory distress of newborn (P22)	514	13.0
9	Diseases of the circulatory system (I00–I99)	496	12.5
10	Neonatal hemorrhage (P50–P52,P54)	444	11.2
...	All other causes (residual)	7,457	188.6
Total white			
...	All causes	15,451	511.7
1	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	3,732	123.6
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	2,330	77.2
3	Sudden infant death syndrome (R95)	1,126	37.3
4	Newborn affected by maternal complications of pregnancy (P01)	962	31.9
5	Accidents (unintentional injuries) (V01–X59) ³	678	22.5
6	Newborn affected by complications of placenta, cord and membranes (P02)	642	21.3
7	Respiratory distress of newborn (P22)	341	11.3
8	Bacterial sepsis of newborn (P36)	326	10.8
9	Diseases of the circulatory system (I00–I99)	317	10.5
10	Neonatal hemorrhage (P50–P52,P54)	315	10.4
...	All other causes (residual)	4,682	155.0
Non-Hispanic white			
...	All causes	10,883	506.0
1	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	2,496	116.0
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	1,577	73.3
3	Sudden infant death syndrome (R95)	904	42.0
4	Newborn affected by maternal complications of pregnancy (P01)	645	30.0
5	Accidents (unintentional injuries) (V01–X59) ³	550	25.6
6	Newborn affected by complications of placenta, cord and membranes (P02)	456	21.2
7	Respiratory distress of newborn (P22)	243	11.3
8	Neonatal hemorrhage (P50–P52,P54)	227	10.6
8	Bacterial sepsis of newborn (P36)	227	10.6
10	Diseases of the circulatory system (I00–I99)	220	10.2
...	All other causes (residual)	3,338	155.2
Total black			
...	All causes	7,221	1,139.8
1	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	1,576	248.8
2	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	994	156.9
3	Newborn affected by maternal complications of pregnancy (P01)	535	84.4
4	Sudden infant death syndrome (R95)	517	81.6
5	Accidents (unintentional injuries) (V01–X59) ³	355	56.0
6	Newborn affected by complications of placenta, cord and membranes (P02)	314	49.6
7	Bacterial sepsis of newborn (P36)	178	28.1
8	Diseases of the circulatory system (I00–I99)	152	24.0
9	Necrotizing enterocolitis of newborn (P77)	150	23.7
10	Respiratory distress of newborn (P22)	148	23.4
...	All other causes (residual)	2,302	363.4

See footnotes at end of table.

Table 8. Infant deaths and infant mortality rates for the 10 leading causes of infant death, by race and Hispanic origin: United States, preliminary 2011—Con.

[Data are based on a continuous file of records received from the states. Rates are per 100,000 live births. Figures are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals. Race and Hispanic origin are reported separately on both the birth and death certificate. Rates for Hispanic origin should be interpreted with caution because of inconsistencies between reporting Hispanic origin on birth and death certificates; see Technical Notes. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported for deaths by 38 states and District of Columbia and for births by 40 states and District of Columbia; see Technical Notes. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see Technical Notes. Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see Technical Notes]

Rank ¹	Cause of death (based on the <i>International Classification of Diseases, Tenth Revision</i> , 2008 Edition, 2009), race, and Hispanic origin	Number	Rate
	Hispanic ⁴		
...	All causes	4,804	526.6
1	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	1,282	140.5
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	784	85.9
3	Newborn affected by maternal complications of pregnancy (P01)	330	36.2
4	Sudden infant death syndrome (R95)	239	26.2
5	Newborn affected by complications of placenta, cord and membranes (P02)	193	21.2
6	Accidents (unintentional injuries) (V01–X59) ³	142	15.6
7	Bacterial sepsis of newborn (P36)	106	11.6
8	Diseases of the circulatory system (I00–I99)	105	11.5
9	Respiratory distress of newborn (P22)	99	10.9
10	Neonatal hemorrhage (P50–P52,P54)	94	10.3
...	All other causes (residual)	1,430	156.7

... Category not applicable.

¹Rank based on number of deaths; see Technical Notes.

²Includes races other than white and black.

³New ICD–10 subcategories were introduced for the existing X34 (Victim of earthquake); see Technical Notes.

⁴Includes all persons of Hispanic origin of any race; see Technical Notes.

NOTE: For certain causes of death such as unintentional injuries, homicides, sudden infant death syndrome, and respiratory diseases, preliminary and final data differ because of the truncated nature of the preliminary file. Data are subject to sampling or random variation. For information regarding the calculation of standard errors and further discussion of the variability of the data, see Technical Notes. Although the infant mortality rate is the preferred indicator of the risk of dying during the first year of life, another measure of infant mortality, the infant death rate, is shown elsewhere in the report. The two measures typically are similar, yet they can differ because the denominators used for these measures are different.

Technical Notes

Nature and sources of data

Preliminary mortality data for 2011 are based on a continuous receipt and processing of statistical records by the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS) through June 12, 2012. NCHS received the data from the states' vital registration systems through the Vital Statistics Cooperative Program. Demographic information for the United States was available in calendar year 2011 for an estimated 98.9 percent of infant decedents and 99.4 percent of decedents aged 1 year and over. Medical information for the United States was available in calendar year 2011 for an estimated 97.3 percent of infant decedents and 98.1 percent of decedents aged 1 year and over. In this report, U.S. totals include only events occurring within the 50 states and the District of Columbia (D.C.). Data for Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Northern Marianas included in tables showing data by state are not included in U.S. totals. Additional information on 2010 final data is available elsewhere (3).

For 2011, individual records of infant deaths (deaths under age 1 year) and deaths of persons aged 1 year and over are weighted (when necessary) to independent counts of deaths occurring in each state. These state-specific counts serve as control totals and are the basis for the record weights in the preliminary file. If the number of records in the preliminary file is greater than the count received from the state, the state-specific number of records in the preliminary file is used instead and the weight is set at 1.0.

For this report, two separate files are processed. The medical file, or cause of death file, contains records that include both demographic and medical information used to generate tables showing cause of death. The demographic file, which includes records from the medical file as well as additional records containing demographic information only, is used to generate tables showing mortality by demographic characteristics only. A state-specific weight is computed for each file by dividing the state control total by the number of records in the preliminary sample.

Each record is assigned two weights, a state-specific weight and a U.S. weight. State weights are used for state-specific tabulations and U.S. weights are used for national tabulations. For the medical file, the state weight makes the death counts comparable with those in the demographic file. The U.S. weight combines two factors: one to make the medical file counts for the individual record's state comparable with those for the demographic file, and one to compensate for any states not represented in the file. This second factor is equivalent to 0 if all states are represented in the file. Thus, when all states are represented in the preliminary files, the state and U.S. weights are the same.

Because there are two separate files, each with two separate sets of weights, slight inconsistencies may occur between the demographic and medical tables in this report. [Table I](#) shows the percent completeness of the preliminary files by place of occurrence for the United States and each state. The percent completeness is obtained by dividing the number of records in the preliminary files by the control total and multiplying by 100. Although data by place of occurrence are used to compute the weights, all data in this report are tabulated by place of residence.

For selected variables in the mortality files, unknown or not stated values are imputed. The percentage not stated was less than 0.3 percent for all variables discussed in this report. Detailed information on

how the file addresses not stated values for specific variables (race, Hispanic origin, sex, and age) may be found in "Technical Appendix, Vital Statistics of the United States: Mortality, 1999" (18).

2003 revision of U.S. Standard Certificate of Death

This report includes data for D.C. and 36 states [Arizona, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York (including New York City), North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Texas, Utah, Vermont, Washington, and Wyoming] that implemented the 2003 revision of the U.S. Standard Certificate of Death by 2011, and the remaining 14 states that collected and reported death data in 2011 based on the 1989 revision of the U.S. Standard Certificate of Death. Minnesota implemented the 2003 revision of the U.S. Standard Certificate of Death in March 2011, so a portion of this state's data for 2011 was reported using the 1989 revision. The 2003 revision is described in detail elsewhere (19,20). Because the items presented in this report appear largely comparable despite changes to item wording and format in the 2003 revision, data from both groups of states are combined.

Race and Hispanic origin

The 2003 revision of the U.S. Standard Certificate of Death allows the reporting of more than one race (multiple races) (19). This change was implemented to reflect the increasing diversity of the population of the United States, to be consistent with the decennial census, and to reflect standards issued in 1997 by the Office of Management and Budget (OMB). OMB standards mandate the collection of more than one race for federal data (see "Population denominators") (21). In addition, the new certificate is compliant with the OMB-mandated minimum set of five races to be reported for federal data. These are white, black or African American, American Indian or Alaska Native (AIAN), Asian, and Native Hawaiian or Other Pacific Islander (NHOPi).

For 2011 mortality data, multiple races were reported on the revised death certificates of Arizona, Arkansas, California, Connecticut, Delaware, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York (including New York City), North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Texas, Utah, Vermont, Washington, and Wyoming. Multiple races were also reported on the unrevised certificates of Hawaii and Wisconsin. Data from the vital records of the remaining 12 states are based on the 1989 revision of the U.S. Standard Certificate of Death, which follows the 1977 OMB standards, allowing only a single race to be reported (20,22). In addition, these 12 states report a minimum set of four races as stipulated in the 1977 standards. These are white, black or African American, AIAN, and Asian or Pacific Islander (API). According to the 2010 final mortality file, 0.4 percent of deaths were reported to persons of more than one race.

To provide uniformity and comparability of data during the transition period, before all or most of the data become available in the new multiple race format, it is necessary to adjust the data for those

Table I. Total count of records and percent completeness of preliminary files of infant deaths and deaths to those aged 1 year and over: United States, each state and territory, preliminary 2011

[By place of occurrence]

Area	Infant deaths (under age 1 year)			Deaths to those aged 1 year and over		
	Count of records	Percent completeness		Count of records	Percent completeness	
		Demographic file	Medical file		Demographic file	Medical file
United States ¹	23,988	98.9	97.3	2,494,230	99.4	98.1
Alabama	477	100.0	100.0	47,405	100.0	100.0
Alaska	40	100.0	97.5	3,716	100.0	97.6
Arizona	514	100.0	100.0	48,686	100.0	100.0
Arkansas	276	100.0	94.9	28,878	100.0	98.7
California	2,417	100.0	100.0	238,102	100.0	100.0
Colorado	395	100.0	100.0	32,653	100.0	100.0
Connecticut	183	100.0	98.4	29,466	99.9	93.7
Delaware	107	100.0	94.4	7,791	100.0	96.7
District of Columbia	157	100.0	98.1	5,419	99.9	99.9
Florida	1,397	100.0	100.0	174,153	100.0	100.0
Georgia	863	99.8	92.2	69,774	100.0	97.6
Hawaii	94	100.0	100.0	9,863	99.9	99.9
Idaho	101	100.0	100.0	11,745	100.0	100.0
Illinois	1,004	100.0	99.9	98,085	100.0	100.0
Indiana	629	100.0	100.0	58,195	100.0	100.0
Iowa	167	100.0	100.0	27,907	100.0	100.0
Kansas	217	100.0	100.0	24,084	100.0	100.0
Kentucky	310	100.0	96.5	41,896	99.9	97.6
Louisiana	465	100.0	100.0	40,293	99.6	99.6
Maine	80	100.0	98.8	12,830	97.0	96.3
Maryland	438	100.0	100.0	43,164	100.0	100.0
Massachusetts	338	99.1	84.6	54,376	99.9	93.3
Michigan	780	78.7	72.4	87,507	86.7	81.1
Minnesota	347	100.0	97.7	39,546	100.0	99.2
Mississippi	329	100.0	97.0	28,283	100.0	99.5
Missouri	569	100.0	99.3	57,225	99.8	99.0
Montana	62	100.0	100.0	9,030	100.0	100.0
Nebraska	149	100.0	99.3	15,531	100.0	100.0
Nevada	197	100.0	97.0	20,874	100.0	99.7
New Hampshire	43	100.0	97.7	10,574	100.0	96.8
New Jersey	477	100.0	96.6	68,960	100.0	96.8
New Mexico	128	100.0	100.0	15,850	100.0	100.0
New York	1,220	99.9	97.6	146,741	100.0	97.8
New York excluding New York City	642	100.0	98.8	94,530	100.0	97.9
New York City	578	99.8	96.4	52,211	100.0	97.6
North Carolina	876	100.0	100.0	79,792	100.0	100.0
North Dakota	59	100.0	100.0	6,466	100.0	100.0
Ohio	1,139	99.7	99.0	110,440	100.0	100.0
Oklahoma	360	98.1	80.6	35,911	100.0	88.1
Oregon	215	100.0	100.0	32,534	100.0	100.0
Pennsylvania	993	91.0	91.0	128,252	99.0	99.0
Rhode Island	80	98.8	98.8	9,662	100.0	100.0
South Carolina	402	99.8	99.0	40,763	97.6	93.1
South Dakota	78	100.0	100.0	7,340	100.0	100.0
Tennessee	680	100.0	100.0	63,137	100.0	100.0
Texas	2,187	100.0	99.5	168,665	100.0	98.3
Utah	303	100.0	100.0	15,415	100.0	100.0
Vermont	28	100.0	100.0	5,326	100.0	100.0
Virginia	667	100.0	100.0	59,489	100.0	100.0
Washington	389	100.0	100.0	49,370	100.0	99.6
West Virginia	135	100.0	83.7	21,257	100.0	83.5
Wisconsin	405	100.0	100.0	47,688	100.0	100.0
Wyoming	22	100.0	100.0	4,121	100.0	99.8
Puerto Rico	355	100.0	96.1	29,447	99.9	97.3
Virgin Islands	11	0.0	0.0	717	0.0	0.0
Guam	42	100.0	100.0	799	100.0	100.0
American Samoa	6	100.0	100.0	273	94.9	94.9
Northern Marianas	4	0.0	0.0	157	0.0	0.0

0.0 Quantity more than zero but less than 0.05.

¹Excludes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas.

NOTE: Percent completeness equals 100 times the number of records in preliminary file divided by the count of records.

states reporting multiple race by “bridging” the multiple-race information reported for decedents to a single race. The bridging procedure used for mortality numerators is similar to the procedure used to bridge multiracial population estimates (see “Population denominators”) (23,24). Multiracial decedents are imputed to a single race (either white, black, AIAN, or API) according to the combination of races, Hispanic origin, sex, and age indicated on the death certificate. The imputation procedure is described in detail at http://www.cdc.gov/nchs/data/dvs/Multiple_race_docu_5-10-04.pdf.

Because race and Hispanic origin are reported separately on the death certificate, data shown by race include persons of Hispanic or non-Hispanic origin, and data for Hispanic origin include persons of any race. In this report, unless otherwise specified, deaths of persons of Hispanic origin are included in the totals for each race group—white, black, AIAN, and API—according to the decedent’s race as reported on the death certificate. Data shown for Hispanic persons include all persons of Hispanic origin of any race. Mortality data on the Hispanic origin population are based on deaths in all states. Death rates for Hispanic, AIAN, and API persons should be interpreted with caution because of inconsistencies in reporting race on death certificates compared with such reporting on censuses, surveys, and birth certificates. Studies have shown underreporting on death certificates of AIAN, API, and Hispanic decedents, as well as undercounts of these groups in censuses (4–6).

Injury at work

Information on deaths attributed to injuries at work is derived from a separate item on the death certificate that asks the medical certifier whether the death resulted from an injury sustained at work. The item is on the death certificate of all states. Number of deaths, crude death rates, and age-adjusted death rates for injury at work for those aged 15 and over, excluding age not stated, are shown in [Table 2](#). Age-adjusted death rates presented in this report for injury at work were computed using age-specific death rates and the U.S. standard population based on year 2000 standard for ages 15 years and over, excluding age not stated ([Table V](#)). If the estimated “employed” population aged 15 and over had been used instead in the denominator, higher death rates would have resulted, especially for population groups with lower employment rates. See “Computing rates and percentages.”

The number of deaths from injury at work from the National Vital Statistics System is generally about 10 percent less than the counts in the Census of Fatal Occupational Injuries (<http://www.bls.gov/iif/>) between 1993 and 2011. The Census of Fatal Occupational Injuries uses multiple source documents, while the National Vital Statistics System uses the death certificate only.

Cause-of-death classification

Mortality statistics are compiled in accordance with World Health Organization (WHO) regulations specifying that member nations classify and code causes of death in accordance with the current revision of the *International Statistical Classification of Diseases, and Related Health Problems* (ICD). The ICD provides the basic guidance used in virtually all countries to code and classify causes of death. It provides not only disease, injury, and poisoning categories but also the rules used to select the single underlying cause of death for

tabulation from the several diagnoses that may be reported on a single death certificate, as well as definitions, tabulation lists, the format of the death certificate, and regulations on the use of the classification. Causes of death for data presented in this report were coded according to ICD guidelines which are described in annual issues of part 2a of the NCHS Instruction Manual (25).

Effective with deaths occurring in 1999, the United States began using the Tenth Revision of the ICD (ICD–10) (26–27). For earlier years, causes of death were classified according to the revisions then in use (3). An innovation in ICD–10 is that the classification is updated between revisions (27). Changes associated with these updates are discussed in the Technical Notes of each annual report (1–3,8,16).

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 categories Assault (homicide) and Intentional self-harm (suicide) for the 113 causes-of-death list ([Table 2](#)) and Assault (homicide) in the 130 causes-of-infant death list ([Table 5](#)). Additional information on the new terrorism categories can be found at http://www.cdc.gov/nchs/icd/terrorism_code.htm. No deaths occurring in 2010 and 2011 were classified to the terrorism categories.

Enterocolitis due to Clostridium difficile (*C. difficile*)—Due to growing concerns about the number of deaths from Enterocolitis due to *Clostridium difficile* (ICD–10 code A04.7), beginning in 2006, *C. difficile* deaths are included separately as a rankable cause of death in tables showing data for 113 selected causes of death ([Table 2](#)).

Codes for drug-induced deaths—The list of codes included in drug-induced causes was expanded in data years 2003 and 2006 to be more comprehensive. The following ICD–10 codes comprise the list of drug-induced codes: D52.1, D59.0, D59.2, D61.1, D64.2, E06.4, E16.0, E23.1, E24.2, E27.3, E66.1, F11.0–F11.5, F11.7–F11.9, F12.0–F12.5, F12.7–F12.9, F13.0–F13.5, F13.7–F13.9, F14.0–F14.5, F14.7–F14.9, F15.0–F15.5, F15.7–F15.9, F16.0–F16.5, F16.7–F16.9, F17.0, F17.3–F17.5, F17.7–F17.9, F18.0–F18.5, F18.7–18.9, F19.0–F19.5, F19.7–F19.9, G21.1, G24.0, G25.1, G25.4, G25.6, G44.4, G62.0, G72.0, I95.2, J70.2–J70.4, K85.3, L10.5, L27.0–L27.1, M10.2, M32.0, M80.4, M81.4, M83.5, M87.1, R50.2, R78.1–R78.5, X40–X44, X60–X64, X85, and Y10–14.

Codes for alcohol-induced deaths—The list of codes included in alcohol-induced causes was expanded in data years 2003 and 2006 to be more comprehensive. The following ICD–10 codes comprise the list of alcohol-induced codes: E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, R78.0, X45, X65, and Y15.

Recently deleted and added codes—Rules governing coding and classifying the causes of death sometimes require modifications as part of the updating process of ICD–10; this includes adding and deleting codes (3). Each modification may be done for a different reason. For example, subcategories were created for existing code X34 (Victim of earthquake) to provide detail, specifically in response to a desire to distinguish victims of events such as the 2004 Indian Ocean tsunami from other kinds of earthquake-related events. Changes to N18 were made to reflect a more contemporary classification scheme for Chronic kidney disease that incorporated diagnosed stages of the disease. Additional detail on the updates can be found at <http://www.who.int/classifications/icd/icd10updates/en/index.html>. These changes may affect comparability of data between years for selected causes of death. With the mentioned examples, statistics for victims

of earthquake were not affected by changes in the codes but the statistics on kidney and renal conditions were. The impact on kidney and renal conditions is discussed below.

Codes deleted in 2011—Beginning with data for 2011, NCHS deleted six WHO ICD–10 codes (28): H54.7, Unspecified visual loss; K35.0, Acute appendicitis with generalized peritonitis; K35.1, Acute appendicitis with peritoneal abscess; K35.9, Acute appendicitis, unspecified; N18.0, End stage renal diseases; and N18.8, Other chronic renal failure.

Codes added in 2011—Beginning with data for 2011, NCHS added 39 new WHO ICD–10 codes (28): B17.9, Acute viral hepatitis, unspecified; D68.5, Primary thrombophilia; D68.6, Other thrombophilia; D89.3, Immune reconstitution syndrome; E88.3, Tumor lysis syndrome; G14, Postpolio syndrome; G21.4, Vascular parkinsonism; H54.9, Unspecified visual impairment (binocular); I72.5, Aneurysm and dissection of other precerebral arteries; J12.3, Human metapneumovirus pneumonia; J21.1, Acute bronchiolitis due to human metapneumovirus; K12.3, Oral mucositis (ulcerative); K35.2, Acute appendicitis with generalized peritonitis; K35.3, Acute appendicitis with localized peritonitis; K35.8, Acute appendicitis, other and unspecified; L89.0, Stage I decubitus ulcer and pressure area; L89.1, Stage II decubitus ulcer; L89.2, Stage III decubitus ulcer; L89.3, Stage IV decubitus ulcer; L89.9, Decubitus ulcer and pressure area, unspecified; N18.1, Chronic kidney disease, stage 1; N18.2, Chronic kidney disease, stage 2; N18.3, Chronic kidney disease, stage 3; N18.4, Chronic kidney disease, stage 4; N18.5, Chronic kidney disease, stage 5; N42.3, Dysplasia of prostate; O14.2, HELLP syndrome; O43.2, Morbidly adherent placenta; O96.0, Death from direct obstetric cause; O96.1, Death from indirect obstetric cause; O96.9, Death from unspecified obstetric cause; O97.0, Death from sequelae of direct obstetric cause; O97.1, Death from sequelae of indirect obstetric cause; O97.9, Death from sequelae of obstetric cause, unspecified; O98.7, Human immunodeficiency (HIV) disease complicating pregnancy, childbirth and the puerperium; X34.0, Victim of cataclysmic earth movements caused by earthquake; X34.1, Victim of tsunami; X34.8, Victim of other specified effects of earthquake; and X34.9, Victim of unspecified effect of earthquake.

Changes in list of 113 selected causes of death—The following codes are included in the list of 113 selected causes of death (Table 2). Deaths classified to code B17.9 are included in the category Viral hepatitis; D68.5, D68.6, D89.3, E83.3, G14, H54.9, K12.3, L89.0, L89.1, L89.2, L89.3, L89.9, and N42 in the Residual category; G21.4 in the category Parkinson's disease; I72.5 in the category Other diseases of arteries, arterioles and capillaries; J12.3 in the category Pneumonia; J21.1 in the category Acute bronchitis and bronchiolitis; K35.2, K35.3, and K35.8 in the category Diseases of appendix; N18.1, N18.2, N18.3, N18.4, and N18.5 in the category Renal failure; O14.2, O43.2, O96.0, O96.1, O96.9, O97.0, O97.1, O97.9, and O98.7 in the category Other complications of pregnancy, childbirth and puerperium; X34.0, X34.1, X34.8, and X34.9 in the category Other and unspecified nontransport accidents and their sequelae (28).

Changes in list of 130 selected causes of infant death—The following codes are included in the list of 130 selected causes of infant death (Table 5). Deaths classified to code B17.9 are included in the category Other and unspecified viral diseases; D68.5 and D68.6 in the category Hemorrhagic conditions and other diseases of blood and blood-forming organs; D89.3 in the category Certain disorders involving the immune mechanism; E88.3 in the category All other endocrine,

nutritional and metabolic diseases; G21.4 in the category Other diseases of nervous system; H54.9, L89.0–L89.3, and L89.9 in the Residual category; I72.5 in the category All other diseases of circulatory system; J12.3 in the category Pneumonia; J21.1 in the category Acute bronchitis and acute bronchiolitis; K12.3, K35.2, K35.3, and K35.8 in the category All other and unspecified diseases of digestive system; N18.1–N18.5 in the category Renal failure and other disorders of kidney; N42.3 in the category Other and unspecified diseases of genitourinary system; and X34.0, X34.1, X34.8, and X34.9 in the category Other and unspecified accidents. Additional information on these new categories can be found at <http://www.cdc.gov/nchs/data/dvs/Part9InstructionManual2011.pdf> (28).

Changes to classification affecting renal failure—In 2011, the implementation of changes in coding rules had an impact on Nephritis, nephrotic syndrome and nephrosis (ICD–10 codes N00–N07, N17–N19, and N25–N27) and therefore, changes in mortality statistics for this condition must be interpreted with caution. Renal failure (N17–N19) is a component condition of the larger category Nephritis, nephrotic syndrome and nephrosis. The changes associate renal failure with other diseases such as diabetes, wasting, and paralyzing conditions in more cases than in the past. For instance, both diabetes and kidney conditions were reported on about 2 percent of death certificates in 2010 and 2011. Compared with 2010, the percentage of these with an underlying cause of Nephritis, nephrotic syndrome and nephrosis decreased while the percentage with an underlying cause of Diabetes mellitus increased in 2011, especially diabetes mellitus with renal complications (data not shown).

Nonsampling error

Causes of death in this report are subject to nonsampling error. This is because the preliminary file is processed before a full year's worth of data are available. The file is thus subject to the seasonality of certain causes of death that may not be equally distributed throughout the year. It is known, for example, that external causes such as unintentional injuries occur disproportionately during the summer months, and that fatal respiratory conditions are more prevalent during the winter months. Accordingly, the truncated nature of the preliminary file may systematically overemphasize or underemphasize causes with pronounced seasonality, particularly when these deaths cluster at the end of the year. However, in years where the preliminary file completeness is more than 90 percent, it is unlikely that seasonality is a major factor; the 2011 preliminary file is more than 98 percent complete.

Furthermore, for some deaths, especially those subject to medicolegal investigation such as unintentional injuries, homicides, suicides, and sudden infant death syndrome (SIDS), the final cause may not be available at the time the preliminary file is processed. In those cases, the causes of death may be reported in the preliminary file as unknown or pending investigation and coded to the category Other ill-defined and unspecified causes of mortality (ICD–10 code R99), a subcategory of Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified (ICD–10 codes R00–R99). In the final data, some of the deaths of unknown cause in the preliminary file will be reassigned to specific causes if further, more specific cause-of-death information is provided.

A quantitative assessment of the degree of the nonsampling error can be made by comparing final data and preliminary data for the same year. A comparison of such data for the selected 113 causes of death for the total U.S. population from 2008–2010 indicates that preliminary estimates for some causes of death are sometimes underestimated and sometimes overestimated in the preliminary file (Table II). Thus, the number of deaths for unintentional injuries (V01–X59, Y85–Y86) was underestimated in the preliminary file by 0.6 percent in 2008, 0.7 percent in 2009, and 2.3 percent in 2010. Similar undercounts occurred for suicide (*U03, X60–X84, Y87.0) with preliminary underestimates of 0.3 percent in 2008, 1.0 percent in 2009, and 1.5 percent in 2010. Likewise, homicide (*U01–*U02, X85–Y09, Y87.1) showed a 1.2 percent underestimate in the preliminary file in 2009 and 2010, but a 0.1 overestimate in 2008.

Comparisons showing nonsampling error in preliminary estimates for causes of infant death are shown in Table III, where Disorders related to short gestation and low birth weight, not elsewhere classified (P07) was underestimated by 0.4 percent in 2008, 1.7 percent in 2009, and 0.4 percent in 2010. Unintentional injuries (V01–X59) and SIDS (R95) were underestimated in the preliminary data for each of the three years from 2008–2010 with unintentional injuries being underestimated between 1.2 percent and 6.0 percent, and SIDS between 2.6 percent and 8.4 percent (Table III).

Tabulation lists and cause-of-death ranking

Tabulation lists for ICD–10 are published in the “NCHS Instruction Manual, Part 9, ICD–10 Cause-of-Death Lists for Tabulating Mortality Statistics, Updated March 2011” (28). For this report, two tabulation lists are used: the List of 113 Selected Causes of Death used for deaths of all ages, and the List of 130 Selected Causes of Infant Death used for infants. Modifications in the lists reflecting changes in ICD codes are footnoted in the report tables. These lists are also used to rank leading causes of death for the two population groups (29). For the List of 113 Selected Causes of Death, the group titles Major cardiovascular diseases (ICD–10 codes I00–I78) and Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified (ICD–10 codes 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 (ICD–10 codes A16–A19)], its component parts are not ranked [in this case, Respiratory tuberculosis (ICD–10 code A16) and Other tuberculosis (ICD–10 codes A17–A19)]. For the List of 130 Selected Causes of Infant Death, the same ranking procedures are used, except that the category Major cardiovascular diseases is not on the list.

Infant mortality

The infant mortality rate is 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 preliminary number of infant deaths that occurred during 2011 by the number of live births for the same period and are presented as rates per 1,000 or per 100,000 live births. For preliminary birth figures used in the denominator for infant mortality rates, see “Births: Preliminary Data for 2011” (15). In contrast to infant mortality rates based on live births, infant death rates are based on the estimated population

under age 1 year (Table 1). Infant death rates that appear in tabulations of age-specific death rates in this report are calculated by dividing the number of infant deaths in 2011 by the estimated population of persons under age 1 on July 1, 2011, and are presented as rates per 100,000 population in this age group. Because of differences in their denominators, infant death rates may differ from infant mortality rates. Information on infant deaths can also be obtained from a file where the infant’s death certificate is linked to the birth certificate. The linked birth/infant death data set (linked file) is a better source of data for infant deaths and mortality rates by race and ethnicity because the race of the mother as reported by the mother on the birth certificate is used in both the numerator and denominator of the infant mortality rate. In contrast, for infant deaths and mortality rates in this report, race information for the denominator is the race of the mother as reported on the birth certificate, but the race information for the numerator is the race of the infant decedent as reported on the death certificate. Race information reported on the birth certificate is considered to be more accurate than that on the death certificate, because the race of each parent is usually reported on the birth certificate by the mother at the time of delivery, whereas on the death certificate, the race of the deceased infant is reported by the funeral director based on information provided by an informant or by observation. This difference in the method of reporting race data has a larger impact for races other than white and black and can lead to differences in race-specific infant mortality rates between the two data sources (13).

Life tables

The period life table provides a measure of the effect of current 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.

Beginning with final data for 1997, complete life tables by single years through age 100 have been constructed for the preliminary report (30). Beginning with the 2008 life tables, the methodology used to construct life tables was revised from methods used in earlier reports (30–35). The most recent revised methodology is described in greater detail in “United States Life Tables, 2008” (7).

NCHS began producing life tables for the 2006 data year by Hispanic origin after conducting research into the quality of race and ethnicity reporting on death certificates and developing methodologies to correct for misclassification of these populations on death certificates (36,37). Previously, NCHS produced annual life tables by race including the white and black populations but had not produced life tables for other racial or ethnic groups. The methods that adjust for misclassification are applied to the production of the life tables, but not to the death rates shown in this report.

The life expectancy data shown in this report for the 2006–2009 data year have been updated using intercensal population estimates and may differ from those published previously (1,2,8).

Population denominators

The rates in this report for 2011 use population estimates as of July 1, 2011. The rates for 2010 use population enumerated based on the 2010 census as of April 1, 2010. These population estimates

Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 2008–2010

[For explanation of asterisk preceding cause-of-death codes, see Technical Notes]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	Preliminary number of deaths 2010	Final number of deaths 2010	Ratio of preliminary to final 2010	Preliminary number of deaths 2009	Final number of deaths 2009	Ratio of preliminary to final 2009	Preliminary number of deaths 2008	Final number of deaths 2008	Ratio of preliminary to final 2008
All causes	2,465,932	2,468,435	0.9990	2,436,652	2,437,163	0.9998	2,472,699	2,471,984	1.0003
Salmonella infections (A01–A02)	28	28	1.0000	26	26	1.0000	43	44	0.9773
Shigellosis and amebiasis (A03,A06)	3	3	1.0000	11	4	2.7500	6	6	1.0000
Certain other intestinal infections (A04,A07–A09) ¹	10,248	10,276	0.9973	10,242	10,251	0.9991	7,883	7,876	1.0009
Tuberculosis (A16–A19)	569	569	1.0000	547	529	1.0340	590	585	1.0085
Respiratory tuberculosis (A16)	424	423	1.0024	422	405	1.0420	452	449	1.0067
Other tuberculosis (A17–A19)	145	146	0.9932	126	124	1.0161	138	136	1.0147
Whooping cough (A37)	26	26	1.0000	15	15	1.0000	20	20	1.0000
Scarlet fever and erysipelas (A38,A46)	3	3	1.0000	5	5	1.0000	3	3	1.0000
Meningococcal infection (A39)	79	79	1.0000	97	99	0.9798	102	102	1.0000
Septicemia (A40–A41)	34,843	34,812	1.0009	35,587	35,639	0.9985	35,961	35,927	1.0009
Syphilis (A50–A53)	27	28	0.9643	33	34	0.9706	34	34	1.0000
Acute poliomyelitis (A80)	–	–	...	–	–	...	–	–	...
Arthropod-borne viral encephalitis (A83–A84,A85.2)	9	9	1.0000	2	2	1.0000	2	2	1.0000
Measles (B05)	2	2	1.0000	2	2	1.0000	–	–	...
Viral hepatitis (B15–B19) ²	7,554	7,564	0.9987	7,652	7,694	0.9945	7,631	7,629	1.0003
Human immunodeficiency virus (HIV) disease (B20–B24)	8,352	8,369	0.9980	9,424	9,406	1.0019	10,295	10,285	1.0010
Malaria (B50–B54)	9	10	0.9000	4	3	1.3333	5	5	1.0000
Other and unspecified infectious and parasitic diseases and their sequelae (A00,A05, A20–A36,A42–A44,A48–A49,A54–A79,A81–A82,A85.0–A85.1,A85.8,A86–B04,B06–B09, B25–B49,B55–B99)	5,808	5,805	1.0005	5,842	5,849	0.9988	5,933	5,914	1.0032
Malignant neoplasms (C00–C97)	573,855	574,743	0.9985	568,668	567,628	1.0018	566,137	565,469	1.0012
Malignant neoplasms of lip, oral cavity and pharynx (C00–C14)	8,447	8,474	0.9968	7,913	7,922	0.9989	8,031	8,019	1.0015
Malignant neoplasm of esophagus (C15)	14,417	14,490	0.9950	13,916	13,908	1.0006	13,739	13,714	1.0018
Malignant neoplasm of stomach (C16)	11,372	11,390	0.9984	11,139	11,185	0.9959	11,381	11,352	1.0026
Malignant neoplasms of colon, rectum and anus (C18–C21)	52,540	52,622	0.9984	52,462	52,394	1.0013	53,337	53,321	1.0003
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	20,275	20,305	0.9985	19,311	19,352	0.9979	18,243	18,213	1.0016
Malignant neoplasm of pancreas (C25)	36,817	36,888	0.9981	35,872	35,628	1.0068	35,267	35,236	1.0009
Malignant neoplasm of larynx (C32)	3,687	3,691	0.9989	3,633	3,631	1.0006	3,759	3,760	0.9997
Malignant neoplasms of trachea, bronchus and lung (C33–C34)	158,135	158,318	0.9988	158,105	158,158	0.9997	158,873	158,656	1.0014
Malignant melanoma of skin (C43)	9,145	9,154	0.9990	9,254	9,199	1.0060	8,643	8,623	1.0023
Malignant neoplasm of breast (C50)	41,360	41,435	0.9982	41,115	41,078	1.0009	41,049	41,026	1.0006
Malignant neoplasm of cervix uteri (C53)	3,922	3,939	0.9957	3,909	3,909	1.0000	4,018	4,008	1.0025
Malignant neoplasms of corpus uteri and uterus, part unspecified (C54–C55)	8,405	8,402	1.0004	7,636	7,713	0.9900	7,682	7,675	1.0009
Malignant neoplasm of ovary (C56)	14,516	14,572	0.9962	14,513	14,436	1.0053	14,373	14,362	1.0008
Malignant neoplasm of prostate (C61)	28,541	28,561	0.9993	28,154	28,088	1.0023	28,517	28,472	1.0016
Malignant neoplasms of kidney and renal pelvis (C64–C65)	13,195	13,219	0.9982	13,027	12,995	1.0025	12,915	12,895	1.0016
Malignant neoplasm of bladder (C67)	14,707	14,731	0.9984	14,315	14,201	1.0080	14,053	14,036	1.0012
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	14,119	14,164	0.9968	14,192	14,176	1.0011	13,739	13,724	1.0011
Malignant neoplasms of lymphoid, hematopoietic and related tissue (C81–C96)	55,489	55,590	0.9982	55,462	55,406	1.0010	54,998	54,954	1.0008
Hodgkin's disease (C81)	1,228	1,231	0.9976	1,265	1,250	1.0120	1,170	1,171	0.9991
Non-Hodgkin's lymphoma (C82–C85)	20,274	20,294	0.9990	20,361	20,389	0.9986	20,374	20,369	1.0002
Leukemia (C91–C95)	22,499	22,569	0.9969	22,697	22,606	1.0040	22,357	22,335	1.0010
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	11,420	11,428	0.9993	11,072	11,094	0.9980	11,038	11,020	1.0016

See footnotes at end of table.

Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 2008–2010—Con.

[For explanation of asterisk preceding cause-of-death codes, see Technical Notes]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision</i> , 2008 Edition, 2009)	Preliminary number of deaths 2010	Final number of deaths 2010	Ratio of preliminary to final 2010	Preliminary number of deaths 2009	Final number of deaths 2009	Ratio of preliminary to final 2009	Preliminary number of deaths 2008	Final number of deaths 2008	Ratio of preliminary to final 2008
Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue. (C96)	68	68	1.0000	66	67	0.9851	59	59	1.0000
All other and unspecified malignant neoplasms (C17,C23–C24,C26–C31,C37–C41,C44–C49,C51–C52,C57–C60,C62–C63,C66,C68–C69,C73–C80,C97)	64,765	64,798	0.9995	64,738	64,249	1.0076	63,519	63,423	1.0015
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	14,892	14,917	0.9983	14,616	14,605	1.0008	14,481	14,470	1.0008
Anemias (D50–D64)	4,842	4,852	0.9979	4,652	4,686	0.9927	5,033	5,018	1.0030
Diabetes mellitus (E10–E14)	68,905	69,071	0.9976	68,504	68,705	0.9971	70,601	70,553	1.0007
Nutritional deficiencies (E40–E64)	2,931	2,948	0.9942	2,836	2,850	0.9951	2,981	2,976	1.0017
Malnutrition (E40–E46)	2,772	2,790	0.9935	2,672	2,680	0.9970	2,767	2,760	1.0025
Other nutritional deficiencies (E50–E64)	158	158	1.0000	164	170	0.9647	214	216	0.9907
Meningitis (G00,G03)	605	608	0.9951	648	649	0.9985	633	633	1.0000
Parkinson's disease (G20–G21) ³	21,963	22,032	0.9969	20,552	20,565	0.9994	20,507	20,483	1.0012
Alzheimer's disease (G30)	83,308	83,494	0.9978	78,889	79,003	0.9986	82,476	82,435	1.0005
Major cardiovascular diseases. (I00–I78)	777,548	780,213	0.9966	779,367	780,624	0.9984	804,899	804,483	1.0005
Diseases of heart. (I00–I09,I11,I13,I20–I51)	595,444	597,689	0.9962	598,607	599,413	0.9987	617,527	616,828	1.0011
Acute rheumatic fever and chronic rheumatic heart diseases. (I00–I09)	2,992	2,987	1.0017	3,251	3,234	1.0053	3,149	3,141	1.0025
Hypertensive heart disease (I11)	33,275	33,678	0.9880	33,029	33,157	0.9961	32,374	32,391	0.9995
Hypertensive heart and renal disease (I13)	2,790	2,807	0.9939	2,880	2,871	1.0031	2,867	2,872	0.9983
Ischemic heart diseases (I20–I25)	378,270	379,559	0.9966	385,723	386,324	0.9984	405,019	405,309	0.9993
Acute myocardial infarction (I21–I22)	121,865	122,071	0.9985	125,361	125,464	0.9992	133,723	133,958	0.9982
Other acute ischemic heart diseases (I24)	4,149	4,170	0.9950	3,953	4,001	0.9880	4,233	4,252	0.9955
Other forms of chronic ischemic heart disease. (I20,I25)	252,237	253,318	0.9957	256,408	256,859	0.9982	267,063	267,099	0.9999
Atherosclerotic cardiovascular disease, so described. (I25.0)	56,848	57,438	0.9897	56,731	57,043	0.9945	58,517	58,625	0.9982
All other forms of chronic ischemic heart disease. (I20,I25.1–I25.9)	195,388	195,880	0.9975	199,677	199,816	0.9993	208,545	208,474	1.0003
Other heart diseases (I26–I51)	178,117	178,658	0.9970	173,725	173,827	0.9994	174,118	173,115	1.0058
Acute and subacute endocarditis. (I33)	1,097	1,103	0.9946	1,164	1,167	0.9974	1,179	1,180	0.9992
Diseases of pericardium and acute myocarditis (I30–I31,I40)	757	776	0.9755	837	847	0.9882	829	827	1.0024
Heart failure (I50)	57,696	57,757	0.9989	56,752	56,410	1.0061	57,215	56,830	1.0068
All other forms of heart disease (I26–I28,I34–I38,I42–I49,I51)	118,567	119,022	0.9962	114,971	115,403	0.9963	114,895	114,278	1.0054
Essential hypertension and hypertensive renal disease. (I10,I12,I15)	26,577	26,634	0.9979	25,651	25,734	0.9968	25,823	25,742	1.0031
Cerebrovascular diseases. (I60–I69)	129,180	129,476	0.9977	128,603	128,842	0.9981	133,750	134,148	0.9970
Atherosclerosis (I70)	7,213	7,230	0.9976	7,341	7,377	0.9951	7,846	7,836	1.0013
Other diseases of circulatory system (I71–I78) ⁴	19,134	19,184	0.9974	19,165	19,258	0.9952	19,952	19,929	1.0012
Aortic aneurysm and dissection (I71)	10,397	10,431	0.9967	10,581	10,597	0.9985	11,088	11,079	1.0008
Other diseases of arteries, arterioles and capillaries (I72–I78) ⁴	8,737	8,753	0.9982	8,584	8,661	0.9911	8,864	8,850	1.0016
Other disorders of circulatory system (I80–I99)	4,191	4,241	0.9882	4,044	4,118	0.9820	4,034	4,042	0.9980
Influenza and pneumonia (J09–J18) ^{5,6}	50,003	50,097	0.9981	53,582	53,692	0.9980	56,335	56,284	1.0009
Influenza (J09–J11) ⁵	494	500	0.9880	2,808	2,918	0.9623	1,721	1,722	0.9994
Pneumonia (J12–J18) ⁶	49,510	49,597	0.9982	50,774	50,774	1.0000	54,614	54,562	1.0010
Other acute lower respiratory infections (J20–J22,U04) ⁷	212	213	0.9953	263	272	0.9669	285	284	1.0035
Acute bronchitis and bronchiolitis (J20–J21) ⁷	175	177	0.9887	226	234	0.9658	235	235	1.0000
Unspecified acute lower respiratory infection. (J22,U04)	36	36	1.0000	38	38	1.0000	50	49	1.0204
Chronic lower respiratory diseases (J40–J47)	137,789	138,080	0.9979	137,082	137,353	0.9980	141,075	141,090	0.9999
Bronchitis, chronic and unspecified (J40–J42)	621	620	1.0016	636	639	0.9953	733	731	1.0027
Emphysema (J43)	10,021	10,034	0.9987	10,916	10,878	1.0035	12,459	12,448	1.0009

See footnotes at end of table.

Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 2008–2010—Con.

[For explanation of asterisk preceding cause-of-death codes, see Technical Notes]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	Preliminary number of deaths 2010	Final number of deaths 2010	Ratio of preliminary to final 2010	Preliminary number of deaths 2009	Final number of deaths 2009	Ratio of preliminary to final 2009	Preliminary number of deaths 2008	Final number of deaths 2008	Ratio of preliminary to final 2008
Asthma. (J45–J46)	3,355	3,404	0.9856	3,345	3,388	0.9873	3,395	3,397	0.9994
Other chronic lower respiratory diseases (J44,J47)	123,792	124,022	0.9981	122,185	122,448	0.9979	124,489	124,514	0.9998
Pneumoconioses and chemical effects. (J60–J66,J68)	850	845	1.0059	843	841	1.0024	905	908	0.9967
Pneumonitis due to solids and liquids (J69)	17,001	17,011	0.9994	15,928	15,948	0.9987	16,622	16,608	1.0008
Other diseases of respiratory system (J00–J06,J30–J39,J67,J70–J98)	31,144	31,187	0.9986	30,655	30,530	1.0041	30,000	29,925	1.0025
Peptic ulcer (K25–K28)	2,956	2,977	0.9929	2,937	2,956	0.9936	3,070	3,073	0.9990
Diseases of appendix. (K35–K38) ⁹	415	415	1.0000	428	426	1.0047	420	418	1.0048
Hernia. (K40–K46)	1,830	1,832	0.9989	1,821	1,801	1.0111	1,682	1,674	1.0048
Chronic liver disease and cirrhosis (K70,K73–K74)	31,802	31,903	0.9968	30,444	30,558	0.9963	29,963	29,963	1.0000
Alcoholic liver disease (K70)	15,950	15,990	0.9975	15,107	15,183	0.9950	14,859	14,864	0.9997
Other chronic liver disease and cirrhosis (K73–K74)	15,852	15,913	0.9962	15,338	15,375	0.9976	15,104	15,099	1.0003
Cholelithiasis and other disorders of gallbladder (K80–K82)	3,335	3,332	1.0009	3,286	3,300	0.9958	3,425	3,417	1.0023
Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27) ⁹	50,472	50,476	0.9999	48,714	48,935	0.9955	48,283	48,237	1.0010
Acute and rapidly progressive nephritic and nephrotic syndrome (N00–N01,N04)	203	203	1.0000	163	159	1.0252	165	160	1.0313
Chronic glomerulonephritis, nephrosis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified (N02–N03,N05–N07,N26)	5,863	5,894	0.9947	4,897	4,909	0.9976	4,120	4,109	1.0027
Renal failure. (N17–N19) ⁹	44,388	44,362	1.0006	43,628	43,840	0.9952	43,965	43,935	1.0007
Other disorders of kidney (N25,N27)	17	17	1.0000	25	27	0.9259	33	33	1.0000
Infections of kidney (N10–N12,N13.6,N15.1)	602	608	0.9901	602	604	0.9967	629	627	1.0032
Hyperplasia of prostate (N40)	487	489	0.9959	438	446	0.9821	504	502	1.0040
Inflammatory diseases of female pelvic organs (N70–N76)	136	137	0.9927	138	134	1.0299	133	136	0.9779
Pregnancy, childbirth and the puerperium (O00–O99) ¹⁰	824	825	0.9988	873	960	0.9094	774	795	0.9736
Pregnancy with abortive outcome (O00–O07)	40	37	1.0811	34	34	1.0000	34	34	1.0000
Other complications of pregnancy, childbirth and the puerperium (O10–O99) ¹⁰	784	788	0.9949	839	926	0.9060	739	761	0.9711
Certain conditions originating in the perinatal period. (P00–P96)	12,053	12,128	0.9938	13,114	13,116	0.9998	13,889	13,933	0.9968
Congenital malformations, deformations and chromosomal abnormalities. (Q00–Q99)	9,587	9,673	0.9911	9,927	9,883	1.0045	10,284	10,288	0.9996
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	45,383	38,360	1.1831	43,076	39,829	1.0815	38,455	38,522	0.9983
All other diseases (residual)	269,028	269,844	0.9970	252,241	252,818	0.9977	252,706	252,490	1.0009
Accidents (unintentional injuries) (V01–X59,Y85–Y86)	118,043	120,859	0.9767	117,176	118,021	0.9928	121,207	121,902	0.9943
Transport accidents (V01–V99,Y85)	37,661	37,961	0.9921	39,057	39,031	1.0007	42,742	42,709	1.0008
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)	35,080	35,332	0.9929	36,284	36,216	1.0019	39,831	39,790	1.0010
Other land transport accidents. (V01,V05–V06,V09.1,V09.3–V09.9,V10–V11, V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2,V80.6–V80.9, V81.2–V81.9,V82.2–V82.9,V87.9,V88.9,V89.1,V89.3,V89.9)	1,017	1,029	0.9883	991	1,033	0.9593	1,146	1,140	1.0053
Water, air and space, and other and unspecified transport accidents and their sequelae. (V90–V99,Y85)	1,564	1,600	0.9775	1,782	1,782	1.0000	1,765	1,779	0.9921
Nontransport accidents (W00–X59,Y86) ¹¹	80,382	82,898	0.9696	78,118	78,990	0.9890	78,465	79,193	0.9908
Falls (W00–W19)	25,903	26,009	0.9959	24,834	24,792	1.0017	24,062	24,013	1.0020
Accidental discharge of firearms. (W32–W34)	600	606	0.9901	588	554	1.0614	587	592	0.9916
Accidental drowning and submersion (W65–W74)	3,696	3,782	0.9773	3,539	3,517	1.0063	3,549	3,548	1.0003
Accidental exposure to smoke, fire and flames (X00–X09)	2,737	2,782	0.9838	2,751	2,756	0.9982	2,907	2,912	0.9983
Accidental poisoning and exposure to noxious substances (X40–X49)	30,781	33,041	0.9316	30,504	31,758	0.9605	30,306	31,116	0.9740

See footnotes at end of table.

Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 2008–2010—Con.

[For explanation of asterisk preceding cause-of-death codes, see Technical Notes]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	Preliminary number of deaths 2010	Final number of deaths 2010	Ratio of preliminary to final 2010	Preliminary number of deaths 2009	Final number of deaths 2009	Ratio of preliminary to final 2009	Preliminary number of deaths 2008	Final number of deaths 2008	Ratio of preliminary to final 2008
Other and unspecified nontransport accidents and their sequelae. (W20–W31,W35–W64,W75–W99,X10–X39,X50–X59,Y86) ¹¹	16,664	16,678	0.9992	15,902	15,613	1.0185	17,054	17,012	1.0025
Intentional self-harm (suicide). (*U03,X60–X84,Y87.0)	37,793	38,364	0.9851	36,547	36,909	0.9902	35,933	36,035	0.9972
Intentional self-harm (suicide) by discharge of firearms. (X72–X74)	19,308	19,392	0.9957	18,689	18,735	0.9975	18,251	18,223	1.0015
Intentional self-harm (suicide) by other and unspecified means and their sequelae (*U03,X60–X71,X75–X84,Y87.0)	18,485	18,972	0.9743	17,859	18,174	0.9827	17,681	17,812	0.9926
Assault (homicide). (*U01–*U02,X85–Y09,Y87.1)	16,065	16,259	0.9881	16,591	16,799	0.9876	17,837	17,826	1.0006
Assault (homicide) by discharge of firearms(*U01.4,X93–X95)	11,015	11,078	0.9943	11,406	11,493	0.9924	12,209	12,179	1.0025
Assault (homicide) by other and unspecified means and their sequelae (*U01.0–*U01.3,*U01.5–*U01.9,*U02,X85–X92,X96–Y09,Y87.1)	5,050	5,181	0.9747	5,185	5,306	0.9772	5,628	5,647	0.9966
Legal intervention (Y35,Y89.0)	409	412	0.9927	372	395	0.9418	380	381	0.9974
Events of undetermined intent. (Y10–Y34,Y87.2,Y89.9)	4,629	4,908	0.9432	4,730	5,005	0.9451	4,979	5,051	0.9857
Discharge of firearms, undetermined intent. (Y22–Y24)	246	252	0.9762	230	232	0.9914	276	273	1.0110
Other and unspecified events of undetermined intent and their sequelae (Y10–Y21,Y25–Y34,Y87.2,Y89.9)	4,383	4,656	0.9414	4,500	4,773	0.9428	4,703	4,778	0.9843
Operations of war and their sequelae (Y36,Y89.1)	9	9	1.0000	25	25	1.0000	31	31	1.0000
Complications of medical and surgical care. (Y40–Y84,Y88)	2,475	2,490	0.9940	2,550	2,616	0.9748	2,602	2,590	1.0046

– Quantity zero.

. . . Category not applicable.

¹Expanded ICD–10 code A09 (Diarrhea and gastroenteritis of infectious origin) was added to the category in 2009; see Technical Notes.

²New ICD–code B17.9 (Acute viral hepatitis, unspecified) was added to the category in 2011; see Technical Notes.

³New ICD–10 code G21.4 (Vascular parkinsonism) was added to the category in 2011; see Technical Notes.

⁴New ICD–10 code I72.5 (Aneurysm and dissection of other precerebral arteries) was added to the category in 2011; see Technical Notes.

⁵Expanded ICD–10 code J09 (Influenza due to certain identified influenza virus) was added to the category in 2009; see Technical Notes.

⁶New ICD–10 code J12.3 (Human metapneumovirus pneumonia) was added to the category in 2011; see Technical Notes.

⁷New ICD–10 code J21.1 (Acute bronchiolitis due to human metapneumovirus) was added to the category in 2011; see Technical Notes.

⁸New subcategories replaced previous ones for K35 (Acute appendicitis) in 2011; see Technical Notes.

⁹New subcategories replaced previous ones for N18 (Chronic kidney disease) in 2011; see Technical Notes.

¹⁰New ICD–10 codes O14.2 (HELLP syndrome) and O43.2 (Morbidly adherent placenta) were added to the category, and new ICD–10 subcategories were introduced for the existing O96 (Death from any obstetric cause occurring during pregnancy but less than one year after delivery) and O97 (Death from sequelae of direct obstetric causes); see Technical Notes.

¹¹New ICD–10 subcategories were introduced for the existing X34 (Victim of earthquake); see Technical Notes.

SOURCE: CDC/NCHS, National Vital Statistics System.

Table III. Ratios of preliminary to final reported numbers of deaths from 130 selected causes of infant death: United States, 2008–2010

[For explanation of asterisks preceding cause-of-death codes, see Technical Notes]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	Preliminary number of deaths 2010	Final number of deaths 2010	Ratio of preliminary to final 2010	Preliminary number of deaths 2009	Final number of deaths 2009	Ratio of preliminary to final 2009	Preliminary number of deaths 2008	Final number of deaths 2008	Ratio of preliminary to final 2008
All causes	24,548	24,586	0.9985	26,526	26,412	1.0043	28,029	28,059	0.9989
Certain infectious and parasitic diseases (A00–B99) ^{1,2}	707	696	1.0158	735	730	1.0068	485	478	1.0146
Certain intestinal infectious diseases (A00–A08)	5	7	0.7143	11	11	1.0000	12	12	1.0000
Diarrhea and gastroenteritis of infectious origin (A09) ¹	318	316	1.0063	328	331	0.9909	–	–	...
Tuberculosis (A16–A19)	1	–	...	1	1	1.0000	–	–	...
Tetanus (A33,A35)	–	–	...	–	–	...	–	–	...
Diphtheria (A36)	1	–	...	–	–	...	–	–	...
Whooping cough (A37)	25	25	1.0000	15	15	1.0000	18	18	1.0000
Meningococcal infection (A39)	11	11	1.0000	10	11	0.9091	9	9	1.0000
Septicemia (A40–A41)	224	215	1.0419	234	221	1.0588	293	289	1.0138
Congenital syphilis (A50)	2	2	1.0000	–	–	...	–	–	...
Gonococcal infection (A54)	–	–	...	–	–	...	–	–	...
Viral diseases (A80–B34) ²	92	92	1.0000	98	99	0.9899	102	102	1.0000
Acute poliomyelitis (A80)	–	–	...	–	–	...	–	–	...
Varicella (chickenpox) (B01)	–	–	...	–	–	...	–	–	...
Measles (B05)	–	–	...	–	–	...	–	–	...
Human immunodeficiency virus (HIV) disease (B20–B24)	–	–	...	1	1	1.0000	–	–	...
Mumps (B26)	–	–	...	–	–	...	–	–	...
Other and unspecified viral diseases (A81–B00,B02–B04,B06–B19,B25,B27–B34) ²	92	92	1.0000	97	98	0.9898	102	102	1.0000
Candidiasis (B37)	5	6	0.8333	8	11	0.7273	7	7	1.0000
Malaria (B50–B54)	–	–	...	1	1	1.0000	–	–	...
Pneumocystosis (B59)	–	–	...	–	–	...	3	3	1.0000
All other and unspecified infectious and parasitic diseases (A20–A32,A38, A42–A49,A51–A53,A55–A79,B35–B36,B38–B49,B55–B58,B60–B99)	22	22	1.0000	27	29	0.9310	40	38	1.0526
Neoplasms (C00–D48)	110	110	1.0000	148	136	1.0882	128	131	0.9771
Malignant neoplasms (C00–C97)	62	62	1.0000	87	74	1.1757	68	70	0.9714
Hodgkin's disease and non-Hodgkin's lymphomas (C81–C85)	2	2	1.0000	–	–	...	1	1	1.0000
Leukemia (C91–C95)	25	25	1.0000	28	27	1.0370	27	27	1.0000
Other and unspecified malignant neoplasms (C00–C80,C88–C90,C96–C97)	35	35	1.0000	60	47	1.2766	39	42	0.9286
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	49	48	1.0208	61	62	0.9839	60	61	0.9836
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	99	95	1.0421	89	92	0.9674	81	80	1.0125
Anemias (D50–D64)	19	15	1.2667	12	13	0.9231	15	15	1.0000
Hemorrhagic conditions and other diseases of blood and blood-forming organs (D65–D76)	60	60	1.0000	62	64	0.9688	56	56	1.0000
Certain disorders involving the immune mechanism (D80–D89)	20	20	1.0000	14	15	0.9333	9	9	1.0000
Endocrine, nutritional and metabolic diseases (E00–E88)	186	188	0.9894	209	196	1.0663	247	248	0.9960
Short stature, not elsewhere classified (E34.3)	2	2	1.0000	3	2	1.5000	9	9	1.0000
Nutritional deficiencies (E40–E64)	2	3	0.6667	3	3	1.0000	9	10	0.9000
Cystic fibrosis (E84)	5	5	1.0000	7	7	1.0000	4	4	1.0000
Volume depletion, disorders of fluid, electrolyte and acid-base balance (E86–E87)	49	48	1.0208	45	46	0.9783	80	78	1.0256
All other endocrine, nutritional and metabolic diseases (E00–E32,E34.0–E34.2, E34.4–E34.9,E65–E83,E85,E88)	128	130	0.9846	151	138	1.0942	145	147	0.9864
Diseases of the nervous system (G00–G98)	338	345	0.9797	340	354	0.9605	414	415	0.9976

See footnotes at end of table.

Table III. Ratios of preliminary to final reported numbers of deaths from 130 selected causes of infant death: United States, 2008–2010—Con.

[For explanation of asterisks preceding cause-of-death codes, see Technical Notes]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	Preliminary number of deaths 2010	Final number of deaths 2010	Ratio of preliminary to final 2010	Preliminary number of deaths 2009	Final number of deaths 2009	Ratio of preliminary to final 2009	Preliminary number of deaths 2008	Final number of deaths 2008	Ratio of preliminary to final 2008
Meningitis (G00,G03)	59	58	1.0172	59	62	0.9516	67	68	0.9853
Infantile spinal muscular atrophy, type I (Werdnig-Hoffman) (G12.0)	4	4	1.0000	13	13	1.0000	5	5	1.0000
Infantile cerebral palsy (G80)	3	3	1.0000	7	8	0.8750	8	8	1.0000
Anoxic brain damage, not elsewhere classified (G93.1)	36	39	0.9231	38	38	1.0000	51	56	0.9107
Other diseases of nervous system (G04,G06–G11,G12.1–G12.9,G20–G72,G81–G92,G93.0,G93.2–G93.9,G95–G98) ³	236	241	0.9793	223	233	0.9571	283	278	1.0180
Diseases of the ear and mastoid process (H60–H93)	3	3	1.0000	2	2	1.0000	6	6	1.0000
Diseases of the circulatory system (I00–I99) ⁴	499	507	0.9842	565	581	0.9725	590	594	0.9933
Pulmonary heart disease and diseases of pulmonary circulation (I26–I28)	88	90	0.9778	105	112	0.9375	88	88	1.0000
Pericarditis, endocarditis and myocarditis (I30,I33,I40)	12	14	0.8571	16	15	1.0667	19	18	1.0556
Cardiomyopathy (I42)	77	79	0.9747	110	111	0.9910	114	115	0.9913
Cardiac arrest (I46)	18	18	1.0000	27	28	0.9643	25	25	1.0000
Cerebrovascular diseases (I60–I69)	130	130	1.0000	129	147	0.8776	144	141	1.0213
All other diseases of circulatory system (I00–I25,I31,I34–I38,I44–I45,I47–I51,I70–I99) ⁴	174	176	0.9886	177	168	1.0536	201	207	0.9710
Diseases of the respiratory system (J00–J98,U04) ^{5,6,7}	564	574	0.9826	584	595	0.9815	578	578	1.0000
Acute upper respiratory infections (J00–J06)	13	15	0.8667	10	12	0.8333	12	12	1.0000
Influenza and pneumonia (J09–J18) ^{5,6}	188	195	0.9641	238	251	0.9482	225	226	0.9956
Influenza (J09–J11) ⁵	16	16	1.0000	28	43	0.6512	16	16	1.0000
Pneumonia (J12–J18) ⁶	171	179	0.9553	210	208	1.0096	208	210	0.9905
Acute bronchitis and acute bronchiolitis (J20–J21) ⁷	27	27	1.0000	46	46	1.0000	43	43	1.0000
Bronchitis, chronic and unspecified (J40–J42)	23	25	0.9200	13	13	1.0000	22	23	0.9565
Asthma (J45–J46)	6	6	1.0000	4	6	0.6667	6	6	1.0000
Pneumonitis due to solids and liquids (J69)	18	18	1.0000	6	7	0.8571	10	11	0.9091
Other and unspecified diseases of respiratory system (J22,J30–J39,J43–J44,J47–J68,J70–J98,U04)	289	288	1.0035	267	260	1.0269	260	257	1.0117
Diseases of the digestive system (K00–K92) ⁸	201	204	0.9853	229	220	1.0409	578	579	0.9983
Gastritis, duodenitis, and noninfective enteritis and colitis (K29,K50–K55)	28	29	0.9655	33	31	1.0645	355	354	1.0028
Hernia of abdominal cavity and intestinal obstruction without hernia (K40–K46,K56)	50	51	0.9804	50	49	1.0204	47	46	1.0217
All other and unspecified diseases of digestive system (K00–K28,K30–K38,K57–K92) ⁸	122	124	0.9839	147	140	1.0500	175	179	0.9777
Diseases of the genitourinary system (N00–N98) ⁹	126	126	1.0000	124	127	0.9764	172	169	1.0178
Renal failure and other disorders of kidney (N17–N19,N25,N27) ⁹	98	100	0.9800	103	105	0.9810	140	139	1.0072
Other and unspecified diseases of genitourinary system (N00–N15,N20–N23,N26,N28–N98)	28	26	1.0769	21	22	0.9545	32	30	1.0667
Certain conditions originating in the perinatal period (P00–P96)	11,924	12,008	0.9930	12,981	12,999	0.9986	13,738	13,800	0.9955
Newborn affected by maternal factors and by complications of pregnancy, labor and delivery (P00–P04)	2,909	2,920	0.9962	2,914	2,980	0.9779	3,153	3,168	0.9953
Newborn affected by maternal hypertensive disorders (P00.0)	83	85	0.9765	82	83	0.9880	84	85	0.9882
Newborn affected by other maternal conditions which may be unrelated to present pregnancy (P00.1–P00.9)	87	87	1.0000	90	94	0.9574	89	88	1.0114
Newborn affected by maternal complications of pregnancy (P01)	1,555	1,561	0.9962	1,586	1,608	0.9863	1,764	1,765	0.9994
Newborn affected by incompetent cervix (P01.0)	430	431	0.9977	423	430	0.9837	447	446	1.0022
Newborn affected by premature rupture of membranes (P01.1)	776	781	0.9936	778	774	1.0052	840	841	0.9988
Newborn affected by multiple pregnancy (P01.5)	164	163	1.0061	198	206	0.9612	257	257	1.0000
Newborn affected by other maternal complications of pregnancy (P01.2–P01.4,P01.6–P01.9)	186	186	1.0000	187	198	0.9444	220	221	0.9955

See footnotes at end of table.

Table III. Ratios of preliminary to final reported numbers of deaths from 130 selected causes of infant death: United States, 2008–2010—Con.

[For explanation of asterisks preceding cause-of-death codes, see Technical Notes]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	Preliminary number of deaths 2010	Final number of deaths 2010	Ratio of preliminary to final 2010	Preliminary number of deaths 2009	Final number of deaths 2009	Ratio of preliminary to final 2009	Preliminary number of deaths 2008	Final number of deaths 2008	Ratio of preliminary to final 2008
Newborn affected by complications of placenta, cord and membranes. (P02)	1,030	1,030	1.0000	1,022	1,064	0.9605	1,073	1,080	0.9935
Newborn affected by complications involving placenta. (P02.0–P02.3)	491	492	0.9980	498	522	0.9540	531	539	0.9852
Newborn affected by complications involving cord (P02.4–P02.6)	39	39	1.0000	40	41	0.9756	55	55	1.0000
Newborn affected by chorioamnionitis (P02.7)	498	497	1.0020	483	500	0.9660	486	485	1.0021
Newborn affected by other and unspecified abnormalities of membranes (P02.8–P02.9)	2	2	1.0000	1	1	1.0000	1	1	1.0000
Newborn affected by other complications of labor and delivery (P03)	108	110	0.9818	109	98	1.1122	95	99	0.9596
Newborn affected by noxious influences transmitted via placenta or breast milk . . . (P04)	45	47	0.9574	26	33	0.7879	48	51	0.9412
Disorders related to length of gestation and fetal malnutrition. (P05–P08)	4,215	4,233	0.9957	4,568	4,625	0.9877	4,816	4,836	0.9959
Slow fetal growth and fetal malnutrition (P05)	85	85	1.0000	106	87	1.2184	83	82	1.0122
Disorders related to short gestation and low birth weight, not elsewhere classified. (P07)	4,130	4,148	0.9957	4,463	4,538	0.9835	4,733	4,754	0.9956
Extremely low birth weight or extreme immaturity (P07.0,P07.2)	3,158	3,176	0.9943	3,399	3,467	0.9804	3,636	3,645	0.9975
Other low birth weight or preterm (P07.1,P07.3)	972	972	1.0000	1,064	1,071	0.9935	1,097	1,109	0.9892
Disorders related to long gestation and high birth weight (P08)	–	–	–	–	–	–	–	–	–
Birth trauma (P10–P15)	19	19	1.0000	17	16	1.0625	18	18	1.0000
Intrauterine hypoxia and birth asphyxia (P20–P21)	311	314	0.9904	342	316	1.0823	382	385	0.9922
Intrauterine hypoxia (P20)	134	136	0.9853	139	119	1.1681	144	143	1.0070
Birth asphyxia (P21)	177	178	0.9944	203	197	1.0305	238	242	0.9835
Respiratory distress of newborn (P22)	496	514	0.9650	587	595	0.9866	625	630	0.9921
Other respiratory conditions originating in the perinatal period (P23–P28)	802	812	0.9877	964	956	1.0084	1,102	1,099	1.0027
Congenital pneumonia (P23)	70	71	0.9859	101	95	1.0632	74	73	1.0137
Neonatal aspiration syndromes (P24)	49	51	0.9608	40	44	0.9091	58	58	1.0000
Interstitial emphysema and related conditions originating in the perinatal period (P25)	104	106	0.9811	113	113	1.0000	121	122	0.9918
Pulmonary hemorrhage originating in the perinatal period. (P26)	166	167	0.9940	162	159	1.0189	199	196	1.0153
Chronic respiratory disease originating in the perinatal period (P27)	107	106	1.0094	180	183	0.9836	239	237	1.0084
Atelectasis (P28.0–P28.1)	249	248	1.0040	297	283	1.0495	334	334	1.0000
All other respiratory conditions originating in the perinatal period (P28.2–P28.9)	56	63	0.8889	72	79	0.9114	77	79	0.9747
Infections specific to the perinatal period (P35–P39)	733	745	0.9839	858	832	1.0313	896	903	0.9922
Bacterial sepsis of newborn (P36)	569	583	0.9760	682	652	1.0460	696	700	0.9943
Omphalitis of newborn with or without mild hemorrhage. (P38)	1	1	1.0000	4	4	1.0000	2	2	1.0000
All other infections specific to the perinatal period (P35,P37,P39)	163	161	1.0124	172	176	0.9773	198	201	0.9851
Hemorrhagic and hematological disorders of newborn (P50–P61)	555	556	0.9982	644	624	1.0321	642	648	0.9907
Neonatal hemorrhage (P50–P52,P54)	467	469	0.9957	537	517	1.0387	551	556	0.9910
Hemorrhagic disease of newborn (P53)	1	1	1.0000	1	1	1.0000	2	2	1.0000
Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice (P55–P59)	7	7	1.0000	14	15	0.9333	10	10	1.0000
Hematological disorders (P60–P61)	79	79	1.0000	91	91	1.0000	78	80	0.9750
Syndrome of infant of a diabetic mother and neonatal diabetes mellitus . . (P70.0–P70.2)	3	3	1.0000	11	11	1.0000	11	11	1.0000
Necrotizing enterocolitis of newborn (P77)	470	472	0.9958	505	484	1.0434	547	549	0.9964
Hydrops fetalis not due to hemolytic disease (P83.2)	149	150	0.9933	185	193	0.9585	170	169	1.0059
Other perinatal conditions (P29,P70.3–P76,P78–P81,P83.0–P83.1,P83.3–P96)	1,263	1,270	0.9945	1,385	1,367	1.0132	1,375	1,384	0.9935
Congenital malformations, deformations and chromosomal abnormalities. (Q00–Q99)	5,077	5,107	0.9941	5,358	5,319	1.0073	5,647	5,638	1.0016
Anencephaly and similar malformations (Q00)	295	293	1.0068	318	324	0.9815	340	338	1.0059

See footnotes at end of table.

Table III. Ratios of preliminary to final reported numbers of deaths from 130 selected causes of infant death: United States, 2008–2010—Con.

[For explanation of asterisks preceding cause-of-death codes, see Technical Notes]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	Preliminary number of deaths 2010	Final number of deaths 2010	Ratio of preliminary to final 2010	Preliminary number of deaths 2009	Final number of deaths 2009	Ratio of preliminary to final 2009	Preliminary number of deaths 2008	Final number of deaths 2008	Ratio of preliminary to final 2008
Congenital hydrocephalus (Q03)	105	105	1.0000	114	105	1.0857	104	106	0.9811
Spina bifida (Q05)	14	15	0.9333	21	23	0.9130	22	23	0.9565
Other congenital malformations of nervous system (Q01–Q02,Q04,Q06–Q07)	320	318	1.0063	321	328	0.9787	356	355	1.0028
Congenital malformations of heart (Q20–Q24)	1,131	1,148	0.9852	1,232	1,226	1.0049	1,307	1,305	1.0015
Other congenital malformations of circulatory system (Q25–Q28)	175	176	0.9943	181	187	0.9679	219	222	0.9865
Congenital malformations of respiratory system (Q30–Q34)	395	399	0.9900	387	390	0.9923	378	371	1.0189
Congenital malformations of digestive system (Q35–Q45)	88	88	1.0000	66	67	0.9851	85	83	1.0241
Congenital malformations of genitourinary system (Q50–Q64)	454	457	0.9934	488	500	0.9760	516	515	1.0019
Congenital malformations and deformations of musculoskeletal system, limbs and integument (Q65–Q85)	573	577	0.9931	583	545	1.0697	665	664	1.0015
Down's syndrome (Q90)	85	85	1.0000	80	86	0.9302	87	88	0.9886
Edward's syndrome (Q91.0–Q91.3)	470	470	1.0000	530	499	1.0621	556	554	1.0036
Patau's syndrome (Q91.4–Q91.7)	245	244	1.0041	247	250	0.9880	278	275	1.0109
Other congenital malformations and deformations (Q10–Q18,Q86–Q89)	537	542	0.9908	575	592	0.9713	535	538	0.9944
Other chromosomal abnormalities, not elsewhere classified (Q92–Q99)	191	190	1.0053	214	197	1.0863	200	201	0.9950
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	3,243	3,052	1.0626	3,510	3,420	1.0263	3,582	3,546	1.0102
Sudden infant death syndrome (R95)	1,890	2,063	0.9161	2,168	2,226	0.9739	2,292	2,353	0.9741
Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R53,R55–R94,R96–R99)	1,353	989	1.3680	1,342	1,194	1.1240	1,290	1,193	1.0813
All other diseases (residual)	22	20	1.1000	31	14	2.2143	34	24	1.4167
External causes of mortality (*U01,V01–Y84)	1,448	1,551	0.9336	1,620	1,627	0.9957	1,750	1,773	0.9870
Accidents (unintentional injuries) (V01–X59) ¹⁰	1,043	1,110	0.9396	1,158	1,181	0.9805	1,299	1,315	0.9878
Transport accidents (V01–V99)	80	81	0.9877	108	97	1.1134	105	104	1.0096
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)	78	79	0.9873	106	95	1.1158	104	103	1.0097
Other and unspecified transport accidents (V01,V05–V06,V09.1, V09.3–V09.9,V10–V11,V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2,V80.6–V80.9, V81.2–V81.9,V82.2–V82.9,V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99)	2	2	1.0000	2	2	1.0000	1	1	1.0000
Falls (W00–W19)	11	10	1.1000	28	19	1.4737	19	13	1.4615
Accidental discharge of firearms (W32–W34)	–	–	...	–	1	...	–	–	...
Accidental drowning and submersion (W65–W74)	36	39	0.9231	41	45	0.9111	37	41	0.9024
Accidental suffocation and strangulation in bed (W75)	586	629	0.9316	638	665	0.9594	730	736	0.9918
Other accidental suffocation and strangulation (W76–W77,W81–W84)	206	218	0.9450	192	188	1.0213	249	260	0.9577
Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract (W78–W80)	53	58	0.9138	51	54	0.9444	60	62	0.9677
Accidents caused by exposure to smoke, fire and flames (X00–X09)	20	21	0.9524	24	24	1.0000	19	20	0.9500
Accidental poisoning and exposure to noxious substances (X40–X49)	6	6	1.0000	12	22	0.5455	11	11	1.0000
Other and unspecified accidents (W20–W31, W35–W64,W85–W99,X10–X39,X50–X59) ¹⁰	44	48	0.9167	64	66	0.9697	67	68	0.9853

See footnotes at end of table.

Table III. Ratios of preliminary to final reported numbers of deaths from 130 selected causes of infant death: United States, 2008–2010—Con.

[For explanation of asterisks preceding cause-of-death codes, see Technical Notes]

Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i>)	Preliminary number of deaths 2010	Final number of deaths 2010	Ratio of preliminary to final 2010	Preliminary number of deaths 2009	Final number of deaths 2009	Ratio of preliminary to final 2009	Preliminary number of deaths 2008	Final number of deaths 2008	Ratio of preliminary to final 2008
Assault (homicide)(*U01,X85–Y09)	291	311	0.9357	327	317	1.0315	337	340	0.9912
Assault (homicide) by hanging, strangulation and suffocation (X91)	14	15	0.9333	23	26	0.8846	31	32	0.9688
Assault (homicide) by discharge of firearms(*U01.4,X93–X95)	11	11	1.0000	24	11	2.1818	8	9	0.8889
Neglect, abandonment and other maltreatment syndromes (Y06–Y07)	85	82	1.0366	88	97	0.9072	99	98	1.0102
Assault (homicide) by other and unspecified means(*U01.0–*U01.3, *U01.5–*U01.9,X85–X90,X92,X96–X99,Y00–Y05,Y08–Y09)	181	203	0.8916	192	183	1.0492	199	201	0.9900
Complications of medical and surgical care (Y40–Y84)	19	22	0.8636	18	17	1.0588	23	24	0.9583
Other external causes and their sequelae (Y10–Y36)	95	108	0.8796	117	112	1.0446	91	94	0.9681

– Quantity zero.

. . . Category not applicable.

¹Expanded ICD–10 code A09 (Diarrhea and gastroenteritis of infectious origin) was added to the category in 2009; see Technical Notes.

²New ICD–code B17.9 (Acute viral hepatitis, unspecified) was added to the category in 2011; see Technical Notes.

³New ICD–10 code G21.4 (Vascular parkinsonism) was added to the category in 2011; see Technical Notes.

⁴New ICD–10 code I72.5 (Aneurysm and dissection of other precerebral arteries) was added to the category in 2011; see Technical Notes.

⁵Expanded ICD–10 code J09 (Influenza due to certain identified influenza virus) was added to the category in 2009; see Technical Notes.

⁶New ICD–10 code J12.3 (Human metapneumovirus pneumonia) was added to the category in 2011; see Technical Notes.

⁷New ICD–10 code J21.1 (Acute bronchiolitis due to human metapneumovirus) was added to the category in 2011; see Technical Notes.

⁸New subcategories replaced previous ones for K35 (Acute appendicitis) in 2011; see Technical Notes.

⁹New subcategories replaced previous ones for N18 (Chronic kidney disease) in 2011; see Technical Notes.

¹⁰New ICD–10 subcategories were introduced for the existing X34 (Victim of earthquake), see Technical Notes.

SOURCE: CDC/NCHS, National Vital Statistics System.

are available on the NCHS website (14). The production of these population estimates is described in detail elsewhere (23).

Rates for Puerto Rico, American Samoa, Guam, Northern Mariana Islands, and Virgin Islands in this report are based on population estimates as of July 1 for 2010 and 2011. These population estimates are available on the Census Bureau’s website at <http://www.census.gov/population/international/data/idb/region.php>.

The population estimates have been produced under a collaborative arrangement with the U.S. Census Bureau and are based on the 2010 census counts. Reflecting the new standards issued in 1997 by OMB, the 2010 census included an option for persons to report more than one race as appropriate for themselves and household members (21). In addition, the 1997 OMB standards called for reporting of Asian persons separately from NHOPI. In the 1977 OMB standards, data for API persons were collected as a single group (22). Death certificates for 12 states currently collect only one race in the same categories as specified in the 1977 OMB standards (see “2003 revision of U.S. Standard Certificate of Death”). In addition, those death certificate data do not report Asian persons separately from NHOPI. Thus, for nearly one-quarter of the states, the death certificate data by race (numerators for death rates) are incompatible with population data collected in the 2010 census (the denominators for the rates).

To produce national death rates for 2010 and 2011, the reported population data for multiple-race persons had to be “bridged” back to single-race categories. In addition, the census counts were modified to be consistent with the 1977 OMB racial categories; that is, to report the data for Asian persons and NHOPI as one combined category, API, and to reflect age as of the census reference date. The procedures used to produce the bridged populations are described in separate publications (23,24). Bridged data are anticipated to be used over the next few years for computing population-based rates. As more states collect data on race according to the 1997 OMB standards (21), use of the bridged populations is expected to be discontinued.

Computing rates and percentages

Death rates are on an annual basis per 100,000 estimated population residing in the specified area. Infant mortality rates are per 1,000 or per 100,000 live births.

Age-adjusted death 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 (relative age distribution of year 2000 projected population of the United States); see the following formula for age-adjusted death rate, and the table of U.S. standard population (Table IV):

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

where

P_{si} = standard population for age group i

P_s = total U.S. standard population [all ages combined (Table IV)].

Age-adjusted death rates for injury at work were computed by applying the age-specific death rates to the U.S. standard population

Table IV. United States year 2000 standard population

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

for ages 15 and over. The year 2000 standard population used for computing age-adjusted rates and standard errors for injury at work is shown in Table V.

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

Effective with 1999 data, the standard population was changed from 1940 to the year 2000 population in accordance with the new statistical policy promulgated by the Secretary of Health and Human Services in August 1998 (38). The transition in standard population is described in greater detail in “Deaths: Final Data for 2010” (3).

Death rates for the Hispanic population are based only on events to persons reported as Hispanic. Rates for non-Hispanic white persons are based on the sum of all events to white decedents reported as non-Hispanic and white decedents with origin not stated. Likewise, rates for non-Hispanic black persons are based on the sum of all events to black decedents reported as non-Hispanic and black decedents with origin not stated. Hispanic origin is not imputed if it is not reported. Race not stated is imputed. For calculating death rates, deaths with age not stated are not distributed. The number of deaths with age not stated in 2011 was 132, approximately 0.005 percent of all deaths.

For statistics shown in the body of tables throughout this report, an asterisk (*) indicates that the figure does not meet standards of reliability or precision. In this report, two sets of criteria determine whether a figure meets these standards:

- Reporting for any particular variable is at least 80 percent complete. In this report, no data were suppressed based on this criterion.

Table V. United States year 2000 standard population for ages 15 and over

Age	Population
15 years and over	215,670,503
15–24 years	38,076,743
25–34 years	37,233,437
35–44 years	44,659,185
45–54 years	37,030,152
55–64 years	23,961,506
65 years and over	34,709,480

- A rate or percentage is based on at least 20 deaths. Rates based on fewer than 20 deaths have a relative standard error (RSE) of about 23 percent or more and, therefore, are considered highly variable. For age-adjusted death rates, this criterion is applied to the sum of the age-specific deaths; however, some death rates (based on data files that are less than 100 percent complete and on 20–31 deaths) may have RSEs of 23 percent or more but are still shown instead of asterisks. As a result, caution should be exercised in analyzing rates based on 20–31 events. Additional information on random variation in numbers of events, rates, ratios, and percentages may be found in “Reliability of estimates.”

Reliability of estimates

Because the preliminary estimates of deaths in this report are based on files that may not be complete, they are subject to sampling variability. This concept is reflected in the fact that record weights are used to adjust record counts to independent control totals. The lack of completeness of the vital statistics files is due to delays in receiving and processing the death records. Although the proportion of records making up the preliminary file does not constitute a veritable random sample, for the sake of convenience the variability associated with this error (sampling variability) is treated as if it were from a random sample.

Even where the number of vital events in this report is 100 percent complete and not subject to sampling variability, it might be affected by random variation. Thus, when the number of events is small and the probability of such an event is small, considerable caution must be observed in interpreting the data. Such infrequent events may be assumed to follow a Poisson probability distribution. The first column of [Table VI](#) shows the estimated RSEs of a file that is nearly 100 percent complete.

Data in a file that is less than 100 percent complete are affected by sampling variation as well as by random variation. The estimated RSEs in columns 2–6 of [Table VI](#) for various levels of file completeness are measures of the sampling errors and the random errors of the estimates. They do not include nonsampling error.

The estimated RSEs in [Table VI](#) were computed using:

$$1. RSE = 100 \sqrt{\frac{1}{\bar{X}} + \frac{(1-f)(N-\bar{X})}{f\bar{X}(N-(1/f))}}$$

where

f = the sampling fraction or the percent of file completeness/100 from [Table I](#). For mortality data based on deaths under 1 year of age, use *f* for “infant deaths” for either the demographic or medical file as appropriate. For mortality data based on all ages combined or any age group that is 1

Table VI. Relative standard errors for preliminary number of deaths by percentage of file completeness

[Relative standard errors are expressed as a percentage of the estimate]

Estimated number of deaths	Percent of file completeness					
	100	95	90	80	70	60
	Relative standard error (percent)					
1	100.0	102.6	105.4	111.8	119.5	129.1
5	44.7	45.9	47.1	50.0	53.5	57.7
10	31.6	32.4	33.3	35.4	37.8	40.8
20	22.4	22.9	23.6	25.0	26.7	28.9
30	18.3	18.7	19.2	20.4	21.8	23.6
40	15.8	16.2	16.7	17.7	18.9	20.4
50	14.1	14.5	14.9	15.8	16.9	18.3
60	12.9	13.2	13.6	14.4	15.4	16.7
70	12.0	12.3	12.6	13.4	14.3	15.4
80	11.2	11.5	11.8	12.5	13.4	14.4
90	10.5	10.8	11.1	11.8	12.6	13.6
100	10.0	10.3	10.5	11.2	12.0	12.9
200	7.1	7.3	7.5	7.9	8.5	9.1
300	5.8	5.9	6.1	6.5	6.9	7.5
400	5.0	5.1	5.3	5.6	6.0	6.5
500	4.5	4.6	4.7	5.0	5.3	5.8
600	4.1	4.2	4.3	4.6	4.9	5.3
700	3.8	3.9	4.0	4.2	4.5	4.9
800	3.5	3.6	3.7	4.0	4.2	4.6
900	3.3	3.4	3.5	3.7	4.0	4.3
1,000	3.2	3.2	3.3	3.5	3.8	4.1
2,000	2.2	2.3	2.4	2.5	2.7	2.9
5,000	1.4	1.5	1.5	1.6	1.7	1.8
10,000	1.0	1.0	1.1	1.1	1.2	1.3
20,000	0.7	0.7	0.7	0.8	0.8	0.9
50,000	0.4	0.5	0.5	0.5	0.5	0.6
100,000	0.3	0.3	0.3	0.4	0.4	0.4
200,000	0.2	0.2	0.2	0.2	0.3	0.3
500,000	0.1	0.1	0.1	0.2	0.2	0.2
1,000,000	0.1	0.1	0.1	0.1	0.1	0.1
2,000,000	0.1	0.1	0.1	0.1	0.1	0.1
4,000,000	0.1	0.1	0.1	0.1	0.1	0.1

year and over, use *f* for “deaths 1 year of age and over” for either the demographic or medical files as appropriate.

X = the estimated number of infant deaths or deaths.

N = total count of infant deaths or deaths for the United States or any state. (NOTE: RSEs shown in Table VI are based on *N* = 4,000,000. If *N* is smaller, the RSEs may be slightly smaller than those shown.)

RSEs may be used to compute 95 percent confidence intervals for the number of events (*X*), for a rate (*R*), or for a percentage (*P*) and to compute statistical tests concerning the equality of two rates (*R*₁ and *R*₂) or two percentages (*P*₁ and *P*₂).

For the number of deaths, the 95 percent confidence interval may be computed as:

$$2. \text{ Lower limit: } X_1 - \left(1.96 \cdot X_1 \cdot \frac{\text{RSE}(X_1)}{100} \right)$$

$$3. \text{ Upper limit: } X_1 + \left(1.96 \cdot X_1 \cdot \frac{\text{RSE}(X_1)}{100} \right).$$

As a hypothetical example, assume the number of deaths, *X*₁, is 70 from a file with 80 percent completeness. Then,

$$\text{Lower limit: } 70 - \left(1.96 \cdot 70 \cdot \frac{13.4}{100} \right) = 51.6$$

$$\text{Upper limit: } 70 + \left(1.96 \cdot 70 \cdot \frac{13.4}{100} \right) = 88.4.$$

This means that the chances are 95 times out of 100 that the confidence interval (51.6–88.4) will cover the “true” number of deaths.

For rates based on population estimates in the denominator, the 95 percent confidence interval may be computed as:

$$4. \text{ Lower limit: } R_1 - \left(1.96 \cdot R_1 \cdot \frac{\text{RSE}(R_1)}{100} \right)$$

$$5. \text{ Upper limit: } R_1 + \left(1.96 \cdot R_1 \cdot \frac{\text{RSE}(R_1)}{100} \right).$$

As a hypothetical example, assume the death rate, *R*₁, is 20.0, which is based on 70 deaths from a file with 80 percent completeness. Then,

$$\text{Lower limit: } 20.0 - \left(1.96 \cdot 20.0 \cdot \frac{13.4}{100} \right) = 14.7$$

$$\text{Upper limit: } 20.0 + \left(1.96 \cdot 20.0 \cdot \frac{13.4}{100} \right) = 25.3.$$

This means that the chances are 95 times out of 100 that the confidence interval (14.7–25.3) will cover the “true” rate.

For age-adjusted death rates, *R'*, the 95 percent confidence interval may be computed as:

$$6. \text{ Lower limit: } R' - \left(1.96 \cdot R' \cdot \frac{\text{RSE}(R')}{100} \right)$$

$$7. \text{ Upper limit: } R' + \left(1.96 \cdot R' \cdot \frac{\text{RSE}(R')}{100} \right),$$

where

$$8. \text{ RSE}(R') = 100 \frac{\sqrt{\sum_i \left\{ w_i^2 R_i^2 \left[\frac{1}{X_i} + \frac{(1-f_i)(N_i-X_i)}{f_i X_i \left(N_i - \frac{1}{f_i} \right) \right] \right\}}}{R'}$$

where

i = each age group where *i* = 1 for infant deaths, *i* = 2 for 1–4 years, *i* = 3 for 5–14 years, . . . and *i* = 11 for 85 years and over.

*R*_{*i*} = age-specific rate for the *i*th age group.

*w*_{*i*} = *i*th age-specific U.S. standard population such that $\sum w_i = 1.000000$ (see “Computing rates and percentages”).

*X*_{*i*} = the estimated number of deaths for the *i*th age group.

*N*_{*i*} = total count of deaths from Table I for each *i*th age group (for infant deaths, use the count of records as shown; for all age groups 1–4 through 85 years and over, use the count of records as shown for deaths 1 year and over).

*f*_{*i*} = percentage of file completeness/100 from Table I (for infant deaths, use the percent completeness for the demographic or medical file as appropriate for deaths under age 1 year; for all age groups 1–4 through 85 years and over, use the percent completeness for the demographic or medical file as appropriate for deaths at ages 1 year and over).

For testing the equality of two rates, *R*₁ and *R*₂, the following *z* test may be used to define a significance test statistic:

$$9. z = \frac{R_1 - R_2}{\sqrt{R_1^2 \left(\frac{\text{RSE}(R_1)}{100} \right)^2 + R_2^2 \left(\frac{\text{RSE}(R_2)}{100} \right)^2}}.$$

The two-tailed 0.95 critical value for a *z* statistic is 1.96. Therefore, if $|z| \geq 1.96$, the difference is significant at the 0.05 level. If $|z| < 1.96$, then the difference would be considered not statistically significant at the 0.05 level.

As a hypothetical example, assume *R*₁ is the same as the above example for the current 12-month period and that *R*₂, 15.0, is based on 50 deaths occurring in the prior 12-month period (which implies that the file is approximately 100 percent complete for *R*₂). The *z* test may be determined as:

$$z = \frac{20.0 - 15.0}{\sqrt{(20.0)^2 \left(\frac{13.4}{100} \right)^2 + (15.0)^2 \left(\frac{14.1}{100} \right)^2}} = 1.46.$$

Because $|z| < 1.96$, there is no statistically significant difference between the two rates at the 0.05 level of significance.

For rates or percentages based on denominators having random variation only or random and sampling variation, the RSE must take into account the variation in both the numerator and denominator. For example, for a rate, *R*₃, based on the number of live births in the denominator, the RSE is computed as:

$$10. RSE(R_3) = 100 \sqrt{\left(\frac{RSE(D)}{100}\right)^2 + \left(\frac{RSE(B)}{100}\right)^2},$$

where

$RSE(D)$ = RSE of the number of deaths, D

$RSE(B)$ = RSE of the number of births, B

The 95 percent confidence interval of R_3 may be computed as:

$$11. \text{Lower limit: } R_3 - \left(1.96 \cdot R_3 \cdot \frac{RSE(R_3)}{100}\right)$$

$$12. \text{Upper limit: } R_3 + \left(1.96 \cdot R_3 \cdot \frac{RSE(R_3)}{100}\right).$$

As a hypothetical example, assume the infant mortality rate, R_3 , is 15.0, which is based on 30 infant deaths (D) from a file with 70 percent completeness and 2,000 live births (B) from a file with 80 percent completeness. Then,

$$RSE(R_3) = 100 \sqrt{\left(\frac{21.8}{100}\right)^2 + \left(\frac{2.5}{100}\right)^2} = 21.9$$

$$\text{Lower limit: } 15.0 - \left(1.96 \cdot 15.0 \cdot \frac{21.9}{100}\right) = 8.6$$

$$\text{Upper limit: } 15.0 + \left(1.96 \cdot 15.0 \cdot \frac{21.9}{100}\right) = 21.4.$$

This means that the chances are 95 times out of 100 that the confidence interval (8.6–21.4) will cover the “true” rate. The same formulas are applicable to a percentage (P_1) that has variation in both the numerator and denominator. To compare the equality of two infant mortality rates or two percentages that have variation in the numerator and denominator, the above-mentioned z test may be used.

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