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Deaths: Preliminary Data for 2010

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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 2010 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 2010. The records are weighted to independent control counts for 2010. Comparisons are made with 2009 final data.

Results—The age-adjusted death rate decreased from 749.6 deaths per 100,000 population in 2009 to 746.2 deaths per 100,000 population in 2010. From 2009 to 2010, age-adjusted death rates decreased significantly for 7 of the 15 leading causes of death: Diseases of heart, Malignant neoplasms, Chronic lower respiratory diseases, Cerebrovascular diseases, Accidents (unintentional injuries), Influenza and pneumonia, and Septicemia. Assault (homicide) fell from among the top 15 leading causes of death in 2010, replaced by Pneumonitis due to solids and liquids as the 15th leading cause of death. The age-adjusted death rate increased for five leading causes of death: Alzheimer's disease; Nephritis, nephrotic syndrome and nephrosis; Chronic liver disease and cirrhosis; Parkinson's disease; and Pneumonitis due to solids and liquids. Life expectancy increased by 0.1 year from 78.6 in 2009 to 78.7 in 2010.

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 2010. Statistics in preliminary reports are generally considered reliable; past analyses reveal that most statistics shown in preliminary reports for 1995–2009 were confirmed by the final statistics for each of those years (1–15). Death rates for 2010 are based on population estimates consistent with the April 1, 2010, U.S. census (16). For comparison, this report also presents revised final death rates for 2009, based on populations consistent with the 2010 census (17). Because the rates for 2009 are based on revised populations, they may differ from previously published rates.

Data Sources and Methods

Preliminary data in this report are based on records of deaths that occurred in calendar year 2010, 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 November 8, 2011. 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 are given in "Technical Notes."

Each state vital statistics office reported to NCHS the number of deaths registered and processed for calendar year 2010. Those state counts were used as independent control counts for NCHS' 2010 preliminary national mortality file. A comparison of a) the number of 2010 death records received from the states for processing by NCHS with b) each state's independent control counts of the number of deaths in 2010 indicates that demographic information from death certificates for the United States was available for an estimated 99.9 percent of infant deaths (under age 1 year) and 100 percent of deaths of persons aged 1 year and over occurring in calendar year 2010 (see Table I in "Technical Notes"). Medical (or cause-of-death) information, processed separately, was available for an estimated 98.6 percent of infant deaths and 98.7 percent of deaths of persons aged 1 year and over in 2010.

To produce the preliminary estimates shown in this report, 2010 records were weighted using 2010 state-specific, independent control counts of infant deaths and deaths of those aged 1 year and over received in state vital statistics offices. Two separate sets of weights were applied to the death records—one set for demographic information and another for medical information. This results in inconsistencies between demographic data from the mortality demographic tables and the medical tables showing causes of death (see "Nature and sources of data" in "Technical Notes"). Preliminary estimates are subject to sampling variation as well as random variation.

Cause-of-death information is not always available when preliminary data are sent to NCHS, but is available later for final data

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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 "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 "Technical Notes."

This preliminary report includes national and state estimates of total deaths and death rates, as well as statistics on life expectancy, infant mortality, and causes of death. 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. 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. 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 "Technical Notes").

Changes in death rates from 2009 to 2010 were tested for statistical significance. Differences in death rates across demographic groups (but occurring in 2010 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 "Technical Notes").

Two measures of infant mortality are shown: the infant death rate and the infant mortality rate (see "Infant mortality" in "Technical Notes"). These measures typically are similar, although they can differ because they have different denominators. The denominator of the 2010 infant death rate is the estimated population under age 1 year on the reference date of April 1, 2010 (16). This estimated population includes a combination of infants born in 2009 who had not reached their first birthday by April 1, 2010, and infants born in 2010 before April 1. In contrast, the denominator of the 2010 infant mortality rate is all live births occurring in 2010. The infant mortality rate is a better indicator of the risk of dying during the first year of life than the infant death rate.

This report includes data for 34 states and the District of Columbia—Arizona, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Maine, Michigan, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Texas, Utah, Vermont, Washington, and Wyoming—that had implemented the 2003 revision of the U.S. Standard Certificate of Death by 2010, and for the remaining 16 states that collected and reported death data in 2010 based on the 1989 revision of the U.S. Standard Certificate of Death. Kentucky and Maine began using the 2003 revision during 2010; consequently, some of their data were collected and reported using the 1989 revision, and some were collected and reported using the 2003 revision. The 2003 revision is described in detail elsewhere (18,19). In this report, revised data are combined with unrevised but comparable data. More details on procedures used to combine revised with unrevised data on race are given in "Technical Notes."

Because the United States Census 2010 allowed for selection of multiple races, death certificate data by race (i.e., the numerators for death rates) are not wholly compatible with the population data collected in this census. Data from the census are necessary to produce denominators for computing death rates.

Multiple-race data were collected in 2010 by 34 states and the District of Columbia that used the 2003 revision of the U.S. Standard Certificate of Death in a manner that is consistent with the population data collected in the 2010 census. Three additional states—Hawaii, Minnesota, and Wisconsin—that used the 1989 revision of the U.S. Standard Certificate of Death also reported multiple-race data. The remaining 13 states did not collect multiple-race data in 2010. In order to produce national death rates for 2009 and 2010 for this report, multiple-race data from death certificates were "bridged" to be consistent with the 1977 Office of Management and Budget (OMB) single-race categories (20); that is, the multiple-race categories were bridged back to single-race categories. Moreover, data for Asian persons and Native Hawaiians or Other Pacific Islanders were reported as the combined category API (21). The populations used to calculate death rates are also bridged to single-race categories. These populations are produced under a collaborative arrangement with the U.S. Census Bureau and are based on year 2010 census counts. The procedures used to produce the bridged populations are described in separate publications (22,23). As the remaining 13 reporting areas gradually begin to collect data on race according to the 1997 OMB standards (24), use of the bridged populations is expected to be discontinued.

Note that the population data used to compile the death rates by race shown in this report are based on special estimation procedures. They are not true counts. The estimation procedures used to develop these populations are subject to error. Smaller population groups are affected much more than larger populations by this measurement error, especially the AIAN population (22).

All comparisons in this report are between the 2009 final data (15) and the 2010 preliminary data. Rates shown in this report for 2001–2009 have been revised using (intercensal) population estimates (17) based on the 2010 census, to provide more accurate rates for the period. The revised rates may differ from rates previously published, which were based on the 2000 census (postcensal) population estimates.

Results

Trends in numbers and rates

The preliminary number of deaths in the United States for 2010 was 2,465,936 (Tables A and 1). The crude death rate of 798.7 per 100,000 population was 0.5 percent higher than the rate of 794.5 per 100,000 in 2009. The estimated age-adjusted death rate, which accounts for changes in the age distribution of the population, reached a record low of 746.2 per 100,000 U.S. standard population, 0.5 percent lower than the 2009 rate of 749.6 (Tables A and 1). The Figure illustrates the general pattern of decline in both crude and age-adjusted death rates since 1980. The age-adjusted death rate decreased from 2009 to 2010 by 0.5 percent for males and 0.4 percent for females. The relative magnitudes of significant changes in age-adjusted death rates by sex and race and Hispanic origin (Table 1) are:

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 2009 and preliminary 2010

[Data based on a continuous file of records received from the states. Figures for 2010 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]	
	2010	2009	2010	2009	2010	2009
All deaths	2,465,936	2,437,163	2,112,458	2,086,355	286,800	286,623
Male	1,231,215	1,217,379	1,050,382	1,037,475	145,731	146,239
Female	1,234,721	1,219,784	1,062,076	1,048,880	141,068	140,384
Age-adjusted death rate[3,4]	746.2	749.6	741.0	742.8	897.7	912.7
Male	886.2	890.9	877.5	880.5	1,103.4	1,123.1
Female	634.3	636.8	630.1	631.3	752.0	763.3
Life expectancy at birth (years)[5]	78.7	78.6	79.0	78.8	75.1	74.7
Male	76.2	76.0	76.5	76.4	71.8	71.4
Female	81.1	80.9	81.3	81.2	78.0	77.7
All infant deaths	24,548	26,412	15,933	16,817	7,388	8,312
Infant mortality rate[6]	6.14	6.39	5.19	5.30	11.61	12.64

[1]Includes races other than white and black.

[2]Race categories are consistent with 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported for deaths by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009, and were reported for births (used as the denominator in computing infant mortality rates) by 38 states and the District of Columbia in 2010 and by 33 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these reporting areas were bridged to single-race categories of the 1977 OMB standards for comparability with other reporting areas; see "Technical Notes."

[3]Rates for 2009 are revised and may differ from rates previously published; see "Technical Notes."

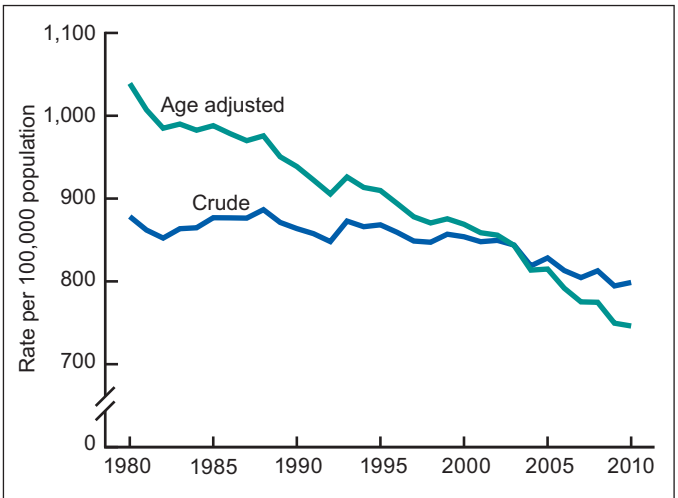
[4]Per 100,000 U.S. standard population, based on the year 2000 standard.

[5]Life expectancies for 2009 have been updated and may differ from those previously published; see "Technical Notes."

[6]Deaths under age 1 year per 1,000 live births in specified group.

- White males—0.3 percent decrease
- Black males—1.8 percent decrease
- Black females—1.5 percent decrease
- Non-Hispanic black males—1.9 percent decrease
- Non-Hispanic black females—1.5 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 (25–27).



NOTES: Crude death rates on an annual basis are per 100,000 population; age-adjusted rates are per 100,000 U.S. standard population. Rates for 2001–2009 are revised and may differ from rates previously published; see "Technical Notes."
SOURCE: CDC/NCHS, National Vital Statistics System, Mortality.

Figure. Crude and age-adjusted death rates: United States, 1980–2009 final and 2010 preliminary

Statistically significant decreases in mortality from 2009 to 2010 were registered for those under age 1 year and across age groups ranging from 5 through 84 years. Decedents aged 85 and over experienced the only statistically significant increase. Mortality for the age group 1–4 years did not change significantly. The magnitude of the significant changes in mortality by age group is (Table 1):

- Under 1 year—5.7 percent decrease
- 5–14 years—7.2 percent decrease
- 15–24 years—3.0 percent decrease
- 25–34 years—1.5 percent decrease
- 35–44 years—5.3 percent decrease
- 45–54 years—2.7 percent decrease
- 55–64 years—0.6 percent decrease
- 65–74 years—0.8 percent decrease
- 75–84 years—0.7 percent decrease
- 85 years and over—1.9 percent increase

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").

Final life expectancy data shown in this report for the 2009 data year have been updated and may differ from data previously published (see "Life Tables" in "Technical Notes"). Life expectancy data shown in this report for data years 2009–2010 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" (14). The preliminary estimate of life expectancy at birth for the total population in 2010 is 78.7 years. This represents an increase in life expectancy of 0.1 year

relative to 2009 (see Tables A and 6). Life expectancy for males increased 0.2 year, from 76.0 in 2009 to 76.2 in 2010. Female life expectancy also increased 0.2 year, from 80.9 to 81.1. (Changes in life expectancy from 2009 to 2010 for the male and female populations differ from the change 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 (14,28). The gap between male and female life expectancy was 4.9 years in 2010, unchanged from the difference between the sexes in 2009. The difference in life expectancy between the white and black populations in 2010 was 3.9 years, a 0.2-year decrease from the 2009 gap between the two races (Table A).

Life expectancy for the Hispanic population increased 0.2 year in 2010 to 81.3 compared with 2009 (Table 6). In 2010, the life expectancy for the Hispanic female population was 83.8. The life expectancy for the Hispanic male population in 2010 was 78.8. The difference in life expectancy between the sexes for the Hispanic population was 5.0 years.

The methodology used to produce life expectancies adjusts for race and ethnicity misclassification (see "Life Tables" in "Technical Notes"). Adjustments do not account for other sources of error such as return migration (27). Note that adjustments for misclassification are applied to the production of the life tables but not to the death rates shown in this report.

Among the six Hispanic origin-race-sex groups (Table 6), Hispanic females have the highest life expectancy at birth (83.8 years), followed by non-Hispanic white females (81.1), Hispanic males (78.8), non-Hispanic black females (77.7), non-Hispanic white males (76.4), and non-Hispanic black males (71.4).

By state of residence, Hawaii had the lowest mortality in 2010 with an age-adjusted death rate of 589.6 deaths per 100,000 standard population (Table 3). Mortality was highest in Mississippi, with an age-adjusted death rate of 961.9 per 100,000 standard population.

Causes of death

The leading causes of death in 2010 remained the same as in 2009 for 14 of the 15 leading causes, although two causes exchanged ranks. Nephritis, nephrotic syndrome and nephrosis, the ninth leading cause in 2009, became the eighth leading cause in 2010, while Influenza and pneumonia, the eighth leading cause in 2009, became the ninth leading cause of death in 2010. Dropping from among the 15 leading causes of death in 2010 was Assault (homicide), replaced by Pneumonitis due to solids and liquids as the 15th leading cause of death in 2010. The 15 leading causes of death in 2010 (Table B) were:

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
8. Nephritis, nephrotic syndrome and nephrosis
9. Influenza and pneumonia
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 2009 to 2010, the age-adjusted death rate declined significantly for 7 of the 15 leading causes of death. The age-adjusted death rate for the leading cause of death, Diseases of heart, decreased by 2.4 percent. The age-adjusted death rate for Malignant neoplasms decreased by 0.6 percent (see Tables B and 2). Deaths from these two diseases combined accounted for 47 percent of deaths in the United States in 2010. Although heart disease mortality has exhibited a fairly steady decline since 1980, cancer mortality began to decline only in the early 1990s (13). Of the 15 leading causes of death, the age-adjusted death rate also decreased significantly for Chronic lower respiratory diseases (1.4 percent), Cerebrovascular diseases (1.5 percent), Accidents (unintentional injuries) (1.1 percent), Influenza and pneumonia (8.5 percent), and Septicemia (3.6 percent).

The age-adjusted death rate increased significantly from 2009 to 2010 for five leading causes: Alzheimer's disease (3.3 percent), Nephritis, nephrotic syndrome and nephrosis (1.3 percent), Chronic liver disease and cirrhosis (3.3 percent), Parkinson's disease (4.6 percent), and Pneumonitis due to solids and liquids (4.1 percent).

The observed changes in the age-adjusted death rates from 2009 to 2010 were not significant for Diabetes mellitus, Intentional self-harm (suicide), and Essential hypertension and hypertensive renal disease.

Although Human immunodeficiency virus (HIV) disease was not among the 15 leading causes of death in 2010 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 13.3 percent from 2009 to 2010 (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 (29), and 5.5 percent per year from 1999 through 2009 (data not shown). For all races combined in the age group 15–24, HIV disease moved from the 12th leading cause of death in 2009 to the 11th leading cause in 2010. HIV disease dropped from the sixth leading cause of death in 2009 to the seventh leading cause in 2010 for the age group 25–44. Among decedents aged 45–64, HIV disease remained the 13th leading cause in 2010, unchanged from its rank in 2009.

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 growing 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 (14,30,31). In 1999, 793 deaths were due to *C. difficile*, compared with 7,476 *C. difficile* deaths in 2008 (14). The number of deaths has dropped slightly since 2008, to 7,251 in 2009 and 7,284 in 2010. The age-adjusted death rate for this cause in 2010 was 2.2 deaths per 100,000 standard population, unchanged from the rate in 2009. In 2010, *C. difficile* ranked as the 18th 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).

Table B. Deaths and death rates for 2010, and age-adjusted death rates and percent changes from 2009 to 2010, for the 15 leading causes of death: United States, final 2009 and preliminary 2010

[Data based on a continuous file of records received from the states. Rates are per 100,000 population. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. Age-adjusted rates per 100,000 U.S. standard population are based on the year 2000 standard; see "Technical Notes." For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures for 2010 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 *International Classification of Diseases, Tenth Revision*, Second Edition, 2004)	Number	Death rate	Age-adjusted death rate		
				2010	2009[2]	Percent change
. . .	All causes	2,465,932	798.7	746.2	749.6	–0.5
1	Diseases of heart (I00–I09,I11,I13,I20–I51)	595,444	192.9	178.5	182.8	–2.4
2	Malignant neoplasms (C00–C97)	573,855	185.9	172.5	173.5	–0.6
3	Chronic lower respiratory diseases (J40–J47)	137,789	44.6	42.1	42.7	–1.4
4	Cerebrovascular diseases (I60–I69)	129,180	41.8	39.0	39.6	–1.5
5	Accidents (unintentional injuries) (V01–X59,Y85–Y86)[3]	118,043	38.2	37.1	37.5	–1.1
6	Alzheimer's disease (G30)	83,308	27.0	25.0	24.2	3.3
7	Diabetes mellitus (E10–E14)	68,905	22.3	20.8	21.0	–1.0
8	Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27)	50,472	16.3	15.3	15.1	1.3
9	Influenza and pneumonia (J09–J18)[4]	50,003	16.2	15.1	16.5	–8.5
10	Intentional self-harm (suicide) (X60–X84,Y87.0)[3]	37,793	12.2	11.9	11.8	0.8
11	Septicemia (A40–A41)	34,843	11.3	10.6	11.0	–3.6
12	Chronic liver disease and cirrhosis (K70,K73–K74)	31,802	10.3	9.4	9.1	3.3
13	Essential hypertension and hypertensive renal disease (I10,I12,I15)	26,577	8.6	7.9	7.8	1.3
14	Parkinson's disease (G20–G21)	21,963	7.1	6.8	6.5	4.6
15	Pneumonitis due to solids and liquids (J69)	17,001	5.5	5.1	4.9	4.1
. . .	All other causes (residual)	488,954	158.5	. . .	. . .	. . .

. . . Category not applicable.

[1]Based on number of deaths.

[2]Rates are revised and may differ from rates previously published; see "Technical Notes."

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

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

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

The age-adjusted death rate for drug-induced deaths declined by 4.0 percent from the final rate of 12.6 in 2009 to the preliminary rate of 12.1 in 2010. However, the final number of drug-induced deaths in 2010 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. The observed decrease in the age-adjusted death rate for firearm injuries (1.0 percent) and the observed increase in the age-adjusted death rate for alcohol-induced deaths (1.4 percent) were not statistically significant. Mortality from injury at work in 2010 was unchanged from 2009 (Table 2).

Infant mortality

The preliminary infant mortality rate for 2010 was 6.14 infant deaths per 1,000 live births (see Tables A and 4). This represents a decrease of 3.9 percent from the final 2009 rate of 6.39. With the exception of 2002 and 2005, the infant mortality rate has statistically remained the same or decreased significantly each successive year from 1958 through 2010 (14,32). The neonatal (i.e., infants aged less than 28 days) mortality rate decreased 3.3 percent from 4.18 per 1,000 live births in 2009 to 4.04 per 1,000 live births in 2010. The postneonatal (i.e., infants aged 28 days–11 months) mortality rate decreased by 5.4 percent from 2009 to 2010.

The 2010 preliminary infant mortality rate for black infants was 11.61 infant deaths per 1,000 live births, compared with the final rate of 12.64 per 1,000 live births in 2009.

The infant mortality rate for white infants decreased in 2010 by 2.1 percent, from 5.30 infant deaths per 1,000 live births in 2009 to 5.19 in 2010, but the observed decrease was not significant. The mortality rate for black infants was 2.2 times the rate for white infants (see 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 (27). The linked birth/infant death data set provides a better source of data for infant deaths and mortality rates by maternal race and ethnicity (33).

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 2010 infant death rate is the estimated population under age 1 year as of the reference date, April 1, 2010 (16). This population estimate includes a combination of infants born in 2009 who had not reached their first birthday before April 1, 2010, and infants born in 2010 before April 1, 2010. In contrast, the denominator of the 2010 infant mortality rate is all live births occurring during 2010 (34). For example, the preliminary number of live births for 2010 (n = 4,000,279) is 1.4 percent higher than the April 1 infant population in 2010 (n = 3,944,153). Therefore, the infant mortality rate for 2010 (613.7 deaths per 100,000 live births) is lower than the infant death rate for 2010 (622.4 deaths per 100,000 population). For 2010, both the infant mortality rate and the infant death rate decreased significantly from 2009.

The 10 leading causes of infant mortality for 2010 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
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. Diseases of the circulatory system
9. Respiratory distress of newborn
10. Necrotizing enterocolitis of newborn

The leading causes of infant death in 2010 remained the same as in 2009 for 9 of the 10 leading causes, although two causes exchanged ranks (Table 8). Diseases of the circulatory system, the ninth leading cause in 2009, became the eighth leading cause of death in 2010, while Respiratory distress of newborn, the eighth leading cause in 2009, became the ninth leading cause in 2010. Dropping from among the 10 leading causes of infant death in 2010 was Neonatal hemorrhage, replaced by Necrotizing enterocolitis of newborn as the 10th leading cause. The infant mortality rate decreased for 5 of 10 leading causes of death from 2009 to 2010 (Tables 5 and 8). The infant mortality rate decreased by 6.1 percent for Disorders related to short gestation and low birth weight, not elsewhere classified; by 12.4 percent for SIDS; by 8.7 percent for Accidents (unintentional injuries); by 11.3 percent for Diseases of the circulatory system; and by 13.9 percent for Respiratory distress of newborn (Tables 5 and 8).

Deaths due to SIDS, currently the third leading cause of infant death, have been declining since 1988 (4,14). 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 (35).

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List of Detailed Tables

Table 1. Deaths and death rates, by age, sex, and race and Hispanic origin, and age-adjusted death rates, by sex and race and Hispanic origin: United States, final 2009 and preliminary 2010

[Data based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." Figures for 2010 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 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these states were bridged to 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"]

	2010		2009	
Age, sex, and race and Hispanic origin	Number	Rate	Number	Rate[1]
All races, both sexes				
All ages	2,465,936	798.7	2,437,163	794.5
Under 1 year[2]	24,548	622.4	26,412	659.7
1–4 years	4,321	26.6	4,450	27.4
5–14 years	5,271	12.8	5,651	13.8
15–24 years	29,519	67.7	30,416	69.8
25–34 years	42,214	102.8	42,502	104.4
35–44 years	69,964	170.4	74,665	180.0
45–54 years	183,030	406.7	187,568	418.1
55–64 years	310,536	851.2	303,307	856.7
65–74 years	406,773	1,873.4	401,032	1,888.7
75–84 years	625,043	4,785.5	627,727	4,820.2
85 years and over	764,582	13,918.1	733,178	13,660.1
Not stated	134	. . .	255	. . .
Age-adjusted rate[3]	. . .	746.2	. . .	749.6
All races, male				
All ages	1,231,215	811.2	1,217,379	807.2
Under 1 year[2]	13,698	680.0	14,823	725.0
1–4 years	2,461	29.6	2,495	30.1
5–14 years	3,050	14.5	3,248	15.6
15–24 years	21,768	97.5	22,312	100.0
25–34 years	29,167	141.4	29,199	142.7
35–44 years	43,389	212.3	46,555	225.5
45–54 years	111,908	505.4	114,820	520.3
55–64 years	189,126	1,074.5	184,142	1,078.4
65–74 years	229,500	2,273.1	225,794	2,290.5
75–84 years	311,513	5,687.9	311,032	5,725.8
85 years and over	275,545	15,396.3	262,782	15,142.9
Not stated	90	. . .	177	. . .
Age-adjusted rate[3]	. . .	886.2	. . .	890.9
All races, female				
All ages	1,234,721	786.6	1,219,784	782.1
Under 1 year[2]	10,850	562.2	11,589	591.5
1–4 years	1,860	23.4	1,955	24.6
5–14 years	2,221	11.1	2,403	12.0
15–24 years	7,751	36.4	8,104	38.1
25–34 years	13,047	63.9	13,303	65.6
35–44 years	26,575	128.8	28,110	134.9
45–54 years	71,123	311.1	72,748	319.1
55–64 years	121,410	643.0	119,165	650.1
65–74 years	177,273	1,526.0	175,238	1,540.5
75–84 years	313,530	4,133.9	316,695	4,172.2
85 years and over	489,036	13,203.8	470,396	12,951.6
Not stated	44	. . .	78	. . .
Age-adjusted rate[3]	. . .	634.3	. . .	636.8

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, and race and Hispanic origin, and age-adjusted death rates, by sex and race and Hispanic origin: United States, final 2009 and preliminary 2010—Con.

[Data based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." Figures for 2010 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 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these states were bridged to 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"]

	2010		2009	
Age, sex, and race and Hispanic origin	Number	Rate	Number	Rate[1]
Total white, both sexes				
All ages	2,112,458	860.7	2,086,355	853.7
Under 1 year[2]	15,933	536.5	16,817	558.0
1–4 years	3,017	24.6	3,141	25.5
5–14 years	3,836	12.3	4,005	12.8
15–24 years	21,477	64.6	22,241	66.8
25–34 years	31,386	99.0	31,489	100.1
35–44 years	53,009	164.9	56,337	172.9
45–54 years	142,895	392.5	146,108	401.4
55–64 years	249,342	819.5	243,809	823.4
65–74 years	342,631	1,844.9	338,048	1,859.1
75–84 years	551,959	4,813.4	555,168	4,843.5
85 years and over	696,872	14,130.2	668,976	13,858.2
Not stated	100	. . .	216	. . .
Age-adjusted rate[3]	. . .	741.0	. . .	742.8
White male				
All ages	1,050,382	865.2	1,037,475	858.3
Under 1 year[2]	8,867	584.0	9,419	611.2
1–4 years	1,718	27.4	1,780	28.3
5–14 years	2,219	13.8	2,314	14.5
15–24 years	15,640	91.6	16,243	94.9
25–34 years	21,858	135.4	21,780	135.9
35–44 years	33,450	206.4	35,627	216.8
45–54 years	88,918	491.4	90,871	502.3
55–64 years	153,141	1,031.9	149,005	1,032.1
65–74 years	194,604	2,230.2	191,494	2,245.4
75–84 years	277,255	5,697.7	277,531	5,737.2
85 years and over	252,647	15,621.0	241,261	15,362.5
Not stated	66	. . .	150	. . .
Age-adjusted rate[3]	. . .	877.5	. . .	880.5
White female				
All ages	1,062,076	856.4	1,048,880	849.3
Under 1 year[2]	7,066	486.9	7,398	502.3
1–4 years	1,299	21.7	1,361	22.6
5–14 years	1,617	10.6	1,691	11.1
15–24 years	5,837	36.1	5,998	37.1
25–34 years	9,528	61.3	9,709	62.9
35–44 years	19,559	122.7	20,710	128.2
45–54 years	53,978	294.8	55,237	301.6
55–64 years	96,201	617.2	94,804	624.8
65–74 years	148,027	1,503.3	146,554	1,517.9
75–84 years	274,704	4,161.5	277,637	4,191.0
85 years and over	444,226	13,402.7	427,715	13,132.8
Not stated	34	. . .	66	. . .
Age-adjusted rate[3]	. . .	630.1	. . .	631.3

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, and race and Hispanic origin, and age-adjusted death rates, by sex and race and Hispanic origin: United States, final 2009 and preliminary 2010—Con.

[Data based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." Figures for 2010 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 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these states were bridged to 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"]

	2010		2009	
Age, sex, and race and Hispanic origin	Number	Rate	Number	Rate[1]
Non-Hispanic white, both sexes				
All ages	1,967,619	983.2	1,944,606	972.3
Under 1 year[2]	11,002	528.2	11,608	550.7
1–4 years	2,143	24.7	2,181	25.0
5–14 years	2,905	12.6	2,867	12.4
15–24 years	16,814	66.3	17,150	67.1
25–34 years	25,453	105.4	25,203	105.1
35–44 years	44,943	176.0	47,736	183.0
45–54 years	127,887	406.7	130,740	413.7
55–64 years	229,026	833.3	224,375	837.2
65–74 years	319,462	1,874.2	315,532	1,888.2
75–84 years	520,429	4,881.6	524,664	4,911.3
85 years and over	667,489	14,267.4	642,473	14,006.3
Not stated	66	. . .	77	. . .
Age-adjusted rate[3]	. . .	754.1	. . .	755.1
Non-Hispanic white male				
All ages	970,460	986.4	959,014	975.7
Under 1 year[2]	6,133	574.9	6,530	604.4
1–4 years	1,221	27.5	1,262	28.3
5–14 years	1,688	14.3	1,684	14.2
15–24 years	12,057	93.2	12,318	94.5
25–34 years	17,464	143.5	17,165	142.1
35–44 years	28,028	218.7	29,834	227.9
45–54 years	79,200	507.5	80,827	515.4
55–64 years	140,398	1,045.1	136,875	1,045.0
65–74 years	181,374	2,254.5	178,722	2,269.9
75–84 years	261,428	5,763.8	262,553	5,810.1
85 years and over	241,428	15,796.1	231,198	15,553.1
Not stated	40	. . .	46	. . .
Age-adjusted rate[3]	. . .	891.4	. . .	893.7
Non-Hispanic white female				
All ages	997,159	980.1	985,592	969.1
Under 1 year[2]	4,869	479.2	5,078	494.2
1–4 years	922	21.8	919	21.6
5–14 years	1,217	10.8	1,183	10.5
15–24 years	4,757	38.3	4,832	38.6
25–34 years	7,989	66.7	8,038	67.5
35–44 years	16,915	133.0	17,902	137.7
45–54 years	48,687	307.4	49,913	313.5
55–64 years	88,628	630.9	87,500	638.5
65–74 years	138,088	1,534.3	136,810	1,548.1
75–84 years	259,001	4,228.4	262,111	4,252.4
85 years and over	426,060	13,525.7	411,275	13,264.8
Not stated	26	. . .	31	. . .
Age-adjusted rate[3]	. . .	642.6	. . .	643.1

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, and race and Hispanic origin, and age-adjusted death rates, by sex and race and Hispanic origin: United States, final 2009 and preliminary 2010—Con.

[Data based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." Figures for 2010 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 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these states were bridged to 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"]

	2010		2009	
Age, sex, and race and Hispanic origin	Number	Rate	Number	Rate[1]
Total black, both sexes				
All ages	286,800	681.8	286,623	688.3
Under 1 year[2]	7,388	1,100.2	8,312	1,214.9
1–4 years	1,044	38.2	1,077	39.8
5–14 years	1,142	17.0	1,300	19.5
15–24 years	6,676	93.2	6,742	94.7
25–34 years	8,912	151.9	9,196	158.7
35–44 years	14,004	250.0	15,153	268.5
45–54 years	34,072	591.1	35,447	622.4
55–64 years	51,794	1,285.4	50,676	1,312.0
65–74 years	52,467	2,525.0	51,870	2,555.8
75–84 years	57,504	5,368.2	57,464	5,441.9
85 years and over	51,773	13,181.6	49,356	12,988.1
Not stated	23	. . .	30	. . .
Age-adjusted rate[3]	. . .	897.7	. . .	912.7
Black male				
All ages	145,731	725.0	146,239	735.1
Under 1 year[2]	4,118	1,207.1	4,706	1,356.3
1–4 years	596	42.9	576	41.9
5–14 years	666	19.5	755	22.2
15–24 years	5,128	142.8	5,090	142.4
25–34 years	6,067	216.6	6,238	226.1
35–44 years	8,109	307.3	8,952	336.7
45–54 years	19,382	715.9	20,320	760.4
55–64 years	30,445	1,661.4	29,932	1,707.0
65–74 years	28,384	3,204.4	28,076	3,250.0
75–84 years	26,579	6,715.7	26,115	6,728.8
85 years and over	16,237	14,709.8	15,459	14,564.3
Not stated	19	. . .	20	. . .
Age-adjusted rate[3]	. . .	1,103.4	. . .	1,123.1
Black female				
All ages	141,068	642.3	140,384	645.5
Under 1 year[2]	3,270	989.9	3,606	1,069.3
1–4 years	448	33.3	501	37.7
5–14 years	476	14.5	545	16.6
15–24 years	1,548	43.4	1,652	46.6
25–34 years	2,845	92.8	2,958	97.5
35–44 years	5,894	199.0	6,201	207.7
45–54 years	14,690	480.6	15,127	500.5
55–64 years	21,349	971.8	20,744	983.6
65–74 years	24,083	2,020.1	23,794	2,041.3
75–84 years	30,924	4,578.4	31,349	4,694.0
85 years and over	35,537	12,584.6	33,897	12,377.2
Not stated	4	. . .	10	. . .
Age-adjusted rate[3]	. . .	752.0	. . .	763.3

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, and race and Hispanic origin, and age-adjusted death rates, by sex and race and Hispanic origin: United States, final 2009 and preliminary 2010—Con.

[Data based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." Figures for 2010 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 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these states were bridged to 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"]

	2010		2009	
Age, sex, and race and Hispanic origin	Number	Rate	Number	Rate[1]
Non-Hispanic black, both sexes				
All ages	282,750	717.0	282,982	723.5
Under 1 year[2]	7,052	1,167.2	7,967	1,294.6
1–4 years	992	40.1	1,039	42.5
5–14 years	1,114	18.1	1,266	20.5
15–24 years	6,540	98.3	6,602	99.5
25–34 years	8,756	161.3	9,031	168.3
35–44 years	13,772	261.2	14,951	280.8
45–54 years	33,609	609.3	35,062	642.6
55–64 years	51,171	1,315.8	50,089	1,342.7
65–74 years	51,797	2,575.5	51,335	2,611.9
75–84 years	56,802	5,464.4	56,785	5,536.5
85 years and over	51,128	13,355.9	48,832	13,180.1
Not stated	16	. . .	23	. . .
Age-adjusted rate[3]	. . .	918.1	. . .	934.4
Non-Hispanic black male				
All ages	143,480	762.7	144,197	773.1
Under 1 year[2]	3,929	1,280.9	4,522	1,450.1
1–4 years	569	45.3	561	45.1
5–14 years	647	20.6	735	23.4
15–24 years	5,026	150.6	4,985	149.7
25–34 years	5,955	230.1	6,112	239.5
35–44 years	7,959	320.4	8,826	352.0
45–54 years	19,088	736.9	20,066	783.9
55–64 years	30,063	1,700.8	29,527	1,744.6
65–74 years	27,986	3,266.0	27,768	3,320.9
75–84 years	26,216	6,832.1	25,790	6,846.2
85 years and over	16,026	14,947.1	15,289	14,826.4
Not stated	15	. . .	16	. . .
Age-adjusted rate[3]	. . .	1,129.0	. . .	1,150.5
Non-Hispanic black female				
All ages	139,270	675.3	138,785	678.4
Under 1 year[2]	3,124	1,050.4	3,445	1,134.9
1–4 years	423	34.8	478	39.7
5–14 years	467	15.4	531	17.5
15–24 years	1,514	45.6	1,617	48.9
25–34 years	2,801	98.6	2,919	103.8
35–44 years	5,812	208.4	6,125	217.4
45–54 years	14,521	496.3	14,996	517.7
55–64 years	21,108	995.0	20,562	1,008.9
65–74 years	23,811	2,062.9	23,567	2,086.8
75–84 years	30,585	4,663.9	30,995	4,776.2
85 years and over	35,103	12,737.3	33,543	12,545.2
Not stated	1	. . .	7	. . .
Age-adjusted rate[3]	. . .	768.9	. . .	781.0

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, and race and Hispanic origin, and age-adjusted death rates, by sex and race and Hispanic origin: United States, final 2009 and preliminary 2010—Con.

[Data based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." Figures for 2010 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 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these states were bridged to 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"]

	2010		2009	
Age, sex, and race and Hispanic origin	Number	Rate	Number	Rate[1]
Total AIAN,[4,5] both sexes				
All ages	15,520	364.0	14,960	362.3
Under 1 year[2]	351	451.5	385	498.4
1–4 years	93	29.4	83	27.5
5–14 years	108	14.4	115	15.9
15–24 years	612	80.9	670	90.1
25–34 years	795	122.0	752	119.9
35–44 years	1,158	202.3	1,261	224.6
45–54 years	2,199	408.9	2,174	416.5
55–64 years	2,697	780.1	2,525	768.3
65–74 years	2,799	1,707.5	2,674	1,710.2
75–84 years	2,670	3,811.6	2,535	3,771.4
85 years and over	2,036	9,587.0	1,785	8,832.3
Not stated	1	. . .	1	. . .
Age-adjusted rate[3]	. . .	626.2	. . .	618.2
AIAN[4,5] male				
All ages	8,498	396.6	8,105	391.1
Under 1 year[2]	211	537.4	214	550.2
1–4 years	55	34.3	48	31.3
5–14 years	69	18.1	57	15.6
15–24 years	455	116.1	468	121.3
25–34 years	526	156.5	502	155.4
35–44 years	745	256.8	782	276.3
45–54 years	1,309	495.3	1,250	488.1
55–64 years	1,585	948.2	1,496	943.5
65–74 years	1,506	1,969.7	1,441	1,978.3
75–84 years	1,295	4,441.5	1,219	4,367.8
85 years and over	741	10,240.5	627	9,188.2
Not stated	–	. . .	1	. . .
Age-adjusted rate[3]	. . .	728.6	. . .	711.5
AIAN[4,5] female				
All ages	7,023	331.1	6,855	333.3
Under 1 year[2]	140	363.8	171	445.8
1–4 years	38	24.4	35	23.6
5–14 years	39	10.5	58	16.3
15–24 years	157	43.1	202	56.4
25–34 years	269	85.3	250	82.2
35–44 years	413	146.3	479	172.1
45–54 years	890	325.5	924	347.5
55–64 years	1,112	622.7	1,029	604.9
65–74 years	1,293	1,478.2	1,233	1,476.4
75–84 years	1,375	3,362.5	1,316	3,347.9
85 years and over	1,295	9,249.3	1,158	8,650.8
Not stated	1	. . .	–	. . .
Age-adjusted rate[3]	. . .	539.3	. . .	538.2

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, and race and Hispanic origin, and age-adjusted death rates, by sex and race and Hispanic origin: United States, final 2009 and preliminary 2010—Con.

[Data based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." Figures for 2010 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 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these states were bridged to 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"]

	2010		2009	
Age, sex, and race and Hispanic origin	Number	Rate	Number	Rate[1]
Total API,[6] both sexes				
All ages	51,158	301.0	49,225	296.3
Under 1 year[2]	876	388.8	898	393.3
1–4 years	167	17.9	149	16.1
5–14 years	185	8.2	231	10.5
15–24 years	754	30.3	763	31.3
25–34 years	1,120	39.2	1,065	37.6
35–44 years	1,794	65.3	1,914	71.1
45–54 years	3,864	168.1	3,839	170.8
55–64 years	6,702	398.7	6,297	392.1
65–74 years	8,875	986.8	8,440	977.0
75–84 years	12,910	2,852.0	12,560	2,870.5
85 years and over	13,900	9,415.4	13,061	9,343.2
Not stated	10	. . .	8	. . .
Age-adjusted rate[3]	. . .	424.2	. . .	424.2
API[6] male				
All ages	26,604	327.1	25,560	321.1
Under 1 year[2]	502	434.4	484	412.0
1–4 years	92	19.3	91	19.3
5–14 years	96	8.4	122	11.0
15–24 years	545	43.0	511	41.2
25–34 years	716	52.8	679	50.3
35–44 years	1,085	83.6	1,194	93.7
45–54 years	2,299	213.9	2,379	226.5
55–64 years	3,954	519.4	3,709	509.7
65–74 years	5,005	1,225.0	4,783	1,217.8
75–84 years	6,383	3,436.6	6,167	3,450.9
85 years and over	5,921	10,822.7	5,435	10,465.8
Not stated	5	. . .	6	. . .
Age-adjusted rate[3]	. . .	512.0	. . .	508.6
API[6] female				
All ages	24,555	277.2	23,665	273.5
Under 1 year[2]	374	340.9	414	373.5
1–4 years	75	16.3	58	12.7
5–14 years	89	7.9	109	10.0
15–24 years	209	17.1	252	21.1
25–34 years	404	27.0	386	26.0
35–44 years	709	48.9	720	50.8
45–54 years	1,565	127.9	1,460	122.0
55–64 years	2,748	298.8	2,588	294.7
65–74 years	3,870	788.5	3,657	776.3
75–84 years	6,527	2,445.2	6,393	2,469.8
85 years and over	7,979	8,586.9	7,626	8,679.7
Not stated	5	. . .	2	. . .
Age-adjusted rate[3]	. . .	358.9	. . .	360.8

See footnotes at end of table.

Table 1. Deaths and death rates, by age, sex, and race and Hispanic origin, and age-adjusted death rates, by sex and race and Hispanic origin: United States, final 2009 and preliminary 2010—Con.

[Data based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." Figures for 2010 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 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these states were bridged to 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"]

	2010		2009	
Age, sex, and race and Hispanic origin	Number	Rate	Number	Rate[1]
Hispanic,[7] both sexes				
All ages	144,427	286.1	141,576	287.0
Under 1 year[2]	5,167	510.4	5,424	525.6
1–4 years	930	22.7	1,004	24.7
5–14 years	951	10.2	1,172	12.9
15–24 years	4,796	54.2	5,187	59.9
25–34 years	6,017	71.3	6,369	76.4
35–44 years	8,139	111.5	8,640	120.7
45–54 years	14,901	272.7	15,226	288.6
55–64 years	20,054	624.0	19,251	629.4
65–74 years	22,945	1,391.7	22,379	1,410.1
75–84 years	31,357	3,636.5	30,498	3,663.9
85 years and over	29,159	10,775.3	26,397	10,293.5
Not stated	8	. . .	29	. . .
Age-adjusted rate[3]	. . .	558.4	. . .	559.7
Hispanic[7] male				
All ages	79,592	310.7	78,157	311.8
Under 1 year[2]	2,874	557.5	2,989	569.5
1–4 years	523	25.0	539	25.9
5–14 years	543	11.4	650	14.1
15–24 years	3,690	79.4	3,992	87.6
25–34 years	4,457	100.9	4,688	107.1
35–44 years	5,461	146.2	5,811	158.5
45–54 years	9,617	351.5	9,955	376.9
55–64 years	12,502	814.6	11,941	818.9
65–74 years	13,031	1,773.7	12,623	1,789.2
75–84 years	15,721	4,461.3	14,911	4,396.7
85 years and over	11,167	11,775.6	10,039	11,225.7
Not stated	5	. . .	19	. . .
Age-adjusted rate[3]	. . .	677.5	. . .	675.5
Hispanic[7] female				
All ages	64,835	260.8	63,419	261.4
Under 1 year[2]	2,294	461.6	2,435	480.1
1–4 years	407	20.3	465	23.4
5–14 years	408	8.9	522	11.8
15–24 years	1,106	26.3	1,195	29.1
25–34 years	1,560	38.8	1,681	42.5
35–44 years	2,678	75.1	2,829	81.0
45–54 years	5,284	193.7	5,271	200.0
55–64 years	7,552	449.8	7,310	456.8
65–74 years	9,914	1,084.6	9,756	1,106.7
75–84 years	15,636	3,066.4	15,587	3,160.1
85 years and over	17,992	10,235.6	16,358	9,794.3
Not stated	3	. . .	10	. . .
Age-adjusted rate[3]	. . .	463.1	. . .	466.1

. . . Category not applicable.

– Quantity zero.

[1]Rates for 2009 are revised and may differ from rates previously published; see "Technical Notes."

[2]Death 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.

[3]For method of computation, see "Technical Notes."

[4]American Indian or Alaska Native.

[5]Includes deaths among Aleuts and Eskimos.

[6]Asian or Pacific Islander.

[7]Includes 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 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 2009 and preliminary 2010

[Data based on a continuous file of records received from the states. Rates per 100,000 population. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. 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 2010 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on *International Classification of Diseases*, Tenth Revision, Second Edition, 2004)	2010			2009		
	Number	Rate	Age-adjusted rate	Number	Rate[1]	Age-adjusted rate[1]
All causes	2,465,932	798.7	746.2	2,437,163	794.5	749.6
Salmonella infections (A01–A02)	28	0.0	0.0	26	0.0	0.0
Shigellosis and amebiasis (A03,A06)	3	*	*	4	*	*
Certain other intestinal infections (A04,A07–A09)[2]	10,248	3.3	3.1	10,251	3.3	3.2
Tuberculosis (A16–A19)	569	0.2	0.2	529	0.2	0.1
Respiratory tuberculosis (A16)	424	0.1	0.1	405	0.1	0.1
Other tuberculosis (A17–A19)	145	0.0	0.0	124	0.0	0.0
Whooping cough (A37)	26	0.0	0.0	15	*	*
Scarlet fever and erysipelas (A38,A46)	3	*	*	5	*	*
Meningococcal infection (A39)	79	0.0	0.0	99	0.0	0.0
Septicemia (A40–A41)	34,843	11.3	10.6	35,639	11.6	11.0
Syphilis (A50–A53)	27	0.0	0.0	34	0.0	0.0
Acute poliomyelitis (A80)	–	*	*	–	*	*
Arthropod-borne viral encephalitis (A83–A84,A85.2)	9	*	*	2	*	*
Measles (B05)	2	*	*	2	*	*
Viral hepatitis (B15–B19)	7,554	2.4	2.1	7,694	2.5	2.2
Human immunodeficiency virus (HIV) disease (B20–B24)	8,352	2.7	2.6	9,406	3.1	3.0
Malaria (B50–B54)	9	*	*	3	*	*
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	1.9	1.8	5,849	1.9	1.8
Malignant neoplasms (C00–C97)	573,855	185.9	172.5	567,628	185.0	173.5
Malignant neoplasms of lip, oral cavity and pharynx (C00–C14)	8,447	2.7	2.5	7,922	2.6	2.4
Malignant neoplasm of esophagus (C15)	14,417	4.7	4.3	13,908	4.5	4.2
Malignant neoplasm of stomach (C16)	11,372	3.7	3.4	11,185	3.6	3.4
Malignant neoplasms of colon, rectum and anus (C18–C21)	52,540	17.0	15.8	52,394	17.1	16.0
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	20,275	6.6	5.9	19,352	6.3	5.8
Malignant neoplasm of pancreas (C25)	36,817	11.9	11.0	35,628	11.6	10.8
Malignant neoplasm of larynx (C32)	3,687	1.2	1.1	3,631	1.2	1.1
Malignant neoplasms of trachea, bronchus and lung (C33–C34)	158,135	51.2	47.6	158,158	51.6	48.4
Malignant melanoma of skin (C43)	9,145	3.0	2.8	9,199	3.0	2.8
Malignant neoplasm of breast (C50)	41,360	13.4	12.3	41,078	13.4	12.5
Malignant neoplasm of cervix uteri (C53)	3,922	1.3	1.2	3,909	1.3	1.2
Malignant neoplasms of corpus uteri and uterus, part unspecified (C54–C55)	8,405	2.7	2.5	7,713	2.5	2.3
Malignant neoplasm of ovary (C56)	14,516	4.7	4.3	14,436	4.7	4.4
Malignant neoplasm of prostate (C61)	28,541	9.2	8.7	28,088	9.2	8.7
Malignant neoplasms of kidney and renal pelvis (C64–C65)	13,195	4.3	3.9	12,995	4.2	3.9
Malignant neoplasm of bladder (C67)	14,707	4.8	4.5	14,201	4.6	4.4
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	14,119	4.6	4.3	14,176	4.6	4.3
Malignant neoplasms of lymphoid, hematopoietic and related tissue (C81–C96)	55,489	18.0	16.9	55,406	18.1	17.2
Hodgkin's disease (C81)	1,228	0.4	0.4	1,250	0.4	0.4
Non-Hodgkin's lymphoma (C82–C85)	20,274	6.6	6.2	20,389	6.6	6.3
Leukemia (C91–C95)	22,499	7.3	6.9	22,606	7.4	7.0
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	11,420	3.7	3.4	11,094	3.6	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 2009 and preliminary 2010—Con.

[Data based on a continuous file of records received from the states. Rates per 100,000 population. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. 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 2010 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on *International Classification of Diseases*, Tenth Revision, Second Edition, 2004)	2010			2009		
	Number	Rate	Age-adjusted rate	Number	Rate[1]	Age-adjusted rate[1]
Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue (C96)	68	0.0	0.0	67	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)	64,765	21.0	19.5	64,249	20.9	19.7
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	14,892	4.8	4.5	14,605	4.8	4.5
Anemias (D50–D64)	4,842	1.6	1.5	4,686	1.5	1.4
Diabetes mellitus (E10–E14)	68,905	22.3	20.8	68,705	22.4	21.0
Nutritional deficiencies (E40–E64)	2,931	0.9	0.9	2,850	0.9	0.9
Malnutrition (E40–E46)	2,772	0.9	0.8	2,680	0.9	0.8
Other nutritional deficiencies (E50–E64)	158	0.1	0.0	170	0.1	0.0
Meningitis (G00,G03)	605	0.2	0.2	649	0.2	0.2
Parkinson's disease (G20–G21)	21,963	7.1	6.8	20,565	6.7	6.5
Alzheimer's disease (G30)	83,308	27.0	25.0	79,003	25.8	24.2
Major cardiovascular diseases (I00–I78)	777,548	251.8	233.4	780,624	254.5	238.5
Diseases of heart (I00–I09,I11,I13,I20–I51)	595,444	192.9	178.5	599,413	195.4	182.8
Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09)	2,992	1.0	0.9	3,234	1.1	1.0
Hypertensive heart disease (I11)	33,275	10.8	9.9	33,157	10.8	10.0
Hypertensive heart and renal disease (I13)	2,790	0.9	0.8	2,871	0.9	0.9
Ischemic heart diseases (I20–I25)	378,270	122.5	113.3	386,324	125.9	117.7
Acute myocardial infarction (I21–I22)	121,885	39.5	36.5	125,464	40.9	38.2
Other acute ischemic heart diseases (I24)	4,149	1.3	1.2	4,001	1.3	1.2
Other forms of chronic ischemic heart disease (I20,I25)	252,237	81.7	75.5	256,859	83.7	78.3
Atherosclerotic cardiovascular disease, so described (I25.0)	56,848	18.4	16.8	57,043	18.6	17.2
All other forms of chronic ischemic heart disease (I20,I25.1–I25.9)	195,388	63.3	58.7	199,816	65.1	61.1
Other heart diseases (I26–I51)	178,117	57.7	53.6	173,827	56.7	53.2
Acute and subacute endocarditis (I33)	1,097	0.4	0.3	1,167	0.4	0.4
Diseases of pericardium and acute myocarditis (I30–I31,I40)	757	0.2	0.2	847	0.3	0.3
Heart failure (I50)	57,696	18.7	17.3	56,410	18.4	17.2
All other forms of heart disease (I26–I28,I34–I38,I42–I49,I51)	118,567	38.4	35.7	115,403	37.6	35.4
Essential hypertension and hypertensive renal disease (I10,I12,I15)	26,577	8.6	7.9	25,734	8.4	7.8
Cerebrovascular diseases (I60–I69)	129,180	41.8	39.0	128,842	42.0	39.6
Atherosclerosis (I70)	7,213	2.3	2.2	7,377	2.4	2.2
Other diseases of circulatory system (I71–I78)	19,134	6.2	5.8	19,258	6.3	5.9
Aortic aneurysm and dissection (I71)	10,397	3.4	3.2	10,597	3.5	3.3
Other diseases of arteries, arterioles and capillaries (I72–I78)	8,737	2.8	2.6	8,661	2.8	2.7
Other disorders of circulatory system (I80–I99)	4,191	1.4	1.3	4,118	1.3	1.3
Influenza and pneumonia (J09–J18)[3]	50,003	16.2	15.1	53,692	17.5	16.5
Influenza (J09–J11)[3]	494	0.2	0.1	2,918	1.0	0.9
Pneumonia (J12–J18)	49,510	16.0	14.9	50,774	16.6	15.6
Other acute lower respiratory infections (J20–J22,U04)	212	0.1	0.1	272	0.1	0.1
Acute bronchitis and bronchiolitis (J20–J21)	175	0.1	0.0	234	0.1	0.1
Other and unspecified acute lower respiratory infections (J22,U04)	36	0.0	0.0	38	0.0	0.0
Chronic lower respiratory diseases (J40–J47)	137,789	44.6	42.1	137,353	44.8	42.7

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 2009 and preliminary 2010—Con.

[Data based on a continuous file of records received from the states. Rates per 100,000 population. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. 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 2010 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on *International Classification of Diseases*, Tenth Revision, Second Edition, 2004)	2010			2009		
	Number	Rate	Age-adjusted rate	Number	Rate[1]	Age-adjusted rate[1]
Bronchitis, chronic and unspecified (J40–J42)	621	0.2	0.2	639	0.2	0.2
Emphysema (J43)	10,021	3.2	3.1	10,878	3.5	3.4
Asthma (J45–J46)	3,355	1.1	1.0	3,388	1.1	1.1
Other chronic lower respiratory diseases (J44,J47)	123,792	40.1	37.8	122,448	39.9	38.0
Pneumoconioses and chemical effects (J60–J66,J68)	850	0.3	0.3	841	0.3	0.3
Pneumonitis due to solids and liquids (J69)	17,001	5.5	5.1	15,948	5.2	4.9
Other diseases of respiratory system (J00–J06,J30–J39,J67,J70–J98)	31,144	10.1	9.5	30,530	10.0	9.5
Peptic ulcer (K25–K28)	2,956	1.0	0.9	2,956	1.0	0.9
Diseases of appendix (K35–K38)	415	0.1	0.1	426	0.1	0.1
Hernia (K40–K46)	1,830	0.6	0.5	1,801	0.6	0.5
Chronic liver disease and cirrhosis (K70,K73–K74)	31,802	10.3	9.4	30,558	10.0	9.1
Alcoholic liver disease (K70)	15,950	5.2	4.7	15,183	4.9	4.5
Other chronic liver disease and cirrhosis (K73–K74)	15,852	5.1	4.7	15,375	5.0	4.6
Cholelithiasis and other disorders of gallbladder (K80–K82)	3,335	1.1	1.0	3,300	1.1	1.0
Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27)	50,472	16.3	15.3	48,935	16.0	15.1
Acute and rapidly progressive nephritic and nephrotic syndrome (N00–N01,N04)	203	0.1	0.0	159	0.1	0.0
Chronic glomerulonephritis, nephrosis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified (N02–N03,N05–N07,N26)	5,863	1.9	1.7	4,909	1.6	1.5
Renal failure (N17–N19)	44,388	14.4	13.4	43,840	14.3	13.5
Other disorders of kidney (N25,N27)	17	*	*	27	0.0	0.0
Infections of kidney (N10–N12,N13.6,N15.1)	602	0.2	0.2	604	0.2	0.2
Hyperplasia of prostate (N40)	487	0.2	0.1	446	0.1	0.1
Inflammatory diseases of female pelvic organs (N70–N76)	136	0.0	0.0	134	0.0	0.0
Pregnancy, childbirth and the puerperium (O00–099)	824	0.3	0.3	960	0.3	0.3
Pregnancy with abortive outcome (O00–O07)	40	0.0	0.0	34	0.0	0.0
Other complications of pregnancy, childbirth and the puerperium (O10–O99)	784	0.3	0.3	926	0.3	0.3
Certain conditions originating in the perinatal period (P00–P96)	12,053	3.9	4.2	13,116	4.3	4.5
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	9,587	3.1	3.2	9,883	3.2	3.3
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	45,383	14.7	13.9	39,829	13.0	12.3
All other diseases (residual)	269,028	87.1	80.9	252,818	82.4	77.3
Accidents (unintentional injuries) (V01–X59,Y85–Y86)	118,043	38.2	37.1	118,021	38.5	37.5
Transport accidents (V01–V99,Y85)	37,661	12.2	12.0	39,031	12.7	12.5
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)	35,080	11.4	11.2	36,216	11.8	11.6
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	0.3	0.3	1,033	0.3	0.3
Water, air and space, and other and unspecified transport accidents and their sequelae (V90–V99,Y85)	1,564	0.5	0.5	1,782	0.6	0.5
Nontransport accidents (W00–X59,Y86)	80,382	26.0	25.1	78,990	25.7	25.0
Falls (W00–W19)	25,903	8.4	7.9	24,792	8.1	7.6
Accidental discharge of firearms (W32–W34)	600	0.2	0.2	554	0.2	0.2

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 2009 and preliminary 2010—Con.

[Data based on a continuous file of records received from the states. Rates per 100,000 population. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. 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 2010 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on *International Classification of Diseases*, Tenth Revision, Second Edition, 2004)	2010			2009		
	Number	Rate	Age-adjusted rate	Number	Rate[1]	Age-adjusted rate[1]
Accidental drowning and submersion (W65–W74)	3,696	1.2	1.2	3,517	1.1	1.1
Accidental exposure to smoke, fire and flames (X00–X09)	2,737	0.9	0.9	2,756	0.9	0.9
Accidental poisoning and exposure to noxious substances (X40–X49)	30,781	10.0	9.9	31,758	10.4	10.3
Other and unspecified nontransport accidents and their sequelae (W20–W31,W35–W64, W75–W99,X10–X39,X50–X59,Y86)	16,664	5.4	5.1	15,613	5.1	4.9
Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)	37,793	12.2	11.9	36,909	12.0	11.8
Intentional self-harm (suicide) by discharge of firearms (X72–X74)	19,308	6.3	6.1	18,735	6.1	5.9
Intentional self-harm (suicide) by other and unspecified means and their sequelae (*U03,X60–X71,X75–X84,Y87.0)	18,485	6.0	5.9	18,174	5.9	5.8
Assault (homicide) (*U01–*U02,X85–Y09,Y87.1)	16,065	5.2	5.3	16,799	5.5	5.5
Assault (homicide) by discharge of firearms (*U01.4,X93–X95)	11,015	3.6	3.6	11,493	3.7	3.8
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	1.6	1.6	5,306	1.7	1.7
Legal intervention (Y35,Y89.0)	409	0.1	0.1	395	0.1	0.1
Events of undetermined intent (Y10–Y34,Y87.2,Y89.9)	4,629	1.5	1.5	5,005	1.6	1.6
Discharge of firearms, undetermined intent (Y22–Y24)	246	0.1	0.1	232	0.1	0.1
Other and unspecified events of undetermined intent and their sequelae (Y10–Y21, Y25–Y34,Y87.2,Y89.9)	4,383	1.4	1.4	4,773	1.6	1.5
Operations of war and their sequelae (Y36,Y89.1)	9	*	*	25	0.0	0.0
Complications of medical and surgical care (Y40–Y84,Y88)	2,475	0.8	0.7	2,616	0.9	0.8
Injury by firearms (*U01.4,W32–W34,X72–X74,X93–X95,Y22–Y24,Y35.0)[4]	31,513	10.2	10.0	31,347	10.2	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,F18.7–18.9,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,Y10–14)[4]	37,792	12.2	12.1	39,147	12.8	12.6
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)[4]	25,440	8.2	7.5	24,518	8.0	7.4
Injury at work[5]	4,066	1.6	1.6	3,919	1.6	1.6
Enterocolitis due to *Clostridium difficile* (A04.7)[6]	7,284	2.4	2.2	7,251	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.

[1]Rates for 2009 are revised and may differ from rates previously published; see "Technical Notes."

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

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

[4]Included in selected categories above.

[5]Described in "Technical Notes."

[6]Included 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 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 2009 and preliminary 2010

[By place of residence. Data are based on a continuous file of records received from the states. Rates are per 100,000 population. Rates are based on populations enumerated in the 2010 U.S. census as of April 1 for 2010 and estimated as of July 1 for 2009. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." Figures for 2010 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Area	2010			2009		
	Number	Rate	Age-adjusted rate	Number	Rate[1]	Age-adjusted rate[1]
United States[2]	2,465,936	798.7	746.2	2,437,163	794.5	749.6
Alabama	48,022	1,004.7	939.4	47,470	997.7	941.8
Alaska	3,727	524.8	771.3	3,618	517.7	754.9
Arizona	46,765	731.6	693.1	45,816	722.3	693.5
Arkansas	28,913	991.6	892.6	28,673	989.8	898.0
California	234,044	628.2	646.8	232,736	629.7	655.5
Colorado	31,465	625.6	682.7	31,173	626.9	689.7
Connecticut	28,719	803.5	653.5	28,585	802.5	659.4
Delaware	7,706	858.2	769.9	7,534	844.9	768.0
District of Columbia	4,672	776.4	792.4	4,834	816.2	833.4
Florida	173,763	924.2	701.0	169,924	911.0	700.3
Georgia	71,323	736.2	846.1	69,712	724.6	842.2
Hawaii	9,617	707.0	589.6	9,914	736.2	620.8
Idaho	11,430	729.1	731.6	11,098	714.0	724.3
Illinois	99,838	778.1	736.3	100,056	781.9	746.8
Indiana	56,739	875.1	820.6	55,973	866.5	820.2
Iowa	27,745	910.8	721.7	27,544	908.2	722.2
Kansas	24,502	858.8	762.2	24,024	848.1	757.8
Kentucky	41,980	967.4	914.9	41,380	958.5	912.1
Louisiana	40,671	897.1	903.8	40,282	896.8	908.7
Maine	12,755	960.2	749.8	12,594	947.2	752.2
Maryland	43,324	750.4	728.5	43,843	765.1	750.1
Massachusetts	52,595	803.3	675.0	52,308	802.6	681.5
Michigan	85,561	865.7	764.2	86,455	873.1	782.8
Minnesota	38,971	734.8	661.4	37,851	716.7	650.6
Mississippi	28,964	976.1	961.9	28,275	955.6	951.0
Missouri	55,276	923.0	819.5	54,263	910.3	814.6
Montana	8,827	892.1	754.7	8,730	887.2	756.9
Nebraska	15,171	830.7	717.8	14,810	817.0	709.8
Nevada	19,623	726.6	795.4	19,224	716.1	794.2
New Hampshire	10,201	774.9	690.4	10,100	767.4	691.2
New Jersey	69,499	790.5	691.2	68,277	779.8	689.5
New Mexico	15,931	773.7	749.0	15,643	768.0	750.0
New York	146,413	755.6	665.4	146,475	758.7	674.7
North Carolina	78,761	826.0	804.7	77,117	816.1	804.0
North Dakota	5,946	884.0	704.6	5,914	889.4	712.3
Ohio	108,710	942.3	815.7	107,156	929.5	814.7
Oklahoma	36,544	974.2	915.6	35,601	957.6	903.6
Oregon	31,886	832.3	723.0	31,636	830.6	727.8
Pennsylvania	124,599	980.9	766.0	124,780	985.1	775.2
Rhode Island	9,581	910.3	722.0	9,395	891.7	710.7
South Carolina	41,604	899.5	854.6	40,449	881.3	846.5
South Dakota	7,100	872.0	715.1	6,923	857.8	704.7
Tennessee	59,574	938.7	890.8	58,288	924.3	885.7
Texas	166,525	662.2	772.3	163,249	658.2	773.3
Utah	14,776	534.6	703.2	14,138	519.1	685.0
Vermont	5,380	859.8	718.7	5,034	805.7	681.8
Virginia	59,031	737.8	741.5	58,653	740.0	751.7
Washington	48,145	716.0	692.3	48,270	724.0	707.8
West Virginia	21,274	1,148.1	933.5	21,386	1,157.4	949.6
Wisconsin	47,308	831.9	719.0	45,697	806.0	702.5
Wyoming	4,438	787.4	778.8	4,283	765.0	770.9
Puerto Rico[3]	29,133	781.9	716.3	29,005	775.4	727.0
Virgin Islands[4]	---	---	---	675	---	---
Guam[4]	857	---	---	835	---	---
American Samoa[4]	224	---	---	310	---	---
Northern Marianas[4]	---	---	---	203	---	---

--- Data not available.

[1]Rates for 2009 are revised and may differ from rates previously published; see "Technical Notes."

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

[3]Age-adjusted rates are computed with ages under 5 years combined; see "Technical Notes."

[4]Populations based on the 2010 U.S. census are not available; see "Technical Notes."

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

Table 4. Infant deaths and infant mortality rates, by age and race and Hispanic origin: United States, final 2009 and preliminary 2010

[Data based on a continuous file of records received from the states. Rates per 1,000 live births. Figures for 2010 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 certificates. 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 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported for deaths by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009, and were reported for births by 38 states and the District of Columbia in 2010 and by 33 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these states were bridged to single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes"]

Age and race and Hispanic origin	2010		2009	
	Number	Rate	Number	Rate
All races[1]				
Under 1 year	24,548	6.14	26,412	6.39
Under 28 days	16,167	4.04	17,255	4.18
28 days–11 months	8,381	2.10	9,157	2.22
Total white				
Under 1 year	15,933	5.19	16,817	5.30
Under 28 days	10,603	3.45	11,054	3.48
28 days–11 months	5,330	1.74	5,763	1.82
Non-Hispanic white				
Under 1 year	11,002	5.09	11,608	5.25
Under 28 days	7,199	3.33	7,562	3.42
28 days–11 months	3,803	1.76	4,046	1.83
Total black				
Under 1 year	7,388	11.61	8,312	12.64
Under 28 days	4,760	7.48	5,374	8.17
28 days–11 months	2,627	4.13	2,938	4.47
Hispanic[2]				
Under 1 year	5,167	5.46	5,424	5.43
Under 28 days	3,523	3.72	3,629	3.63
28 days–11 months	1,644	1.74	1,795	1.80

[1]Includes races other than white and black.
[2]Includes 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 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 but use different denominators. For more information on these measures of risk, see Infant mortality in "Technical Notes."

Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2009 and preliminary 2010

[Data 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 2010 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on *International Classification of Diseases, Tenth Revision*, Second Edition, 2004)	2010		2009	
	Number	Rate	Number	Rate
All causes	24,548	613.7	26,412	639.4
Certain infectious and parasitic diseases (A00–B99)[1]	707	17.7	730	17.7
Certain intestinal infectious diseases (A00–A08)	5	*	11	*
Diarrhea and gastroenteritis of infectious origin (A09)[1]	318	7.9	331	8.0
Tuberculosis (A16–A19)	1	*	1	*
Tetanus (A33,A35)	–	*	–	*
Diphtheria (A36)	–	*	–	*
Whooping cough (A37)	25	0.6	15	*
Meningococcal infection (A39)	11	*	11	*
Septicemia (A40–A41)	224	5.6	221	5.4
Congenital syphilis (A50)	2	*	–	*
Gonococcal infection (A54)	–	*	–	*
Viral diseases (A80–B34)	92	2.3	99	2.4
Acute poliomyelitis (A80)	–	*	–	*
Varicella (chickenpox) (B01)	–	*	–	*
Measles (B05)	–	*	–	*
Human immunodeficiency virus (HIV) disease (B20–B24)	–	*	1	*
Mumps (B26)	–	*	–	*
Other and unspecified viral diseases (A81–B00,B02–B04,B06–B19,B25,B27–B34)	92	2.3	98	2.4
Candidiasis (B37)	5	*	11	*
Malaria (B50–B54)	–	*	1	*
Pneumocystosis (B59)	–	*	–	*
All other and unspecified infectious and parasitic diseases (A20–A32,A38,A42–A49, A51–A53,A55–A79,B35–B36,B38–B49,B55–B58,B60–B99)	22	0.5	29	0.7
Neoplasms (C00–D48)	110	2.7	136	3.3
Malignant neoplasms (C00–C97)	62	1.5	74	1.8
Hodgkin's disease and non-Hodgkin's lymphomas (C81–C85)	2	*	–	*
Leukemia (C91–C95)	25	0.6	27	0.7
Other and unspecified malignant neoplasms (C00–C80,C88,C90,C96–C97)	35	0.9	47	1.1
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	49	1.2	62	1.5
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	99	2.5	92	2.2
Anemias (D50–D64)	19	*	13	*
Hemorrhagic conditions and other diseases of blood and blood–forming organs (D65–D76)	60	1.5	64	1.5
Certain disorders involving the immune mechanism (D80–D89)	20	0.5	15	*
Endocrine, nutritional and metabolic diseases (E00–E88)	186	4.6	196	4.7
Short stature, not elsewhere classified (E34.3)	2	*	2	*
Nutritional deficiencies (E40–E64)	2	*	3	*
Cystic fibrosis (E84)	5	*	7	*
Volume depletion, disorders of fluid, electrolyte and acid–base balance (E86–E87)	49	1.2	46	1.1
All other endocrine, nutritional and metabolic diseases (E00–E32,E34.0–E34.2, E34.4–E34.9,E65–E83,E85,E88)	128	3.2	138	3.3
Diseases of the nervous system (G00–G98)	338	8.4	354	8.6
Meningitis (G00,G03)	59	1.5	62	1.5
Infantile spinal muscular atrophy, type I (Werdnig-Hoffman) (G12.0)	4	*	13	*

See footnotes at end of table.

Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2009 and preliminary 2010—Con.

[Data 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 2010 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on *International Classification of Diseases, Tenth Revision*, Second Edition, 2004)	2010		2009	
	Number	Rate	Number	Rate
Infantile cerebral palsy (G80)	3	*	8	*
Anoxic brain damage, not elsewhere classified (G93.1)	36	0.9	38	0.9
Other diseases of nervous system (G04,G06–G11,G12.1–G12.9,G20–G72,G81–G92,G93.0, G93.2–G93.9,G95–G98)	236	5.9	233	5.6
Diseases of the ear and mastoid process (H60–H93)	3	*	2	*
Diseases of the circulatory system (I00–I99)	499	12.5	581	14.1
Pulmonary heart disease and diseases of pulmonary circulation (I26–I28)	88	2.2	112	2.7
Pericarditis, endocarditis and myocarditis (I30,I33,I40)	12	*	15	*
Cardiomyopathy (I42)	77	1.9	111	2.7
Cardiac arrest (I46)	18	*	28	0.7
Cerebrovascular diseases (I60–I69)	130	3.2	147	3.6
All other diseases of circulatory system (I00–I25,I31,I34–I38,I44–I45,I47–I51,I70–I99)	174	4.3	168	4.1
Diseases of the respiratory system (J00–J98,U04)[2]	564	14.1	595	14.4
Acute upper respiratory infections (J00–J06)	13	*	12	*
Influenza and pneumonia (J09–J18)[2]	188	4.7	234	5.7
Influenza (J09–J11)[2]	16	*	26	0.6
Pneumonia (J12–J18)	171	4.3	208	5.0
Acute bronchitis and acute bronchiolitis (J20–J21)	27	0.7	46	1.1
Bronchitis, chronic and unspecified (J40–J42)	23	0.6	13	*
Asthma (J45–J46)	6	*	6	*
Pneumonitis due to solids and liquids (J69)	18	*	7	*
Other and unspecified diseases of respiratory system (J22,J30–J39,J43–J44,J47–J68,J70–J98,U04)	289	7.2	277	6.7
Diseases of the digestive system (K00–K92)	201	5.0	220	5.3
Gastritis, duodenitis, and noninfective enteritis and colitis (K29,K50–K55)	28	0.7	31	0.8
Hernia of abdominal cavity and intestinal obstruction without hernia (K40–K46,K56)	50	1.2	49	1.2
All other and unspecified diseases of digestive system (K00–K28,K30–K38,K57–K92)	122	3.0	140	3.4
Diseases of the genitourinary system (N00–N95)	126	3.1	127	3.1
Renal failure and other disorders of kidney (N17–N19,N25,N27)	98	2.4	105	2.5
Other and unspecified diseases of genitourinary system (N00–N15,N20–N23,N26,N28–N95)	28	0.7	22	0.5
Certain conditions originating in the perinatal period (P00–P96)	11,924	298.1	12,999	314.7
Newborn affected by maternal factors and by complications of pregnancy, labor and delivery (P00–P04)	2,909	72.7	2,980	72.1
Newborn affected by maternal hypertensive disorders (P00.0)	83	2.1	83	2.0
Newborn affected by other maternal conditions which may be unrelated to present pregnancy (P00.1–P00.9)	87	2.2	94	2.3
Newborn affected by maternal complications of pregnancy (P01)	1,555	38.9	1,608	38.9
Newborn affected by incompetent cervix (P01.0)	430	10.7	430	10.4
Newborn affected by premature rupture of membranes (P01.1)	776	19.4	774	18.7
Newborn affected by multiple pregnancy (P01.5)	164	4.1	206	5.0
Newborn affected by other maternal complications of pregnancy (P01.2–P01.4,P01.6–P01.9)	186	4.6	198	4.8
Newborn affected by complications of placenta, cord and membranes (P02)	1,030	25.7	1,064	25.8
Newborn affected by complications involving placenta (P02.0–P02.3)	491	12.3	522	12.6
Newborn affected by complications involving cord (P02.4–P02.6)	39	1.0	41	1.0
Newborn affected by chorioamnionitis (P02.7)	498	12.4	500	12.1
Newborn affected by other and unspecified abnormalities of membranes (P02.8–P02.9)	2	*	1	*
Newborn affected by other complications of labor and delivery (P03)	108	2.7	98	2.4

See footnotes at end of table.

Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2009 and preliminary 2010—Con.

[Data 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 2010 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on *International Classification of Diseases, Tenth Revision*, Second Edition, 2004)	2010		2009	
	Number	Rate	Number	Rate
Newborn affected by noxious influences transmitted via placenta or breast milk (P04)	45	1.1	33	0.8
Disorders related to length of gestation and fetal malnutrition (P05–P08)	4,215	105.4	4,625	112.0
Slow fetal growth and fetal malnutrition (P05)	85	2.1	87	2.1
Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	4,130	103.2	4,538	109.9
Extremely low birth weight or extreme immaturity (P07.0,P07.2)	3,158	78.9	3,467	83.9
Other low birth weight or preterm (P07.1,P07.3)	972	24.3	1,071	25.9
Disorders related to long gestation and high birth weight (P08)	–	*	–	*
Birth trauma (P10–P15)	19	*	16	*
Intrauterine hypoxia and birth asphyxia (P20–P21)	311	7.8	316	7.7
Intrauterine hypoxia (P20)	134	3.3	119	2.9
Birth asphyxia (P21)	177	4.4	197	4.8
Respiratory distress of newborn (P22)	496	12.4	595	14.4
Other respiratory conditions originating in the perinatal period (P23–P28)	802	20.0	956	23.1
Congenital pneumonia (P23)	70	1.7	95	2.3
Neonatal aspiration syndromes (P24)	49	1.2	44	1.1
Interstitial emphysema and related conditions originating in the perinatal period (P25)	104	2.6	113	2.7
Pulmonary hemorrhage originating in the perinatal period (P26)	166	4.1	159	3.8
Chronic respiratory disease originating in the perinatal period (P27)	107	2.7	183	4.4
Atelectasis (P28.0–P28.1)	249	6.2	283	6.9
All other respiratory conditions originating in the perinatal period (P28.2–P28.9)	56	1.4	79	1.9
Infections specific to the perinatal period (P35–P39)	733	18.3	832	20.1
Bacterial sepsis of newborn (P36)	569	14.2	652	15.8
Omphalitis of newborn with or without mild hemorrhage (P38)	1	*	4	*
All other infections specific to the perinatal period (P35,P37,P39)	163	4.1	176	4.3
Hemorrhagic and hematological disorders of newborn (P50–P61)	555	13.9	624	15.1
Neonatal hemorrhage (P50–P52,P54)	467	11.7	517	12.5
Hemorrhagic disease of newborn (P53)	1	*	1	*
Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice (P55–P59)	7	*	15	*
Hematological disorders (P60–P61)	79	2.0	91	2.2
Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (P70.0–P70.2)	3	*	11	*
Necrotizing enterocolitis of newborn (P77)	470	11.7	484	11.7
Hydrops fetalis not due to hemolytic disease (P83.2)	149	3.7	193	4.7
Other perinatal conditions (P29,P70.3–P76,P78–P81,P83.0–P83.1,P83.3–P96)	1,263	31.6	1,367	33.1
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	5,077	126.9	5,319	128.8
Anencephaly and similar malformations (Q00)	295	7.4	324	7.8
Congenital hydrocephalus (Q03)	105	2.6	105	2.5
Spina bifida (Q05)	14	*	23	0.6
Other congenital malformations of nervous system (Q01–Q02,Q04,Q06–Q07)	320	8.0	328	7.9
Congenital malformations of heart (Q20–Q24)	1,131	28.3	1,226	29.7
Other congenital malformations of circulatory system (Q25–Q28)	175	4.4	187	4.5
Congenital malformations of respiratory system (Q30–Q34)	395	9.9	390	9.4
Congenital malformations of digestive system (Q35–Q45)	88	2.2	67	1.6
Congenital malformations of genitourinary system (Q50–Q64)	454	11.3	500	12.1
Congenital malformations and deformations of musculoskeletal system, limbs and integument (Q65–Q85)	573	14.3	545	13.2

See footnotes at end of table.

Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2009 and preliminary 2010—Con.

[Data 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 2010 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

Cause of death (based on *International Classification of Diseases, Tenth Revision*, Second Edition, 2004)	2010		2009	
	Number	Rate	Number	Rate
Down's syndrome (Q90)	85	2.1	86	2.1
Edward's syndrome (Q91.0–Q91.3)	470	11.7	499	12.1
Patau's syndrome (Q91.4–Q91.7)	245	6.1	250	6.1
Other congenital malformations and deformations (Q10–Q18,Q86–Q89)	537	13.4	592	14.3
Other chromosomal abnormalities, not elsewhere classified (Q92–Q99)	191	4.8	197	4.8
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	3,243	81.1	3,420	82.8
Sudden infant death syndrome (R95)	1,890	47.2	2,226	53.9
Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R53,R55–R94,R96–R99)	1,353	33.8	1,194	28.9
All other diseases (residual)	22	0.5	14	*
External causes of mortality (*U01,V01–Y84)	1,448	36.2	1,627	39.4
Accidents (unintentional injuries) (V01–X59)	1,043	26.1	1,181	28.6
Transport accidents (V01–V99)	80	2.0	97	2.3
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)	78	1.9	95	2.3
Other and unspecified transport accidents (V01,V05–V06,V09.1,V09.3–V09.9,V10–V11, V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2,V80.6–V80.9,V81.2–V81.9,V82.2–V82.9, V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99)	2	*	2	*
Falls (W00–W19)	11	*	19	*
Accidental discharge of firearms (W32–W34)	–	*	1	*
Accidental drowning and submersion (W65–W74)	36	0.9	45	1.1
Accidental suffocation and strangulation in bed (W75)	586	14.6	665	16.1
Other accidental suffocation and strangulation (W76–W77,W81–W84)	206	5.1	188	4.6
Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract (W78–W80)	53	1.3	54	1.3
Accidents caused by exposure to smoke, fire and flames (X00–X09)	20	0.5	24	0.6
Accidental poisoning and exposure to noxious substances (X40–X49)	6	*	22	0.5
Other and unspecified accidents (W20–W31,W35–W64,W85–W99,X10–X39,X50–X59)	44	1.1	66	1.6
Assault (homicide) (*U01,X85–Y09)	291	7.3	317	7.7
Assault (homicide) by hanging, strangulation and suffocation (X91)	14	*	26	0.6
Assault (homicide) by discharge of firearms (*U01.4,X93–X95)	11	*	11	*
Neglect, abandonment and other maltreatment syndromes (Y06–Y07)	85	2.1	97	2.3
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	4.5	183	4.4
Complications of medical and surgical care (Y40–Y84)	19	*	17	*
Other external causes (Y10–Y36)	95	2.4	112	2.7

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

– Quantity zero.

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

[2]Expanded ICD–10 code J09 (Influenza due to certain identified influenza virus) was added to the category in 2009; 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 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 but use different denominators. For more information on these measures of risk, see "Infant mortality" in "Technical Notes."

Table 6. Expectation of life at selected ages, by race and Hispanic origin, race for non-Hispanic population, and sex: United States, final 2009 and preliminary 2010

[Data based on a continuous file of records from the states. Calculations of life expectancy employ populations estimated as of April 1 for 2010 and July 1 for 2009; see "Technical Notes." Race categories are consistent with 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these states were bridged to 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 race and ethnicity misclassification (see "Life tables" in "Technical Notes"). Adjustments do not account for other sources of error such as return migration (27)]

Age (years) and race	Both sexes		Male		Female	
	2010	2009[1]	2010	2009[1]	2010	2009[1]
All races and origins[2]						
0	78.7	78.6	76.2	76.0	81.1	80.9
1	78.2	78.1	75.7	75.6	80.5	80.4
5	74.3	74.2	71.8	71.6	76.6	76.5
10	69.3	69.2	66.8	66.7	71.6	71.5
15	64.4	64.3	61.9	61.7	66.7	66.6
20	59.5	59.4	57.1	57.0	61.8	61.7
25	54.8	54.7	52.4	52.3	56.9	56.8
30	50.0	49.9	47.8	47.7	52.0	51.9
35	45.3	45.2	43.1	43.0	47.2	47.1
40	40.6	40.5	38.5	38.4	42.5	42.4
45	36.0	35.9	33.9	33.8	37.8	37.7
50	31.5	31.5	29.6	29.5	33.2	33.1
55	27.2	27.2	25.4	25.4	28.8	28.7
60	23.1	23.1	21.5	21.4	24.5	24.4
65	19.2	19.2	17.7	17.7	20.3	20.3
70	15.5	15.5	14.2	14.2	16.5	16.5
75	12.2	12.2	11.0	11.0	12.9	12.9
80	9.2	9.2	8.2	8.2	9.7	9.7
85	6.6	6.6	5.9	5.9	7.0	7.0
90	4.7	4.7	4.1	4.1	4.9	4.9
95	3.3	3.3	2.9	2.9	3.4	3.4
100	2.4	2.4	2.1	2.1	2.4	2.4
White						
0	79.0	78.8	76.5	76.4	81.3	81.2
1	78.4	78.3	76.0	75.9	80.7	80.6
5	74.4	74.3	72.1	71.9	76.8	76.7
10	69.5	69.4	67.1	67.0	71.8	71.7
15	64.5	64.4	62.2	62.0	66.8	66.7
20	59.7	59.6	57.3	57.2	61.9	61.8
25	54.9	54.8	52.7	52.6	57.1	57.0
30	50.2	50.1	48.0	47.9	52.2	52.1
35	45.4	45.3	43.3	43.2	47.4	47.3
40	40.7	40.6	38.7	38.6	42.6	42.5
45	36.1	36.0	34.1	34.0	37.9	37.8
50	31.6	31.5	29.7	29.7	33.3	33.3
55	27.3	27.3	25.5	25.5	28.9	28.8
60	23.1	23.1	21.6	21.5	24.5	24.5
65	19.2	19.2	17.8	17.7	20.4	20.3
70	15.5	15.5	14.2	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	5.8	5.8	6.9	6.9
90	4.6	4.6	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	2.1	2.1	2.3	2.3

See footnotes at end of table.

Table 6. Expectation of life at selected ages, by race and Hispanic origin, race for non-Hispanic population, and sex: United States, final 2009 and preliminary 2010—Con.

[Data based on a continuous file of records from the states. Calculations of life expectancy employ populations estimated as of April 1 for 2010 and July 1 for 2009; see "Technical Notes." Race categories are consistent with 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these states were bridged to 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 race and ethnicity misclassification (see "Life tables" in "Technical Notes"). Adjustments do not account for other sources of error such as return migration (27)]

Age (years) and race	Both sexes		Male		Female	
	2010	2009[1]	2010	2009[1]	2010	2009[1]
Black						
0	75.1	74.7	71.8	71.4	78.0	77.7
1	75.0	74.7	71.8	71.4	77.8	77.6
5	71.1	70.8	67.9	67.5	73.9	73.7
10	66.1	65.8	62.9	62.6	69.0	68.8
15	61.2	60.9	58.0	57.6	64.0	63.8
20	56.4	56.1	53.3	52.9	59.1	58.9
25	51.7	51.4	48.8	48.4	54.3	54.1
30	47.1	46.8	44.3	43.9	49.5	49.3
35	42.4	42.2	39.7	39.4	44.7	44.6
40	37.9	37.6	35.2	34.9	40.1	39.9
45	33.4	33.2	30.8	30.6	35.5	35.4
50	29.1	28.9	26.6	26.4	31.2	31.1
55	25.1	25.0	22.7	22.6	27.0	26.9
60	21.4	21.3	19.2	19.1	23.1	23.0
65	17.8	17.8	15.9	15.9	19.3	19.2
70	14.6	14.6	12.9	12.9	15.8	15.7
75	11.6	11.6	10.2	10.2	12.5	12.5
80	9.0	9.0	7.8	7.8	9.6	9.6
85	6.8	6.8	5.9	5.9	7.2	7.2
90	5.1	5.1	4.4	4.4	5.3	5.3
95	3.8	3.8	3.3	3.3	3.9	3.9
100	2.9	2.9	2.5	2.5	2.9	2.9
Hispanic						
0	81.3	81.1	78.8	78.6	83.8	83.5
1	80.7	80.5	78.2	78.1	83.2	82.9
5	76.8	76.6	74.3	74.2	79.3	79.0
10	71.8	71.7	69.4	69.2	74.3	74.1
15	66.9	66.7	64.4	64.3	69.4	69.1
20	62.0	61.9	59.6	59.5	64.4	64.2
25	57.2	57.1	54.9	54.8	59.5	59.3
30	52.4	52.3	50.1	50.1	54.6	54.4
35	47.6	47.5	45.4	45.3	49.7	49.5
40	42.8	42.7	40.7	40.6	44.9	44.6
45	38.1	38.0	36.0	36.0	40.1	39.9
50	33.5	33.5	31.5	31.6	35.4	35.2
55	29.0	29.1	27.2	27.3	30.8	30.7
60	24.8	24.8	23.1	23.2	26.4	26.2
65	20.7	20.7	19.2	19.3	22.1	21.9
70	16.8	16.9	15.5	15.6	18.0	17.9
75	13.2	13.3	12.1	12.3	14.2	14.1
80	10.0	10.1	9.1	9.3	10.8	10.7
85	7.2	7.3	6.6	6.7	7.8	7.7
90	5.1	5.2	4.6	4.8	5.4	5.4
95	3.5	3.6	3.3	3.4	3.7	3.7
100	2.5	2.6	2.4	2.5	2.6	2.6

See footnotes at end of table.

Table 6. Expectation of life at selected ages, by race and Hispanic origin, race for non-Hispanic population, and sex: United States, final 2009 and preliminary 2010—Con.

[Data based on a continuous file of records from the states. Calculations of life expectancy employ populations estimated as of April 1 for 2010 and July 1 for 2009; see "Technical Notes." Race categories are consistent with 1977 Office of Management and Budget (OMB) standards. Multiple-race data were reported by 37 states and the District of Columbia in 2010 and by 34 states and the District of Columbia in 2009; see "Technical Notes." Multiple-race data for these states were bridged to 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 race and ethnicity misclassification (see "Life tables" in "Technical Notes"). Adjustments do not account for other sources of error such as return migration (27)]

Age (years) and race	Both sexes		Male		Female	
	2010	2009[1]	2010	2009[1]	2010	2009[1]
Non-Hispanic white						
0	78.8	78.7	76.4	76.3	81.1	81.1
1	78.2	78.1	75.9	75.8	80.5	80.4
5	74.3	74.2	71.9	71.9	76.6	76.5
10	69.3	69.3	67.0	66.9	71.6	71.5
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	52.6	52.5	56.9	56.8
30	50.0	49.9	47.9	47.8	52.1	52.0
35	45.3	45.2	43.2	43.1	47.3	47.2
40	40.6	40.5	38.6	38.5	42.5	42.4
45	36.0	35.9	34.0	34.0	37.8	37.7
50	31.5	31.5	29.7	29.6	33.2	33.2
55	27.2	27.2	25.5	25.5	28.8	28.8
60	23.1	23.1	21.5	21.5	24.5	24.4
65	19.1	19.1	17.7	17.7	20.3	20.3
70	15.4	15.4	14.2	14.2	16.4	16.4
75	12.1	12.1	11.0	11.0	12.9	12.8
80	9.1	9.1	8.2	8.2	9.7	9.7
85	6.5	6.5	5.8	5.8	6.9	6.9
90	4.6	4.6	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	2.1	2.1	2.3	2.3
Non-Hispanic black						
0	74.7	74.3	71.4	70.9	77.7	77.4
1	74.6	74.3	71.4	71.0	77.6	77.3
5	70.7	70.4	67.5	67.1	73.7	73.4
10	65.8	65.5	62.5	62.2	68.7	68.5
15	60.9	60.5	57.6	57.2	63.8	63.5
20	56.1	55.8	52.9	52.5	58.9	58.6
25	51.4	51.1	48.4	48.0	54.0	53.8
30	46.8	46.5	43.9	43.6	49.3	49.1
35	42.2	41.9	39.4	39.1	44.5	44.3
40	37.6	37.3	34.9	34.6	39.9	39.7
45	33.1	32.9	30.5	30.3	35.3	35.2
50	28.9	28.7	26.4	26.1	31.0	30.9
55	24.9	24.8	22.5	22.3	26.8	26.8
60	21.2	21.1	19.0	18.9	22.9	22.8
65	17.7	17.7	15.8	15.8	19.2	19.1
70	14.5	14.5	12.8	12.8	15.7	15.6
75	11.6	11.6	10.1	10.1	12.5	12.4
80	9.0	9.0	7.8	7.8	9.6	9.6
85	6.8	6.8	5.9	5.9	7.2	7.2
90	5.1	5.1	4.4	4.4	5.3	5.3
95	3.8	3.8	3.3	3.3	3.9	3.9
100	2.9	2.9	2.5	2.5	2.9	2.9

[1]Life expectancies for 2009 have been updated and may differ from those previously published; see "Technical Notes."
[2]Includes 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 2010

[Data based on a continuous file of records received from the states. Rates are per 100,000 population in specified group. Rates are based on populations enumerated in the 2010 U.S. census as of April 1. For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures 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 *International Classification of Diseases, Tenth Revision*, Second Edition, 2004) and age	Number	Rate
	All ages[2]		
...	All causes	2,465,932	798.7
1	Diseases of heart (I00–I09,I11,I13,I20–I51)	595,444	192.9
2	Malignant neoplasms (C00–C97)	573,855	185.9
3	Chronic lower respiratory diseases (J40–J47)	137,789	44.6
4	Cerebrovascular diseases (I60–I69)	129,180	41.8
5	Accidents (unintentional injuries) (V01–X59,Y85–Y86)	118,043	38.2
...	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	11.4
...	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)	82,962	26.9
6	Alzheimer's disease (G30)	83,308	27.0
7	Diabetes mellitus (E10–E14)	68,905	22.3
8	Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27)	50,472	16.3
9	Influenza and pneumonia (J09–J18)	50,003	16.2
10	Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)	37,793	12.2
...	All other causes (residual)	621,140	201.2
	1–4 years		
...	All causes	4,308	26.5
1	Accidents (unintentional injuries) (V01–X59,Y85–Y86)	1,367	8.4
...	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)	444	2.7
...	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)	923	5.7
2	Congenital malformations, deformations and chromosomal abnormalities. (Q00–Q99)	495	3.0
3	Assault (homicide). (*U01–*U02,X85–Y09,Y87.1)	367	2.3
4	Malignant neoplasms (C00–C97)	343	2.1
5	Diseases of heart (I00–I09,I11,I13,I20–I51)	156	1.0
6	Influenza and pneumonia (J09–J18)	83	0.5
7	Septicemia (A40–A41)	60	0.4
8	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	58	0.4
9	Cerebrovascular diseases (I60–I69)	52	0.3
9	Certain conditions originating in the perinatal period. (P00–P96)	52	0.3
...	All other causes (residual)	1,275	7.8
	5–14 years		
...	All causes	5,274	12.9
1	Accidents (unintentional injuries) (V01–X59,Y85–Y86)	1,626	4.0
...	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)	895	2.2
...	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)	731	1.8
2	Malignant neoplasms (C00–C97)	913	2.2
3	Congenital malformations, deformations and chromosomal abnormalities. (Q00–Q99)	292	0.7
4	Intentional self harm (suicide) (*U03,X60–X84,Y87.0)	273	0.7
5	Assault (homicide). (*U01–*U02,X85–Y09,Y87.1)	254	0.6
6	Diseases of heart (I00–I09,I11,I13,I20–I51)	180	0.4
7	Chronic lower respiratory diseases (J40–J47)	128	0.3
8	Cerebrovascular diseases (I60–I69)	85	0.2
9	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	83	0.2
10	Influenza and pneumonia (J09–J18)	69	0.2
...	All other causes (residual)	1,371	3.3

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 2010—Con.

[Data based on a continuous file of records received from the states. Rates are per 100,000 population in specified group. Rates are based on populations enumerated in the 2010 U.S. census as of April 1. For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures 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 *International Classification of Diseases, Tenth Revision*, Second Edition, 2004) and age	Number	Rate
	15–24 years		
...	All causes	29,504	67.6
1	Accidents (unintentional injuries) (V01–X59,Y85–Y86)	12,015	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)	7,209	16.5
...	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)	4,806	11.0
2	Assault (homicide) (*U01–*U02,X85–Y09,Y87.1)	4,651	10.7
3	Intentional self harm (suicide) (*U03,X60–X84,Y87.0)	4,559	10.5
4	Malignant neoplasms (C00–C97)	1,594	3.7
5	Diseases of heart (I00–I09,I11,I13,I20–I51)	984	2.3
6	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	401	0.9
7	Cerebrovascular diseases (I60–I69)	187	0.4
8	Influenza and pneumonia (J09–J18)	179	0.4
9	Pregnancy, childbirth and the puerperium (O00–O99)	162	0.4
10	Diabetes mellitus (E10–E14)	161	0.4
...	All other causes (residual)	4,611	10.6
	25–44 years		
...	All causes	112,177	136.6
1	Accidents (unintentional injuries) (V01–X59,Y85–Y86)	28,149	34.3
...	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)	10,420	12.7
...	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)	17,729	21.6
2	Malignant neoplasms (C00–C97)	15,389	18.7
3	Diseases of heart (I00–I09,I11,I13,I20–I51)	13,447	16.4
4	Intentional self harm (suicide) (*U03,X60–X84,Y87.0)	12,119	14.8
5	Assault (homicide) (*U01–*U02,X85–Y09,Y87.1)	6,674	8.1
6	Chronic liver disease and cirrhosis (K70,K73–K74)	2,900	3.5
7	Human immunodeficiency virus (HIV) disease (B20–B24)	2,638	3.2
8	Cerebrovascular diseases (I60–I69)	2,396	2.9
9	Diabetes mellitus (E10–E14)	2,365	2.9
10	Influenza and pneumonia (J09–J18)	1,146	1.4
...	All other causes (residual)	24,954	30.4
	45–64 years		
...	All causes	493,376	605.4
1	Malignant neoplasms (C00–C97)	159,379	195.6
2	Diseases of heart (I00–I09,I11,I13,I20–I51)	103,812	127.4
3	Accidents (unintentional injuries) (V01–X59,Y85–Y86)	32,667	40.1
...	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)	9,655	11.8
...	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)	23,011	28.2
4	Chronic lower respiratory diseases (J40–J47)	18,616	22.8
5	Chronic liver disease and cirrhosis (K70,K73–K74)	18,348	22.5
6	Diabetes mellitus (E10–E14)	17,224	21.1
7	Cerebrovascular diseases (I60–I69)	16,565	20.3
8	Intentional self harm (suicide) (*U03,X60–X84,Y87.0)	14,912	18.3
9	Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27)	7,306	9.0
10	Septicemia (A40–A41)	6,957	8.5
...	All other causes (residual)	97,590	119.8

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 2010—Con.

[Data based on a continuous file of records received from the states. Rates are per 100,000 population in specified group. Rates are based on populations enumerated in the 2010 U.S. census as of April 1. For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures 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 *International Classification of Diseases, Tenth Revision*, Second Edition, 2004) and age	Number	Rate
	65 years and over		
. . .	All causes	1,796,620	4,461.7
1	Diseases of heart (I00–I09,I11,I13,I20–I51)	476,519	1,183.4
2	Malignant neoplasms (C00–C97)	396,173	983.8
3	Chronic lower respiratory diseases (J40–J47)	117,856	292.7
4	Cerebrovascular diseases (I60–I69)	109,764	272.6
5	Alzheimer's disease (G30)	82,438	204.7
6	Diabetes mellitus (E10–E14)	49,123	122.0
7	Influenza and pneumonia (J09–J18)	42,824	106.3
8	Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27)	41,995	104.3
9	Accidents (unintentional injuries) (V01–X59,Y85–Y86)	41,160	102.2
. . .	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)	6,376	15.8
. . .	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)	34,784	86.4
10	Septicemia (A40–A41)	26,322	65.4
. . .	All other causes (residual)	412,446	1,024.3

. . . Category not applicable.

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

[2]Includes deaths under age 1 year.

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 variability of the data, see "Technical Notes."

Table 8. Infant deaths and infant mortality rates for the 10 leading causes of infant death: United States, preliminary 2010

[Data 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]

Rank[1]	Cause of death (based on *International Classification of Diseases, Tenth Revision*, Second Edition, 2004)	Number	Rate
. . .	All causes	24,548	613.7
1	Congenital malformations, deformations and chromosomal abnormalities. (Q00-Q99)	5,077	126.9
2	Disorders related to short gestation and low birth weight, not elsewhere classified. (P07)	4,130	103.2
3	Sudden infant death syndrome (R95)	1,890	47.2
4	Newborn affected by maternal complications of pregnancy (P01)	1,555	38.9
5	Accidents (unintentional injuries) (V01-X59)	1,043	26.1
6	Newborn affected by complications of placenta, cord and membranes (P02)	1,030	25.7
7	Bacterial sepsis of newborn (P36)	569	14.2
8	Diseases of the circulatory system (I00-I99)	499	12.5
9	Respiratory distress of newborn. (P22)	496	12.4
10	Necrotizing enterocolitis of newborn (P77)	470	11.7
. . .	All other causes (residual)	7,789	194.7

. . . Category not applicable.

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

NOTES: For certain causes of death such as unintentional injuries, homicides, suicides, and sudden infant death syndrome, 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 but use different denominators. For more information on these measures of risk, see "Infant mortality" in "Technical Notes."

Technical Notes

Nature and sources of data

Preliminary mortality data for 2010 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 November 8, 2011. NCHS received the data from the state's vital registration systems through the Vital Statistics Cooperative Program. Demographic information for the United States was available in calendar year 2010 for an estimated 99.9 percent of infant decedents and 100 percent of decedents aged 1 year and over. Medical information for the United States was available in calendar year 2010 for an estimated 98.6 percent of infant decedents and 98.7 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. Data for Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas included in tables showing data by state are not included in U.S. totals. Additional information on 2009 final data is available elsewhere (15).

For 2010, 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 0.5 percent for all variables discussed in this report. Detailed information on reporting completeness and imputation procedures may be found in "Technical Appendix, Vital Statistics of the United States: Mortality, 1999" (36).

2003 revision of U.S. Standard Certificate of Death

This report includes data for the District of Columbia and 34 states [Arizona, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Maine, Michigan, 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 2010, and the remaining 16 states that collected and reported death data in 2009 based on the 1989 revision of the U.S. Standard Certificate of Death. Kentucky implemented the 2003 revision of the U.S. Standard Certificate of Death in July 2010, and Maine started using the 2003 revision in June; therefore, a portion of these two states' data for 2010 were reported using the 1989 revision. The 2003 revision is described in detail elsewhere (18,19). 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) (18). 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") (24). 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 2010 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, Kansas, Kentucky, Maine, Michigan, 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, Minnesota, and Wisconsin. Data from the vital records of the remaining 13 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 (19,20). In addition, these 13 states report a minimum set of four races as stipulated in the 1977 standards. These are white, black or African American, American Indian or Alaska Native (AIAN), and Asian or Pacific Islander (API).

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 2010

[By place of occurrence]

Area	Infant deaths (under age 1 year)			Deaths to those aged 1 year and over		
		Percent completeness			Percent completeness	
	Count of records	Demographic file	Medical file	Count of records	Demographic file	Medical file
United States[1]	24,598	99.9	98.6	2,445,491	100.0	98.7
Alabama	519	100.0	100.0	46,833	100.0	100.0
Alaska	38	100.0	100.0	3,600	100.0	99.9
Arizona	526	99.8	99.8	47,082	100.0	100.0
Arkansas	277	100.0	100.0	28,320	100.0	100.0
California	2,432	100.0	100.0	232,079	100.0	100.0
Colorado	422	100.0	100.0	31,444	100.0	100.0
Connecticut	189	100.0	93.1	28,647	99.9	95.4
Delaware	95	100.0	100.0	7,579	100.0	100.0
District of Columbia	169	100.0	100.0	5,574	100.0	100.0
Florida	1,436	100.0	100.0	173,710	100.0	100.0
Georgia	859	100.0	95.7	70,937	100.0	96.3
Hawaii	110	100.0	100.0	9,542	100.0	100.0
Idaho	88	100.0	100.0	11,199	100.0	100.0
Illinois	1,055	100.0	100.0	96,018	100.0	100.0
Indiana	609	100.0	92.1	56,693	100.0	93.1
Iowa	162	100.0	100.0	27,534	100.0	100.0
Kansas	217	100.0	100.0	23,353	100.0	100.0
Kentucky	344	100.0	94.2	41,294	100.0	91.6
Louisiana	488	100.0	100.6	40,344	100.0	100.0
Maine	73	100.0	93.2	12,590	99.9	98.1
Maryland	424	100.0	100.0	42,772	100.0	100.0
Massachusetts	327	100.0	100.0	53,179	100.0	100.0
Michigan	777	100.0	99.7	83,508	100.0	99.4
Minnesota	328	100.0	93.9	38,684	100.0	89.0
Mississippi	351	100.0	100.0	27,951	100.0	100.0
Missouri	610	99.5	99.5	56,693	100.0	100.0
Montana	61	100.0	100.0	8,777	100.0	100.0
Nebraska	146	100.0	100.0	15,146	100.0	100.0
Nevada	195	100.0	100.0	20,171	100.0	100.0
New Hampshire	41	100.0	100.0	9,949	100.0	100.0
New Jersey	456	100.0	100.0	67,866	100.0	100.0
New Mexico	134	100.0	100.0	15,376	100.0	100.0
New York	1,249	100.0	100.0	144,347	100.0	100.0
New York excluding New York City	640	100.0	100.0	92,381	100.0	100.0
New York City	609	100.0	100.0	51,966	100.0	100.0
North Carolina	883	100.0	100.0	78,701	100.0	100.0
North Dakota	56	100.0	100.0	6,361	100.0	100.0
Ohio	1,120	99.4	97.2	107,550	100.0	96.6
Oklahoma	371	100.0	66.3	35,237	100.0	75.6
Oregon	249	100.0	100.0	31,632	100.0	100.0
Pennsylvania	1,110	100.0	99.7	124,561	100.0	100.0
Rhode Island	90	97.8	96.7	9,658	100.0	99.9
South Carolina	397	100.0	100.0	40,360	100.0	100.0
South Dakota	90	100.0	100.0	7,186	100.0	100.0
Tennessee	712	100.0	100.0	61,909	100.0	100.0
Texas	2,390	100.0	100.0	166,292	100.0	100.0
Utah	277	100.0	100.0	14,873	100.0	100.0
Vermont	24	100.0	100.0	5,267	100.0	100.0
Virginia	667	100.0	100.0	57,684	100.0	100.0
Washington	388	100.0	96.9	47,861	100.0	99.1
West Virginia	150	100.0	86.7	20,706	100.0	88.2
Wisconsin	393	100.0	100.0	46,673	100.0	100.0
Wyoming	24	100.0	100.0	4,189	100.0	100.0
Puerto Rico	350	100.0	99.1	28,923	100.0	96.3
Virgin Islands	11	0.0	0.0	688	0.0	0.0
Guam	49	100.0	100.0	822	100.0	100.0
American Samoa	14	100.0	100.0	211	100.0	100.0
Northern Marianas	2	0.0	0.0	170	0.0	0.0

0.0 Quantity more than zero but less than 0.05. [1]Excludes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas.

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

To provide uniformity and comparability of data during the transition period, before all or most of the data becomes available in the new multiple-race format, it is necessary to adjust the data for those 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") (22,23). 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 (25–27).

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 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."

In 2009 and 2010, all records for Wyoming were assigned a value of unknown for injury at work because of an error in reporting the item. As a result, injury at work data, shown in Table 2 of this report, are somewhat undercounted. Wyoming generally reports a relatively small number of injury at work deaths, therefore, the impact of not having these deaths included is expected to be minimal. Wyoming reported 28 deaths in 2006, 35 deaths in 2007, and 56 deaths in 2008 for injury at work (12–14). The issue is expected to be resolved for 2010 final data.

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* (37).

Effective with deaths occurring in 1999, the United States began using the Tenth Revision of the ICD (ICD–10) (38). In 2004, the Second Edition of ICD–10 was adopted (39). During 1979–1998, causes of death were coded and classified according to the Ninth Revision (ICD–9) (40). The change from ICD–9 to ICD–10 resulted in discontinuities for selected cause-of-death trends. These discontinuities are measured using comparability ratios derived from a comparability study (41).

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 2009 and 2010 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 year 2003 to be more comprehensive. The following 37 ICD–10 codes were added to the previous 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, G21.1, G24.0, G25.1, G25.4, G25.6, G44.4, G62.0, G72.0, I95.2, J70.2, J70.3, J70.4, L10.5, L27.0, L27.1, M10.2, M32.0, M80.4, M81.4, M83.5, M87.1, R78.1, R78.2, R78.3, R78.4, and R78.5. In addition to expansion of the list in 2003, ICD codes K85.3 (Drug-induced acute pancreatitis) and R50.2 (Drug-induced fever) were added to the list of drug-induced codes in 2006.

Codes for alcohol-induced deaths—The list of codes included in alcohol-induced causes was expanded in data year 2003 to be more comprehensive. Three ICD–10 codes were added to the previous list of alcohol-induced codes: E24.4, G72.1, and K86.0. Additionally, K85.2 (Alcohol-induced acute pancreatitis) was added to the list in 2006.

Recently added codes—Beginning with data for 2009, NCHS added five new WHO ICD–10 codes: A09.0, Other and unspecified gastroenteritis and colitis of infectious origin; A09.9, Gastroenteritis and colitis of unspecified origin; K52.3, Indeterminate colitis; R26.3, Immobility; and R63.6, Insufficient intake of food and water due to self neglect. Deaths classified to codes A09.0 and A09.9 are included in the

category Certain other intestinal infections in the list of 113 selected causes of death (Table 2) and in the category Diarrhea and gastroenteritis of infectious origin in the list of 130 selected causes of infant death (Table 5). Deaths classified to the code K52.3 are included in the Residual category of the list of 113 selected causes of death and in the category Gastritis, duodenitis, and noninfective enteritis and colitis in the list of 130 selected causes of infant death. Deaths classified to codes R26.3 and R63.6 are included in the category Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified in both the 113 and 130 cause lists (15). Additional information on these new categories is available from: http://www.cdc.gov/nchs/data/dvs/Part9InstructionManual2009.pdf (42).

In addition, in 2009 the title for ICD–10 code J09 was changed from Influenza due to identified avian influenza virus to Influenza due to certain identified influenza virus. The reason for this change was to accommodate deaths from influenza A (H1N1) virus in the ICD–10 code J09 for the 2009 data year. In April 2009, the new influenza A (H1N1) virus was determined to be a cause of influenza illness in the United States (43). The effect of this change is discussed in greater detail in "Deaths: Final Data for 2009" (15). In 2009, 1,557 deaths were classified to ICD–10 code J09; in 2010, 226 deaths were classified to code J09.

No codes were added or deleted in 2010.

Nonsampling error

Causes of death in this report are subject to nonsampling error 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 for which the preliminary file completeness is more than 90 percent, it is unlikely that seasonality is a major factor.

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 2007–2009 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 was underestimated in the preliminary file by 5.4 percent in 2007, 0.6 percent in 2008, and 0.7 percent in 2009. Similar undercounts occurred for suicide, with preliminary underestimates of 4.1 percent in 2007, 0.3 percent in 2008, and 1.0 percent in 2009. Likewise, homicide showed a 4.6 percent underestimate in the preliminary file in 2007 and 1.2 percent underestimate in 2009, 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 was underestimated by 3.7 percent in 2007, 0.4 percent in 2008, and 1.7 percent in 2009. Unintentional injuries and SIDS were underestimated in the preliminary data for each of the 3 years during 2007–2009, with unintentional injuries being underestimated between 1.2 percent and 3.7 percent, and SIDS between 2.6 percent and 13.7 percent (Table III).

Tabulation lists and cause-of-death ranking

Tabulation lists for ICD–10 are published in "NCHS Instruction Manual, Part 9, ICD–10 Cause-of-Death Lists for Tabulating Mortality Statistics, Updated March 2009" (42). 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 (44). 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 2010 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 2010" (34). 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 2010 by the estimated population of persons under age 1 enumerated in the 2010 census as of April 1, 2010, 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

Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 2007–2009

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

Cause of death (based on *International Classification of Diseases, Tenth Revision*, Second Edition, 2004)	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	Preliminary number of deaths 2007	Final number of deaths 2007	Ratio of preliminary to final 2007
All causes	2,436,652	2,437,163	0.9998	2,472,699	2,471,984	1.0003	2,424,059	2,423,712	1.0001
Salmonella infections (A01–A02)	26	26	1.0000	43	44	0.9773	30	30	1.0000
Shigellosis and amebiasis (A03,A06)	11	4	2.7500	6	6	1.0000	4	4	1.0000
Certain other intestinal infections (A04,A07–A09)[1]	10,242	10,251	0.9991	7,883	7,876	1.0009	6,822	6,758	1.0095
Tuberculosis (A16–A19)	547	529	1.0340	590	585	1.0085	541	554	0.9765
Respiratory tuberculosis (A16)	422	405	1.0420	452	449	1.0067	410	424	0.9670
Other tuberculosis (A17–A19)	126	124	1.0161	138	136	1.0147	131	130	1.0077
Whooping cough (A37)	15	15	1.0000	20	20	1.0000	11	9	1.2222
Scarlet fever and erysipelas (A38,A46)	5	5	1.0000	3	3	1.0000	3	3	1.0000
Meningococcal infection (A39)	97	99	0.9798	102	102	1.0000	73	87	0.8391
Septicemia (A40–A41)	35,587	35,639	0.9985	35,961	35,927	1.0009	34,851	34,828	1.0007
Syphilis (A50–A53)	33	34	0.9706	34	34	1.0000	50	42	1.1905
Acute poliomyelitis (A80)	–	–	. . .	–	–	. . .	–	–	. . .
Arthropod-borne viral encephalitis (A83–A84,A85.2)	2	2	1.0000	2	2	1.0000	2	3	0.6667
Measles (B05)	2	2	1.0000	–	–	. . .	–	–	. . .
Viral hepatitis (B15–B19)	7,652	7,694	0.9945	7,631	7,629	1.0003	7,313	7,407	0.9873
Human immunodeficiency virus (HIV) disease (B20–B24)	9,424	9,406	1.0019	10,295	10,285	1.0010	11,061	11,295	0.9793
Malaria (B50–B54)	4	3	1.3333	5	5	1.0000	4	5	0.8000
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)	5,842	5,849	0.9988	5,933	5,914	1.0032	5,774	5,825	0.9912
Malignant neoplasms (C00–C97)	568,668	567,628	1.0018	566,137	565,469	1.0012	560,187	562,875	0.9952
Malignant neoplasms of lip, oral cavity and pharynx (C00–C14)	7,913	7,922	0.9989	8,031	8,019	1.0015	7,950	8,067	0.9855
Malignant neoplasm of esophagus (C15)	13,916	13,908	1.0006	13,739	13,714	1.0018	13,488	13,592	0.9923
Malignant neoplasm of stomach (C16)	11,139	11,185	0.9959	11,381	11,352	1.0026	11,308	11,388	0.9930
Malignant neoplasms of colon, rectum and anus (C18–C21)	52,462	52,394	1.0013	53,337	53,321	1.0003	53,100	53,586	0.9909
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	19,311	19,352	0.9979	18,243	18,213	1.0016	17,033	17,146	0.9934
Malignant neoplasm of pancreas (C25)	35,872	35,628	1.0068	35,267	35,236	1.0009	34,032	34,117	0.9975
Malignant neoplasm of larynx (C32)	3,633	3,631	1.0006	3,759	3,760	0.9997	3,680	3,634	1.0127
Malignant neoplasms of trachea, bronchus and lung (C33–C34)	158,105	158,158	0.9997	158,873	158,656	1.0014	158,258	158,760	0.9968
Malignant melanoma of skin (C43)	9,254	9,199	1.0060	8,643	8,623	1.0023	8,499	8,461	1.0045
Malignant neoplasm of breast (C50)	41,115	41,078	1.0009	41,049	41,026	1.0006	40,514	40,970	0.9889
Malignant neoplasm of cervix uteri (C53)	3,909	3,909	1.0000	4,018	4,008	1.0025	3,942	4,021	0.9804
Malignant neoplasms of corpus uteri and uterus, part unspecified (C54–C55)	7,636	7,713	0.9900	7,682	7,675	1.0009	7,319	7,456	0.9816
Malignant neoplasm of ovary (C56)	14,513	14,436	1.0053	14,373	14,362	1.0008	14,535	14,621	0.9941
Malignant neoplasm of prostate (C61)	28,154	28,088	1.0023	28,517	28,472	1.0016	28,823	29,093	0.9907
Malignant neoplasms of kidney and renal pelvis (C64–C65)	13,027	12,995	1.0025	12,915	12,895	1.0016	12,569	12,703	0.9895
Malignant neoplasm of bladder (C67)	14,315	14,201	1.0080	14,053	14,036	1.0012	13,827	13,843	0.9988
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	14,192	14,176	1.0011	13,739	13,724	1.0011	13,172	13,234	0.9953
Malignant neoplasms of lymphoid, hematopoietic and related tissue (C81–C96)	55,462	55,406	1.0010	54,998	54,954	1.0008	54,950	54,991	0.9993
Hodgkin's disease (C81)	1,265	1,250	1.0120	1,170	1,171	0.9991	1,251	1,271	0.9843
Non–Hodgkin's lymphoma (C82–C85)	20,361	20,389	0.9986	20,374	20,369	1.0002	20,537	20,528	1.0004
Leukemia (C91–C95)	22,697	22,606	1.0040	22,357	22,335	1.0010	21,696	21,825	0.9941
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	11,072	11,094	0.9980	11,038	11,020	1.0016	11,420	11,307	1.0100

See footnotes at end of table.

Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 2007–2009—Con.

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

Cause of death (based on *International Classification of Diseases, Tenth Revision*, Second Edition, 2004)	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	Preliminary number of deaths 2007	Final number of deaths 2007	Ratio of preliminary to final 2007
Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue (C96)	66	67	0.9851	59	59	1.0000	47	60	0.7833
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)	64,738	64,249	1.0076	63,519	63,423	1.0015	63,186	63,192	0.9999
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	14,616	14,605	1.0008	14,481	14,470	1.0008	14,151	14,204	0.9963
Anemias (D50–D64)	4,652	4,686	0.9927	5,033	5,018	1.0030	4,848	4,829	1.0039
Diabetes mellitus (E10–E14)	68,504	68,705	0.9971	70,601	70,553	1.0007	70,905	71,382	0.9933
Nutritional deficiencies (E40–E64)	2,836	2,850	0.9951	2,981	2,976	1.0017	2,810	2,852	0.9853
Malnutrition (E40–E46)	2,672	2,680	0.9970	2,767	2,760	1.0025	2,600	2,644	0.9834
Other nutritional deficiencies (E50–E64)	164	170	0.9647	214	216	0.9907	210	208	1.0096
Meningitis (G00,G03)	648	649	0.9985	633	633	1.0000	626	655	0.9557
Parkinson's disease (G20–G21)	20,552	20,565	0.9994	20,507	20,483	1.0012	20,136	20,058	1.0039
Alzheimer's disease (G30)	78,889	79,003	0.9986	82,476	82,435	1.0005	74,944	74,632	1.0042
Major cardiovascular diseases (I00–I78)	779,367	780,624	0.9984	804,899	804,483	1.0005	803,504	806,156	0.9967
Diseases of heart (I00–I09,I11,I13,I20–I51)	598,607	599,413	0.9987	617,527	616,828	1.0011	615,651	616,067	0.9993
Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09)	3,251	3,234	1.0053	3,149	3,141	1.0025	3,188	3,201	0.9959
Hypertensive heart disease (I11)	33,029	33,157	0.9961	32,374	32,391	0.9995	30,354	30,780	0.9862
Hypertensive heart and renal disease (I13)	2,880	2,871	1.0031	2,867	2,872	0.9983	2,954	2,987	0.9890
Ischemic heart diseases (I20–I25)	385,723	386,324	0.9984	405,019	405,309	0.9993	403,741	406,351	0.9936
Acute myocardial infarction (I21–I22)	125,361	125,464	0.9992	133,723	133,958	0.9982	132,841	132,968	0.9990
Other acute ischemic heart diseases (I24)	3,953	4,001	0.9880	4,233	4,252	0.9955	4,046	4,092	0.9888
Other forms of chronic ischemic heart disease (I20,I25)	256,408	256,859	0.9982	267,063	267,099	0.9999	266,854	269,291	0.9910
Atherosclerotic cardiovascular disease, so described (I25.0)	56,731	57,043	0.9945	58,517	58,625	0.9982	57,639	59,051	0.9761
All other forms of chronic ischemic heart disease (I20,I25.1–I25.9)	199,677	199,816	0.9993	208,545	208,474	1.0003	209,215	210,240	0.9951
Other heart diseases (I26–I51)	173,725	173,827	0.9994	174,118	173,115	1.0058	175,413	172,748	1.0154
Acute and subacute endocarditis (I33)	1,164	1,167	0.9974	1,179	1,180	0.9992	1,206	1,225	0.9845
Diseases of pericardium and acute myocarditis (I30–I31,I40)	837	847	0.9882	829	827	1.0024	843	867	0.9723
Heart failure (I50)	56,752	56,410	1.0061	57,215	56,830	1.0068	57,235	56,565	1.0118
All other forms of heart disease (I26–I28,I34–I38,I42–I49,I51)	114,971	115,403	0.9963	114,895	114,278	1.0054	116,129	114,091	1.0179
Essential hypertension and hypertensive renal disease (I10,I12,I15)	25,651	25,734	0.9968	25,823	25,742	1.0031	23,769	23,965	0.9918
Cerebrovascular diseases (I60–I69)	128,603	128,842	0.9981	133,750	134,148	0.9970	133,990	135,952	0.9856
Atherosclerosis (I70)	7,341	7,377	0.9951	7,846	7,836	1.0013	8,223	8,232	0.9989
Other diseases of circulatory system (I71–I78)	19,165	19,258	0.9952	19,952	19,929	1.0012	21,872	21,940	0.9969
Aortic aneurysm and dissection (I71)	10,581	10,597	0.9985	11,088	11,079	1.0008	12,887	12,986	0.9924
Other diseases of arteries, arterioles and capillaries (I72–I78)	8,584	8,661	0.9911	8,864	8,850	1.0016	8,985	8,954	1.0035
Other disorders of circulatory system (I80–I99)	4,044	4,118	0.9820	4,034	4,042	0.9980	3,981	4,101	0.9707
Influenza and pneumonia (J09–J18)[2]	53,582	53,692	0.9980	56,335	56,284	1.0009	52,847	52,717	1.0025
Influenza (J09–J11)[2]	2,808	2,918	0.9623	1,721	1,722	0.9994	457	411	1.1119
Pneumonia (J12–J18)	50,774	50,774	1.0000	54,614	54,562	1.0010	52,389	52,306	1.0016
Other acute lower respiratory infections (J20–J22,U04)	263	272	0.9669	285	284	1.0035	268	255	1.0510
Acute bronchitis and bronchiolitis (J20–J21)	226	234	0.9658	235	235	1.0000	225	213	1.0563
Unspecified acute lower respiratory infection (J22,U04)	38	38	1.0000	50	49	1.0204	43	42	1.0238
Chronic lower respiratory diseases (J40–J47)	137,082	137,353	0.9980	141,075	141,090	0.9999	129,311	127,924	1.0108
Bronchitis, chronic and unspecified (J40–J42)	636	639	0.9953	733	731	1.0027	704	667	1.0555
Emphysema (J43)	10,916	10,878	1.0035	12,459	12,448	1.0009	12,963	12,790	1.0135
Asthma (J45–J46)	3,345	3,388	0.9873	3,395	3,397	0.9994	3,355	3,447	0.9733

See footnotes at end of table.

Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 2007–2009—Con.

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

Cause of death (based on *International Classification of Diseases, Tenth Revision*, Second Edition, 2004)	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	Preliminary number of deaths 2007	Final number of deaths 2007	Ratio of preliminary to final 2007
Other chronic lower respiratory diseases (J44,J47)	122,185	122,448	0.9979	124,489	124,514	0.9998	112,289	111,020	1.0114
Pneumoconioses and chemical effects (J60–J66,J68)	843	841	1.0024	905	908	0.9967	907	915	0.9913
Pneumonitis due to solids and liquids (J69)	15,928	15,948	0.9987	16,622	16,608	1.0008	17,302	16,988	1.0185
Other diseases of respiratory system (J00–J06,J30–J39,J67,J70–J98)	30,655	30,530	1.0041	30,000	29,925	1.0025	28,773	28,508	1.0093
Peptic ulcer (K25–K28)	2,937	2,956	0.9936	3,070	3,073	0.9990	3,000	3,045	0.9852
Diseases of appendix (K35–K38)	428	426	1.0047	420	418	1.0048	413	426	0.9695
Hernia (K40–K46)	1,821	1,801	1.0111	1,682	1,674	1.0048	1,663	1,698	0.9794
Chronic liver disease and cirrhosis (K70,K73–K74)	30,444	30,558	0.9963	29,963	29,963	1.0000	28,504	29,165	0.9773
Alcoholic liver disease (K70)	15,107	15,183	0.9950	14,859	14,864	0.9997	13,891	14,406	0.9643
Other chronic liver disease and cirrhosis (K73–K74)	15,338	15,375	0.9976	15,104	15,099	1.0003	14,613	14,759	0.9901
Cholelithiasis and other disorders of gallbladder (K80–K82)	3,286	3,300	0.9958	3,425	3,417	1.0023	3,178	3,237	0.9818
Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27)	48,714	48,935	0.9955	48,283	48,237	1.0010	46,095	46,448	0.9924
Acute and rapidly progressive nephritic and nephrotic syndrome (N00–N01,N04)	163	159	1.0252	165	160	1.0313	191	206	0.9272
Chronic glomerulonephritis, nephrosis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified (N02–N03,N05–N07,N26)	4,897	4,909	0.9976	4,120	4,109	1.0027	2,821	2,958	0.9537
Renal failure (N17–N19)	43,628	43,840	0.9952	43,965	43,935	1.0007	43,064	43,263	0.9954
Other disorders of kidney (N25,N27)	25	27	0.9259	33	33	1.0000	19	21	0.9048
Infections of kidney (N10–N12,N13.6,N15.1)	602	604	0.9967	629	627	1.0032	612	628	0.9745
Hyperplasia of prostate (N40)	438	446	0.9821	504	502	1.0040	498	491	1.0143
Inflammatory diseases of female pelvic organs (N70–N76)	138	134	1.0299	133	136	0.9779	100	116	0.8621
Pregnancy, childbirth and the puerperium (O00–099)	873	960	0.9094	774	795	0.9736	762	769	0.9909
Pregnancy with abortive outcome (O00–O07)	34	34	1.0000	34	34	1.0000	28	31	0.9032
Other complications of pregnancy, childbirth and the puerperium (O10–O99)	839	926	0.9060	739	761	0.9711	734	738	0.9946
Certain conditions originating in the perinatal period (P00–P96)	13,114	13,116	0.9998	13,889	13,933	0.9968	14,293	14,599	0.9790
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	9,927	9,883	1.0045	10,284	10,288	0.9996	10,277	10,421	0.9862
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	43,076	39,829	1.0815	38,455	38,522	0.9983	49,960	33,500	1.4913
All other diseases (residual)	252,241	252,818	0.9977	252,706	252,490	1.0009	237,037	238,192	0.9952
Accidents (unintentional injuries) (V01–X59,Y85–Y86)	117,176	118,021	0.9928	121,207	121,902	0.9943	117,075	123,706	0.9464
Transport accidents (V01–V99,Y85)	39,057	39,031	1.0007	42,742	42,709	1.0008	45,832	46,844	0.9784
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)	36,284	36,216	1.0019	39,831	39,790	1.0010	43,098	43,945	0.9807
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)	991	1,033	0.9593	1,146	1,140	1.0053	1,017	1,083	0.9391
Water, air and space, and other and unspecified transport accidents and their sequelae (V90–V99,Y85)	1,782	1,782	1.0000	1,765	1,779	0.9921	1,716	1,816	0.9449
Nontransport accidents (W00–X59,Y86)	78,118	78,990	0.9890	78,465	79,193	0.9908	71,244	76,862	0.9269
Falls (W00–W19)	24,834	24,792	1.0017	24,062	24,013	1.0020	22,736	22,631	1.0046
Accidental discharge of firearms (W32–W34)	588	554	1.0614	587	592	0.9916	721	613	1.1762
Accidental drowning and submersion (W65–W74)	3,539	3,517	1.0063	3,549	3,548	1.0003	3,237	3,443	0.9402
Accidental exposure to smoke, fire and flames (X00–X09)	2,751	2,756	0.9982	2,907	2,912	0.9983	3,276	3,286	0.9970
Accidental poisoning and exposure to noxious substances (X40–X49)	30,504	31,758	0.9605	30,306	31,116	0.9740	24,313	29,846	0.8146
Other and unspecified nontransport accidents and their sequelae (W20–W31,W35–W64,W75–W99,X10–X39,X50–X59,Y86)	15,902	15,613	1.0185	17,054	17,012	1.0025	16,961	17,043	0.9952

See footnotes at end of table.

Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 2007–2009—Con.

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

Cause of death (based on *International Classification of Diseases, Tenth Revision*, Second Edition, 2004)	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	Preliminary number of deaths 2007	Final number of deaths 2007	Ratio of preliminary to final 2007
Intentional self-harm (suicide) . . . . . (*U03,X60–X84,Y87.0)	36,547	36,909	0.9902	35,933	36,035	0.9972	33,185	34,598	0.9592
Intentional self-harm (suicide) by discharge of firearms . . . . . (X72–X74)	18,689	18,735	0.9975	18,251	18,223	1.0015	17,348	17,352	0.9998
Intentional self-harm (suicide) by other and unspecified means and their sequelae . . . . . (*U03,X60–X71,X75–X84,Y87.0)	17,859	18,174	0.9827	17,681	17,812	0.9926	15,837	17,246	0.9183
Assault (homicide) . . . . . (*U01–*U02,X85–Y09,Y87.1)	16,591	16,799	0.9876	17,837	17,826	1.0006	17,520	18,361	0.9542
Assault (homicide) by discharge of firearms . . . . . (*U01.4,X93–X95)	11,406	11,493	0.9924	12,209	12,179	1.0025	12,129	12,632	0.9602
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)	5,185	5,306	0.9772	5,628	5,647	0.9966	5,391	5,729	0.9410
Legal intervention . . . . . (Y35,Y89.0)	372	395	0.9418	380	381	0.9974	371	412	0.9005
Events of undetermined intent . . . . . (Y10–Y34,Y87.2,Y89.9)	4,730	5,005	0.9451	4,979	5,051	0.9857	4,888	5,381	0.9084
Discharge of firearms, undetermined intent . . . . . (Y22–Y24)	230	232	0.9914	276	273	1.0110	256	276	0.9275
Other and unspecified events of undetermined intent and their sequelae . . . . . (Y10–Y21,Y25–Y34,Y87.2,Y89.9)	4,500	4,773	0.9428	4,703	4,778	0.9843	4,632	5,105	0.9073
Operations of war and their sequelae . . . . . (Y36,Y89.1)	25	25	1.0000	31	31	1.0000	19	21	0.9048
Complications of medical and surgical care . . . . . (Y40–Y84,Y88)	2,550	2,616	0.9748	2,602	2,590	1.0046	2,566	2,597	0.9881

– Quantity zero.

. . . Category not applicable.

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

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

Table III. Ratios of preliminary to final reported numbers of deaths from 130 selected causes of infant death: United States, 2007–2009

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

Cause of death (based on *International Classification of Diseases, Tenth Revision,* Second Edition, 2004)	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	Preliminary number of deaths 2007	Final number of deaths 2007	Ratio of preliminary to final 2007
All causes	26,526	26,412	1.0043	28,029	28,059	0.9989	29,241	29,138	1.0035
Certain infectious and parasitic diseases (A00–B99)[1]	735	730	1.0068	485	478	1.0146	484	482	1.0041
Certain intestinal infectious diseases (A00–A08)	11	11	1.0000	12	12	1.0000	20	13	1.5385
Diarrhea and gastroenteritis of infectious origin (A09)[1]	328	331	0.9909	–	–	. . .	–	–	. . .
Tuberculosis (A16–A19)	1	1	1.0000	–	–	. . .	2	2	1.0000
Tetanus (A33,A35)	–	–	. . .	–	–	. . .	–	–	. . .
Diphtheria (A36)	–	–	. . .	–	–	. . .	–	–	. . .
Whooping cough (A37)	15	15	1.0000	18	18	1.0000	8	8	1.0000
Meningococcal infection (A39)	10	11	0.9091	9	9	1.0000	9	11	0.8182
Septicemia (A40–A41)	234	221	1.0588	293	289	1.0138	271	283	0.9576
Congenital syphilis (A50)	–	–	. . .	–	–	. . .	4	5	0.8000
Gonococcal infection (A54)	–	–	. . .	–	–	. . .	–	–	. . .
Viral diseases (A80–B34)	98	99	0.9899	102	102	1.0000	112	115	0.9739
Acute poliomyelitis (A80)	–	–	. . .	–	–	. . .	–	–	. . .
Varicella (chickenpox) (B01)	–	–	. . .	–	–	. . .	–	–	. . .
Measles (B05)	–	–	. . .	–	–	. . .	–	–	. . .
Human immunodeficiency virus (HIV) disease (B20–B24)	1	1	1.0000	–	–	. . .	7	5	1.4000
Mumps (B26)	–	–	. . .	–	–	. . .	–	–	. . .
Other and unspecified viral diseases (A81–B00,B02–B04,B06–B19,B25,B27–B34)	97	98	0.9898	102	102	1.0000	105	110	0.9545
Candidiasis (B37)	8	11	0.7273	7	7	1.0000	15	13	1.1538
Malaria (B50–B54)	1	1	1.0000	–	–	. . .	–	–	. . .
Pneumocystosis (B59)	–	–	. . .	3	3	1.0000	1	1	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)	27	29	0.9310	40	38	1.0526	42	31	1.3548
Neoplasms (C00–D48)	148	136	1.0882	128	131	0.9771	149	131	1.1374
Malignant neoplasms (C00–C97)	87	74	1.1757	68	70	0.9714	92	72	1.2778
Hodgkin's disease and non–Hodgkin's lymphomas (C81–C85)	–	–	. . .	1	1	1.0000	6	2	3.0000
Leukemia (C91–C95)	28	27	1.0370	27	27	1.0000	20	21	0.9524
Other and unspecified malignant neoplasms (C00–C80,C88–C90,C96–C97)	60	47	1.2766	39	42	0.9286	66	49	1.3469
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	61	62	0.9839	60	61	0.9836	57	59	0.9661
Diseases of the blood and blood–forming organs and certain disorders involving the immune mechanism (D50–D89)	89	92	0.9674	81	80	1.0125	108	116	0.9310
Anemias (D50–D64)	12	13	0.9231	15	15	1.0000	16	17	0.9412
Hemorrhagic conditions and other diseases of blood and blood–forming organs (D65–D76)	62	64	0.9688	56	56	1.0000	72	77	0.9351
Certain disorders involving the immune mechanism (D80–D89)	14	15	0.9333	9	9	1.0000	20	22	0.9091
Endocrine, nutritional and metabolic diseases (E00–E88)	209	196	1.0663	247	248	0.9960	255	252	1.0119
Short stature, not elsewhere classified (E34.3)	3	2	1.5000	9	9	1.0000	3	5	0.6000
Nutritional deficiencies (E40–E64)	3	3	1.0000	9	10	0.9000	4	7	0.5714
Cystic fibrosis (E84)	7	7	1.0000	4	4	1.0000	11	11	1.0000
Volume depletion, disorders of fluid, electrolyte and acid–base balance (E86–E87)	45	46	0.9783	80	78	1.0256	62	60	1.0333
All other endocrine, nutritional and metabolic diseases (E00–E32,E34.0–E34.2, E34.4–E34.9,E65–E83,E85,E88)	151	138	1.0942	145	147	0.9864	175	169	1.0355
Diseases of the nervous system (G00–G98)	340	354	0.9605	414	415	0.9976	424	413	1.0266

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, 2007–2009—Con.

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

Cause of death (based on *International Classification of Diseases, Tenth Revision,* Second Edition, 2004)	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	Preliminary number of deaths 2007	Final number of deaths 2007	Ratio of preliminary to final 2007
Meningitis (G00,G03)	59	62	0.9516	67	68	0.9853	88	82	1.0732
Infantile spinal muscular atrophy, type I (Werdnig–Hoffman) (G12.0)	13	13	1.0000	5	5	1.0000	15	13	1.1538
Infantile cerebral palsy (G80)	7	8	0.8750	8	8	1.0000	11	11	1.0000
Anoxic brain damage, not elsewhere classified (G93.1)	38	38	1.0000	51	56	0.9107	53	64	0.8281
Other diseases of nervous system (G04,G06–G11,G12.1–G12.9,G20–G72, G81–G92,G93.0,G93.2–G93.9,G95–G98)	223	233	0.9571	283	278	1.0180	257	243	1.0576
Diseases of the ear and mastoid process (H60–H93)	2	2	1.0000	6	6	1.0000	3	3	1.0000
Diseases of the circulatory system (I00–I99)	565	581	0.9725	590	594	0.9933	612	624	0.9808
Pulmonary heart disease and diseases of pulmonary circulation (I26–I28)	105	112	0.9375	88	88	1.0000	96	100	0.9600
Pericarditis, endocarditis and myocarditis (I30,I33,I40)	16	15	1.0667	19	18	1.0556	17	21	0.8095
Cardiomyopathy (I42)	110	111	0.9910	114	115	0.9913	117	120	0.9750
Cardiac arrest (I46)	27	28	0.9643	25	25	1.0000	34	29	1.1724
Cerebrovascular diseases (I60–I69)	129	147	0.8776	144	141	1.0213	136	132	1.0303
All other diseases of circulatory system (I00–I25,I31,I34–I38,I44–I45,I47–I51,I70–I99)	177	168	1.0536	201	207	0.9710	212	222	0.9550
Diseases of the respiratory system (J00–J98,U04)	584	595	0.9815	578	578	1.0000	641	640	1.0016
Acute upper respiratory infections (J00–J06)	10	12	0.8333	12	12	1.0000	15	14	1.0714
Influenza and pneumonia (J09–J18)[2]	238	234	1.0171	225	226	0.9956	218	222	0.9820
Influenza (J09–J11)[2]	28	26	1.0769	16	16	1.0000	9	13	0.6923
Pneumonia (J12–J18)	210	208	1.0096	208	210	0.9905	209	209	1.0000
Acute bronchitis and acute bronchiolitis (J20–J21)	46	46	1.0000	43	43	1.0000	44	45	0.9778
Bronchitis, chronic and unspecified (J40–J42)	13	13	1.0000	22	23	0.9565	23	24	0.9583
Asthma (J45–J46)	4	6	0.6667	6	6	1.0000	5	4	1.2500
Pneumonitis due to solids and liquids (J69)	6	7	0.8571	10	11	0.9091	11	10	1.1000
Other and unspecified diseases of respiratory system (J22,J30–J39, J43–J44,J47–J68,J70–J98,U04)	267	277	0.9639	260	257	1.0117	324	321	1.0093
Diseases of the digestive system (K00–K92)	229	220	1.0409	578	579	0.9983	650	677	0.9601
Gastritis, duodenitis, and noninfective enteritis and colitis (K29,K50–K55)	33	31	1.0645	355	354	1.0028	394	413	0.9540
Hernia of abdominal cavity and intestinal obstruction without hernia (K40–K46,K56)	50	49	1.0204	47	46	1.0217	68	68	1.0000
All other and unspecified diseases of digestive system (K00–K28,K30–K38,K57–K92)	147	140	1.0500	175	179	0.9777	189	196	0.9643
Diseases of the genitourinary system (N00–N98)	124	127	0.9764	172	169	1.0178	169	169	1.0000
Renal failure and other disorders of kidney (N17–N19,N25,N27)	103	105	0.9810	140	139	1.0072	137	138	0.9928
Other and unspecified diseases of genitourinary system (N00–N15,N20–N23, N26,N28–N98)	21	22	0.9545	32	30	1.0667	32	31	1.0323
Certain conditions originating in the perinatal period (P00–P96)	12,981	12,999	0.9986	13,738	13,800	0.9955	14,141	14,466	0.9775
Newborn affected by maternal factors and by complications of pregnancy, labor and delivery (P00–P04)	2,914	2,980	0.9779	3,153	3,168	0.9953	3,280	3,274	1.0018
Newborn affected by maternal hypertensive disorders (P00.0)	82	83	0.9880	84	85	0.9882	96	89	1.0787
Newborn affected by other maternal conditions which may be unrelated to present pregnancy (P00.1–P00.9)	90	94	0.9574	89	88	1.0114	99	91	1.0879
Newborn affected by maternal complications of pregnancy (P01)	1,586	1,608	0.9863	1,764	1,765	0.9994	1,770	1,769	1.0006
Newborn affected by incompetent cervix (P01.0)	423	430	0.9837	447	446	1.0022	505	488	1.0348
Newborn affected by premature rupture of membranes (P01.1)	778	774	1.0052	840	841	0.9988	852	851	1.0012
Newborn affected by multiple pregnancy (P01.5)	198	206	0.9612	257	257	1.0000	222	238	0.9328
Newborn affected by other maternal complications of pregnancy (P01.2–P01.4,P01.6–P01.9)	187	198	0.9444	220	221	0.9955	191	192	0.9948

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, 2007–2009—Con.

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

Cause of death (based on *International Classification of Diseases, Tenth Revision,* Second Edition, 2004)	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	Preliminary number of deaths 2007	Final number of deaths 2007	Ratio of preliminary to final 2007
Newborn affected by complications of placenta, cord and membranes (P02)	1,022	1,064	0.9605	1,073	1,080	0.9935	1,139	1,135	1.0035
Newborn affected by complications involving placenta (P02.0–P02.3)	498	522	0.9540	531	539	0.9852	586	579	1.0121
Newborn affected by complications involving cord (P02.4–P02.6)	40	41	0.9756	55	55	1.0000	46	43	1.0698
Newborn affected by chorioamnionitis (P02.7)	483	500	0.9660	486	485	1.0021	503	511	0.9843
Newborn affected by other and unspecified abnormalities of membranes (P02.8–P02.9)	1	1	1.0000	1	1	1.0000	4	2	2.0000
Newborn affected by other complications of labor and delivery (P03)	109	98	1.1122	95	99	0.9596	120	127	0.9449
Newborn affected by noxious influences transmitted via placenta or breast milk (P04)	26	33	0.7879	48	51	0.9412	55	63	0.8730
Disorders related to length of gestation and fetal malnutrition (P05–P08)	4,568	4,625	0.9877	4,816	4,836	0.9959	4,782	4,961	0.9639
Slow fetal growth and fetal malnutrition (P05)	106	87	1.2184	83	82	1.0122	105	104	1.0096
Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	4,463	4,538	0.9835	4,733	4,754	0.9956	4,678	4,857	0.9631
Extremely low birth weight or extreme immaturity (P07.0,P07.2)	3,399	3,467	0.9804	3,636	3,645	0.9975	3,573	3,706	0.9641
Other low birth weight or preterm (P07.1,P07.3)	1,064	1,071	0.9935	1,097	1,109	0.9892	1,104	1,151	0.9592
Disorders related to long gestation and high birth weight (P08)	–	–	. . .	–	–	. . .	–	–	. . .
Birth trauma (P10–P15)	17	16	1.0625	18	18	1.0000	14	12	1.1667
Intrauterine hypoxia and birth asphyxia (P20–P21)	342	316	1.0823	382	385	0.9922	349	356	0.9803
Intrauterine hypoxia (P20)	139	119	1.1681	144	143	1.0070	108	106	1.0189
Birth asphyxia (P21)	203	197	1.0305	238	242	0.9835	241	250	0.9640
Respiratory distress of newborn (P22)	587	595	0.9866	625	630	0.9921	735	789	0.9316
Other respiratory conditions originating in the perinatal period (P23–P28)	964	956	1.0084	1,102	1,099	1.0027	1,077	1,117	0.9642
Congenital pneumonia (P23)	101	95	1.0632	74	73	1.0137	102	103	0.9903
Neonatal aspiration syndromes (P24)	40	44	0.9091	58	58	1.0000	50	51	0.9804
Interstitial emphysema and related conditions originating in the perinatal period (P25)	113	113	1.0000	121	122	0.9918	131	124	1.0565
Pulmonary hemorrhage originating in the perinatal period (P26)	162	159	1.0189	199	196	1.0153	154	161	0.9565
Chronic respiratory disease originating in the perinatal period (P27)	180	183	0.9836	239	237	1.0084	225	243	0.9259
Atelectasis (P28.0–P28.1)	297	283	1.0495	334	334	1.0000	354	366	0.9672
All other respiratory conditions originating in the perinatal period (P28.2–P28.9)	72	79	0.9114	77	79	0.9747	61	69	0.8841
Infections specific to the perinatal period (P35–P39)	858	832	1.0313	896	903	0.9922	1,039	1,057	0.9830
Bacterial sepsis of newborn (P36)	682	652	1.0460	696	700	0.9943	790	820	0.9634
Omphalitis of newborn with or without mild hemorrhage (P38)	4	4	1.0000	2	2	1.0000	5	4	1.2500
All other infections specific to the perinatal period (P35,P37,P39)	172	176	0.9773	198	201	0.9851	244	233	1.0472
Hemorrhagic and hematological disorders of newborn (P50–P61)	644	624	1.0321	642	648	0.9907	723	711	1.0169
Neonatal hemorrhage (P50–P52,P54)	537	517	1.0387	551	556	0.9910	614	597	1.0285
Hemorrhagic disease of newborn (P53)	1	1	1.0000	2	2	1.0000	–	–	. . .
Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice (P55–P59)	14	15	0.9333	10	10	1.0000	20	15	1.3333
Hematological disorders (P60–P61)	91	91	1.0000	78	80	0.9750	89	99	0.8990
Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (P70.0–P70.2)	11	11	1.0000	11	11	1.0000	12	14	0.8571
Necrotizing enterocolitis of newborn (P77)	505	484	1.0434	547	549	0.9964	529	554	0.9549
Hydrops fetalis not due to hemolytic disease (P83.2)	185	193	0.9585	170	169	1.0059	195	177	1.1017
Other perinatal conditions (P29,P70.3–P76,P78–P81,P83.0–P83.1,P83.3–P96)	1,385	1,367	1.0132	1,375	1,384	0.9935	1,405	1,444	0.9730
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	5,358	5,319	1.0073	5,647	5,638	1.0016	5,769	5,785	0.9972
Anencephaly and similar malformations (Q00)	318	324	0.9815	340	338	1.0059	306	321	0.9533

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, 2007–2009—Con.

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

Cause of death (based on *International Classification of Diseases, Tenth Revision,* Second Edition, 2004)	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	Preliminary number of deaths 2007	Final number of deaths 2007	Ratio of preliminary to final 2007
Congenital hydrocephalus (Q03)	114	105	1.0857	104	106	0.9811	92	93	0.9892
Spina bifida (Q05)	21	23	0.9130	22	23	0.9565	21	19	1.1053
Other congenital malformations of nervous system (Q01–Q02,Q04,Q06–Q07)	321	328	0.9787	356	355	1.0028	408	393	1.0382
Congenital malformations of heart (Q20–Q24)	1,232	1,226	1.0049	1,307	1,305	1.0015	1,345	1,363	0.9868
Other congenital malformations of circulatory system (Q25–Q28)	181	187	0.9679	219	222	0.9865	256	254	1.0079
Congenital malformations of respiratory system (Q30–Q34)	387	390	0.9923	378	371	1.0189	393	410	0.9585
Congenital malformations of digestive system (Q35–Q45)	66	67	0.9851	85	83	1.0241	129	132	0.9773
Congenital malformations of genitourinary system (Q50–Q64)	488	500	0.9760	516	515	1.0019	495	514	0.9630
Congenital malformations and deformations of musculoskeletal system, limbs and integument (Q65–Q85)	583	545	1.0697	665	664	1.0015	608	623	0.9759
Down's syndrome (Q90)	80	86	0.9302	87	88	0.9886	78	82	0.9512
Edward's syndrome (Q91.0–Q91.3)	530	499	1.0621	556	554	1.0036	547	525	1.0419
Patau's syndrome (Q91.4–Q91.7)	247	250	0.9880	278	275	1.0109	302	295	1.0237
Other congenital malformations and deformations (Q10–Q18,Q86–Q89)	575	592	0.9713	535	538	0.9944	575	552	1.0417
Other chromosomal abnormalities, not elsewhere classified (Q92–Q99)	214	197	1.0863	200	201	0.9950	216	209	1.0335
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	3,510	3,420	1.0263	3,582	3,546	1.0102	4,162	3,617	1.1507
Sudden infant death syndrome (R95)	2,168	2,226	0.9739	2,292	2,353	0.9741	2,118	2,453	0.8634
Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R53,R55–R94,R96–R99)	1,342	1,194	1.1240	1,290	1,193	1.0813	2,044	1,164	1.7560
All other diseases (residual)	31	14	2.2143	34	24	1.4167	27	16	1.6875
External causes of mortality (*U01,V01–Y84)	1,620	1,627	0.9957	1,750	1,773	0.9870	1,646	1,747	0.9422
Accidents (unintentional injuries) (V01–X59)	1,158	1,181	0.9805	1,299	1,315	0.9878	1,238	1,285	0.9634
Transport accidents (V01–V99)	108	97	1.1134	105	104	1.0096	136	127	1.0709
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)	106	95	1.1158	104	103	1.0097	133	124	1.0726
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	1	1	1.0000	4	3	1.3333
Falls (W00–W19)	28	19	1.4737	19	13	1.4615	33	24	1.3750
Accidental discharge of firearms (W32–W34)	–	1	. . .	–	–	. . .	2	1	2.0000
Accidental drowning and submersion (W65–W74)	41	45	0.9111	37	41	0.9024	54	57	0.9474
Accidental suffocation and strangulation in bed (W75)	638	665	0.9594	730	736	0.9918	628	669	0.9387
Other accidental suffocation and strangulation (W76–W77,W81–W84)	192	188	1.0213	249	260	0.9577	203	220	0.9227
Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract (W78–W80)	51	54	0.9444	60	62	0.9677	62	70	0.8857
Accidents caused by exposure to smoke, fire and flames (X00–X09)	24	24	1.0000	19	20	0.9500	38	38	1.0000
Accidental poisoning and exposure to noxious substances (X40–X49)	12	22	0.5455	11	11	1.0000	16	19	0.8421
Other and unspecified accidents (W20–W31,W35–W64,W85–W99,X10–X39,X50–X59)	64	66	0.9697	67	68	0.9853	66	60	1.1000

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, 2007–2009—Con.

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

Cause of death (based on *International Classification of Diseases, Tenth Revision,* Second Edition, 2004)	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	Preliminary number of deaths 2007	Final number of deaths 2007	Ratio of preliminary to final 2007
Assault (homicide) . . . . . (*U01,X85–Y09)	327	317	1.0315	337	340	0.9912	322	352	0.9148
Assault (homicide) by hanging, strangulation and suffocation . . . . . (X91)	23	26	0.8846	31	32	0.9688	32	30	1.0667
Assault (homicide) by discharge of firearms . . . . . (*U01.4,X93–X95)	24	11	2.1818	8	9	0.8889	13	15	0.8667
Neglect, abandonment and other maltreatment syndromes . . . . . (Y06–Y07)	88	97	0.9072	99	98	1.0102	74	86	0.8605
Assault (homicide) by other and unspecified means . . . . . (*U01.0–*U01.3, *U01.5–*U01.9,X85–X90,X92,X96–X99,Y00–Y05,Y08–Y09)	192	183	1.0492	199	201	0.9900	203	221	0.9186
Complications of medical and surgical care . . . . . (Y40–Y84)	18	17	1.0588	23	24	0.9583	24	22	1.0909
Other external causes and their sequelae . . . . . (Y10–Y36)	117	112	1.0446	91	94	0.9681	62	88	0.7045

– Quantity zero.

. . . Category not applicable.

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

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

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 (33).

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. Prior to 1997, U.S. life tables were abridged and constructed by reference to a standard table (45). The age range for these life tables was limited to 5-year age groups ending with the age group 85 and over. Beginning with final data for 1997, a revised methodology, similar to that of the decennial life tables (46), was used to construct complete life tables by single years through age 100 (47) using Medicare probabilities to model the probability of dying for ages 85 and over (48). In 2000, the methodology for constructing life tables was again revised using a methodology similar to that developed for the 1999–2001 decennial life tables (49) but with two major changes: 1) Probabilities for ages 66–100 were based on blended vital statistics and Medicare probabilities of dying, and 2) smoothing and extrapolation of death rates for age 66–100 were performed using a mathematical model (49). A more comprehensive description of the methodology was published in "United States Life Tables, 2005" (50).

Beginning with the 2008 life tables, the methodology used to construct life tables was revised from methods used in earlier reports with respect to the technique used to estimate the probabilities of death for ages over 65. The methodology used to produce life tables beginning with final data for 2008 models the probabilities of death at ages 85 or above (the exact ages at which smoothing techniques are used depend on the population) rather than ages 66 and over. Research into the methodology used for the 1999–2001 decennial life tables (49) and then applied to the annual life tables revealed that it is not necessary to model (or smooth) the probabilities of death beginning at age 66. The newly revised methodology is described in greater detail in "Deaths: Final Data for 2008" (14). A full description of this methodology is forthcoming.

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 (51,52). 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. NCHS first published life tables by Hispanic origin in "United States Life Tables by Hispanic Origin" (51) and, more recently, in "Deaths: Final Data for 2008" (14). 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 2009 data year have been updated using intercensal population estimates and may differ from those published in the report "Deaths: Final Data for 2009" (15).

Population denominators

The rates in this report for 2010 use population estimates based on the 2010 census as of April 1, 2010. These population estimates are available on the NCHS website (16). The production of these population estimates is described in detail elsewhere (22). Rates for 2009 shown in this report have been revised using intercensal population estimates based on the 2010 census, estimated as of July 1, 2009, and may differ from rates previously published.

Rates for Puerto Rico in this report are based on population estimates from the 2010 census as of April 1, 2010. Population estimates as of April 1 for 2010 and intercensal population estimates (based on the 2010 census) for 2001–2009 for American Samoa, Guam, Northern Mariana Islands, and Virgin Islands will not be available before June 2012.

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 the Office of Management and Budget (OMB), the 2010 census included an option for persons to report more than one race as appropriate for themselves and household members (24). 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 (20). Death certificates for 13 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).

In order to produce national death rates for 2009 and 2010, 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 (22,23). 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 (24), 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 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 were computed by applying age-specific death rates to the U.S. standard population. Age groups under 1 year and 1–4 years were combined because population counts were unavailable by age group for ages under 5 years. The year 2000 standard population used for computing age-adjusted rates for the territories is shown in Table VI.

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 (53). The new population standard affects levels of mortality and, to some extent, trends and group comparisons. Of particular note are the effects on race comparison of mortality; see "Age Standardization of Death Rates: Implementation of the Year 2000 Standard" (53). Beginning with 2003 data, the traditional standard million population along with corresponding standard weights to six decimal places were replaced by the projected year 2000 population age distribution. The effect of the change is negligible and does not significantly affect comparability with age-adjusted rates calculated using the previous method.

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

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

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. For calculating death rates, deaths with age not stated are not distributed. The number of deaths with age not stated in 2010 was 134, approximately 0.005 percent of all deaths.

For statistics shown in 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.
- 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."

Table VI. United States year 2000 standard population for the territories

Age	Population
All ages	274,633,642
Under 5 years	18,986,520
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

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 VII 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 VII 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 VII were computed using this formula:

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

where

f = the sampling fraction or the percent of file completeness/100 from Table I. For mortality data based on deaths under age 1 year, 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 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 VII 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).

Table VII. Relative standard errors for preliminary number of deaths, by percent of file completeness

[Relative standard errors are expressed as a percentage of 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

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

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

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

As a hypothetical example, assume the number of deaths, X_1, is 70 from a file with 80 percent completeness. Then

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

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

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:

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

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

As a hypothetical example, assume the death rate, *R1*, is 20.0, which is based on 70 deaths from a file with 80 percent completeness. Then

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

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

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:

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

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

where

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

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 = age-specific rate for the ith age group.

W = ith age-specific U.S. standard population such that $\Sigma w_i = 1.000000$ (see "Computing rates and percentages").

X = estimated number of deaths for the ith age group.

N = total count of deaths from Table I for each ith 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 at ages 1 year and over).

F = 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:

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

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:

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

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

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

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

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

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

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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Contents

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