National Vital Statistics Reports

Volume 54, Number 19 June 28, 2006

# Deaths: Preliminary Data for 2004

by Arialdi M. Miniño, M.P.H.; Melonie P. Heron, Ph.D.; and Betty L. Smith, B.S. Ed., Division of Vital Statistics

## Abstract

*Objectives*—This report presents preliminary U.S. data on deaths, death rates, life expectancy, leading causes of death, and infant mortality for the year 2004 by selected characteristics such as age, sex, race, and Hispanic origin.

*Methods*—Data in this report are based on a large number of deaths comprising approximately 91 percent of the demographic file and 90 percent of the medical file for all deaths in the United States in 2004. The records are weighted to independent control counts for 2004. 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. Comparisons are made with 2003 final data.

*Results*—The age-adjusted death rate for the United States decreased from 832.7 deaths per 100,000 population in 2003 to 801.0 deaths per 100,000 population in 2004. Age-adjusted death rates decreased between 2003 and 2004 for the following major causes of death: Diseases of heart, Malignant neoplasms, Cerebrovascular diseases, Chronic lower respiratory diseases, Accidents (unintentional injuries), Diabetes mellitus, Influenza and pneumonia, Septicemia, Chronic liver disease and cirrhosis, and Pneumonitis due to solids and liquids. Rates increased between 2003 and 2004 for the following: Alzheimer's disease and Essential (primary) hypertension and hypertensive renal disease. Life expectancy at birth rose by 0.4 year to a record high of 77.9 years.

## Introduction

This report presents preliminary mortality data based on vital records for a substantial proportion of deaths occurring in 2004. Trends shown in preliminary reports for 1995–2003 deaths, for most measures, were confirmed by final statistics for each year (1–9) (see "Technical Notes" Tables II and III for data from 2001–03).

## Sources and Methods

### Data sources

Preliminary data in this report are based on records of deaths that occurred in calendar year 2004 and were received and processed by the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS) as of September 12, 2005. After comparison with independent control counts of the number of deaths for 2004 that were received from state vital statistics offices, demographic information was available for an estimated 90 percent of infant deaths (under 1 year of age) and about 91 percent of deaths to persons aged 1 year and over (Table I). Medical or cause-of-death information was processed separately and was available for an estimated 90 percent of infant deaths and 90 percent of deaths to persons aged 1 year and over.

To produce the preliminary estimates shown in this report, records were weighted using independent control counts of infant deaths and deaths aged 1 year and over for 2004 received in the state vital statistics offices. Two separate sets of weights were applied to the death

**Acknowledgments**

This report was prepared in the Division of Vital Statistics (DVS) under the general direction of Charles J. Rothwell, Director, DVS; Robert N. Anderson, Chief, Mortality Statistics Branch (MSB); and Nicholas F. Pace, Chief, Systems, Programming, and Statistical Resources Branch (SPSRB). Elizabeth Arias of MSB provided content related to life expectancy. Robert N. Anderson and Sherry Murphy of MSB and David W. Justice of the Data Acquisition and Evaluation Branch (DAEB) contributed to the "Technical Notes." David P. Johnson, Jaleh Mousavi, Jordan Sacks, Manju Sharma, and Charles Royer of SPSRB provided computer programming support and produced statistical tables. Thomas D. Dunn of SPSRB managed population data and provided content review. Steven J. Steimel and David P. Johnson of SPSRB prepared the mortality file. Staff of MSB provided content and table review. Registration Methods staff and staff of DAEB provided consultation to state vital statistics offices regarding collection of the death certificate data on which this report is based. This report was edited by Demarius V. Miller, Office of Information Services, Information Design and Publishing Staff and typeset by Jacqueline M. Davis of CoCHIS/NCHM/Division of Creative Services.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL CENTER FOR HEALTH STATISTICS
CENTERS FOR DISEASE CONTROL AND PREVENTION
NATIONAL VITAL STATISTICS SYSTEM

records—one set for the demographic information, and one set for the medical information. This results in slight inconsistencies between comparable demographic data from the mortality demographic tables and the medical tables showing causes of death (see section "Nature and sources of data" in the "Technical Notes"). Preliminary estimates are subject to sampling variation as well as random variation.

The proportion of records processed by each state is shown in Table I in the "Technical Notes." Changes in death rates between 2003 and 2004 and differences in death rates across demographic groups for 2004 were tested for statistical significance. Unless otherwise specified, reported differences in death rates are statistically significant. Detailed information on the nature, sources, and qualifications of the preliminary data is given in the "Technical Notes."

Cause of death is not always available when the preliminary data are sent to NCHS, but is available later for final data processing. As a result, estimates based on preliminary mortality data may differ from statistics from the final mortality data. 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), and Sudden infant death syndrome (SIDS), or conditions that are highly seasonal, such as Influenza and pneumonia and Chronic lower respiratory diseases (see section "Nonsampling error" in the "Technical Notes").

In addition to national and state estimates of total deaths and death rates, this report includes preliminary 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, for Hispanics are known to be too low because of reporting problems (see section "Race and Hispanic origin" in the "Technical Notes").

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 subgroups of the population that have different age compositions. All age-adjusted death rates are standardized to the year 2000 population (see section "Computing rates and percentages" in the "Technical Notes"). Two measures of infant mortality are shown, the infant death rate and the infant mortality rate (see section "Infant mortality" in the "Technical Notes"). These measures typically are similar although they can differ because the denominator of the infant death rate includes a combination of infants born the previous year who have not reached their first birthday and infants born before the reference date for the population estimate, whereas the denominator of the infant mortality rate is all births occurring during the reference year. For example, the preliminary number of live births for 2004 is about 1.0 percent greater than the infant population in 2004. An infant mortality rate is a better indicator of the risk of dying during the first year of life.

This report includes data for 12 areas (California, Idaho, Michigan, Montana, New Hampshire, New Jersey, New York City, New York State, Oklahoma, South Dakota, Washington, and Wyoming), which implemented the 2003 revision of the U.S. Standard Certificate of Death by 2004, and the remaining states and the District of Columbia that collected and reported death data in 2004 based on the 1989 revision of the U.S. Standard Certificate of Death. The 2003 revision is described in detail elsewhere (10,11). 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 the "Technical Notes."

The populations used to calculate death rates were produced under a collaborative arrangement with the U.S. Census Bureau and are based on the 2000 census counts. Except for 15 states (California, Hawaii, Idaho, Maine, Michigan, Minnesota, Montana, New Hampshire, New Jersey, New York, Oklahoma, South Dakota, Washington, Wisconsin, and Wyoming), the death certificate data by race (the numerators for death rates) are currently incompatible with the population data collected in the 2000 census (the denominators for the rates). In order to produce national death rates for 2003 and 2004, it was necessary to "bridge" the incompatible reported population data to be consistent with the 1977 Office of Management and Budget (OMB) single race categories (12), that is, to bridge multiple-race categories back to single-race categories and report the data for Asian persons and Native Hawaiians or other Pacific Islanders as a combined category, APIs, and to reflect age as of the census reference date (13). The procedures used to produce the "bridged" populations are described in separate publications (14,15). As the remaining 35 states and the District of Columbia gradually begin to collect data on race according to the 1997 OMB guidelines (16), it is expected that use of the "bridged" populations can be discontinued.

Readers should keep in mind 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. This is the case even for the 2000 populations that are based on the 2000 census. 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 AIANs (14).

# Results

## Trends in numbers and rates

The preliminary number of deaths in the United States for 2004 was 2,398,343, representing a decrease of 49,945 from the 2003 total. The crude death rate of 816.7 per 100,000 population was 3.0 percent less than the rate of 841.9 per 100,000 in 2003. The estimated age-adjusted death rate, which accounts for changes in the age distribution of the population, reached a record low of 801.0 per 100,000 U.S. standard population, 3.8 percent lower than the 2003 rate of 832.7 (Tables A and 1) (4). The age-adjusted death rate in the United States has generally trended downward since 1900 with occasional increases usually due to outbreaks of influenza, the most recent being from 1998 to 1999 (17,18). From 2003 to 2004, age-adjusted death rates decreased by 3.9 percent for males and by 3.7 percent for females. All the sex, race, and Hispanic origin groups described in this report showed significant decreases in the age-adjusted death rate between 2003 and 2004. The relative magnitude of these changes by sex and race and Hispanic origin (Table 1) are as follows.

**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 2003 and preliminary 2004**

[Data are based on a continuous file of records received from the states. Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

| Measure and sex | All races[1,2] | | White[2] | | Black[2] | |
|---|---|---|---|---|---|---|
| | 2004 | 2003 | 2004 | 2003 | 2004 | 2003 |
| All deaths | 2,398,343 | 2,448,288 | 2,059,949 | 2,103,714 | 284,877 | 291,300 |
| Age-adjusted death rate[3] | 801.0 | 832.7 | 787.4 | 817.0 | 1,019.3 | 1,065.9 |
| Male | 955.1 | 994.3 | 937.4 | 973.9 | 1,258.4 | 1,319.1 |
| Female | 680.1 | 706.2 | 668.6 | 693.1 | 849.6 | 885.6 |
| Life expectancy at birth[4] | 77.9 | 77.5 | 78.3 | 78.0 | 73.3 | 72.7 |
| Male | 75.2 | 74.8 | 75.7 | 75.3 | 69.8 | 69.0 |
| Female | 80.4 | 80.1 | 80.8 | 80.5 | 76.5 | 76.1 |
| All infant deaths | 27,838 | 28,025 | 18,240 | 18,440 | 8,359 | 8,402 |
| Infant mortality rate[5] | 6.76 | 6.85 | 5.65 | 5.72 | 13.65 | 14.01 |

[1]Includes races other than white and black.

[2]Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. California, Hawaii, Idaho, Maine, Michigan, Minnesota, Montana, New Hampshire, New Jersey, New York, Oklahoma, South Dakota, Washington, Wisconsin, and Wyoming reported multiple-race data in 2004. The multiple-race data for these states were bridged to the single race categories of the 1977 OMB standards for comparability with the other states; see "Technical Notes."

[3]Age-adjusted death rates are per 100,000 U.S. standard population, based on the year 2000 standard; see "Technical Notes."

[4]Life expectancy at birth stated in years.

[5]Infant mortality rates are deaths under 1 year per 1,000 live births in specified group.

Decreases in age-adjusted death rates:

White males (3.7 percent)
White females (3.5 percent)
Non-Hispanic white males (3.5 percent)
Non-Hispanic white females (3.2 percent)
Black males (4.6 percent)
Black females (4.1 percent)
Non-Hispanic black males (4.4 percent)
Non-Hispanic black females (3.9 percent)
American Indian or Alaska Native (AIAN) males (5.9 percent)
AIAN females (5.9 percent)
Asian or Pacific Islander (API) males (5.1 percent)
API females (3.5 percent)
Hispanic males (6.1 percent)
Hispanic females (6.3 percent)

Among the major race and Hispanic origin groups, the lowest mortality was reported for the API population (44 percent lower than the non-Hispanic white population), the Hispanic population (27 percent lower than the non-Hispanic white population), and the AIAN population (19 percent lower than the non-Hispanic white population). In contrast, the age-adjusted death rate for the non-Hispanic black population was 30 percent higher than that for the non-Hispanic white population (Table 1). However, mortality for races other than white and black may be, in some cases, seriously understated due to underreporting for some race groups and Hispanic origin on death certificates (19–21).

Statistically significant decreases in mortality between 2003 and 2004 were registered across all age groups except 5–14 years, as follows:

Under 1 year (2.5 percent—see also section on "Infant mortality")
1–4 years (4.8 percent)
5–14 years (2.4 percent decrease, not significant)
15–24 years (2.8 percent)
25–34 years (3.0 percent)
35–44 years (5.2 percent)
45–54 years (2.3 percent)
55–64 years (3.7 percent)
65–74 years (4.0 percent)
75–84 years (3.2 percent)
85 years and over (4.8 percent)

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 discussion on infant mortality rates in section on "Infant mortality").

The preliminary estimate of life expectancy at birth for the total population in 2004 reached a record high of 77.9 years. This represents an increase of 0.4 year relative to 2003 (see Tables A and 6). Record-high life expectancies were reached for white males (75.7 years) and black males (69.8 years), as well as for white females (80.8 years) and black females (76.5 years). The gap between male and female life expectancy was 5.2 years in 2004, down from 5.3 years in 2003, and 5.4 years in 2002. The difference between male and female life expectancy at birth has been generally decreasing since its peak of 7.8 years in 1979 (22). Life expectancy for males increased by 0.4 year, reaching a record 75.2 years. Female life expectancy increased by 0.3 year, increasing from 80.1 years to 80.4 years between 2003 and 2004.

By state of residence, Hawaii had the lowest mortality in 2004 with an age-adjusted death rate of 623.6 deaths per 100,000 standard population. Mortality was highest for Mississippi, with an age-adjusted death rate of 998.2 per 100,000 standard population.

## Causes of death

The 15 leading causes of death in 2004 (Table B) remained the same as in 2003 with the exception of two causes that exchanged ranks. Alzheimer's disease, the eighth leading cause in 2003, became the seventh leading cause in 2004, whereas Influenza and

**Table B. Deaths and death rates for 2004 and age-adjusted death rates and percentage changes in age-adjusted rates from 2003 to 2004 for the 15 leading causes of death in 2004: United States, final 2003 and preliminary 2004**

[Data are based on a continuous file of records received from the states. Rates are per 100,000 population; age-adjusted rates per 100,000 U.S. standard population based on the year 2000 standard; see "Technical Notes." For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures for 2004 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*, 1992) | Number | Death rate | Age-adjusted death rate | | |
|---|---|---|---|---|---|---|
| | | | | 2004 | 2003 | Percent change |
| . . . | All causes | 2,398,365 | 816.7 | 801.1 | 832.7 | –3.8 |
| 1 | Diseases of heart (I00–I09,I11,I13,I20–I51) | 654,092 | 222.7 | 217.5 | 232.3 | –6.4 |
| 2 | Malignant neoplasms (C00–C97) | 550,270 | 187.4 | 184.6 | 190.1 | –2.9 |
| 3 | Cerebrovascular diseases (I60–I69) | 150,147 | 51.1 | 50.0 | 53.5 | –6.5 |
| 4 | Chronic lower respiratory diseases (J40–J47) | 123,884 | 42.2 | 41.8 | 43.3 | –3.5 |
| 5 | Accidents (unintentional injuries) (V01–X59,Y85–Y86) | 108,694 | 37.0 | 36.6 | 37.3 | –1.9 |
| 6 | Diabetes mellitus (E10–E14) | 72,815 | 24.8 | 24.4 | 25.3 | –3.6 |
| 7 | Alzheimer's disease (G30) | 65,829 | 22.4 | 21.7 | 21.4 | 1.4 |
| 8 | Influenza and pneumonia (J10–J18) | 61,472 | 20.9 | 20.4 | 22.0 | –7.3 |
| 9 | Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27) | 42,762 | 14.6 | 14.3 | 14.4 | –0.7 |
| 10 | Septicemia (A40–A41) | 33,464 | 11.4 | 11.2 | 11.6 | –3.4 |
| 11 | Intentional self-harm (suicide) (*U03,X60–X84,Y87.0) | 31,647 | 10.8 | 10.7 | 10.8 | –0.9 |
| 12 | Chronic liver disease and cirrhosis (K70,K73–K74) | 26,549 | 9.0 | 8.8 | 9.3 | –5.4 |
| 13 | Essential (primary) hypertension and hypertensive renal disease (I10,I12) | 22,953 | 7.8 | 7.6 | 7.4 | 2.7 |
| 14 | Parkinson's disease (G20–G21) | 18,018 | 6.1 | 6.1 | 6.2 | –1.6 |
| 15 | Pneumonitis due to solids and liquids (J69) | 16,959 | 5.8 | 5.6 | 5.9 | –5.1 |
| . . . | All other causes | 418,810 | 142.6 | . . . | . . . | . . . |

. . . Category not applicable.
[1]Rank based on number of deaths; see "Technical Notes."

pneumonia, the seventh leading cause in 2003, became the eighth leading cause in 2004. The 15 leading causes of death in 2004 were as follows:

1) Diseases of heart;
2) Malignant neoplasms;
3) Cerebrovascular diseases;
4) Chronic lower respiratory diseases;
5) Accidents (unintentional injuries);
6) Diabetes mellitus;
7) Alzheimer's disease;
8) Influenza and pneumonia;
9) Nephritis, nephrotic syndrome and nephrosis;
10) Septicemia;
11) Intentional self-harm (suicide);
12) Chronic liver disease and cirrhosis;
13) Essential (primary) hypertension and hypertensive renal disease;
14) Parkinson's disease; and
15) Pneumonitis due to solids and liquids.

The age-adjusted death rate declined significantly for 10 of the 15 leading causes of death. From 2003 to 2004, the preliminary age-adjusted death rate for the leading cause of death, **Diseases of heart**, decreased by 6.4 percent. The age-adjusted death rate for **Malignant neoplasms** decreased by 2.9 percent (see Tables B and 2). Deaths from these two diseases combined accounted for more than 1.2 million deaths, 50 percent of all deaths in 2004. Although heart disease mortality has exhibited a downward trend since 1950, cancer mortality has declined only since 1990.

The preliminary age-adjusted death rate also decreased between 2003 and 2004 for **Influenza and pneumonia** (7.3 percent), **Cerebrovascular disease** (6.5 percent), **Chronic liver disease and cirrhosis** (5.4 percent), **Pneumonitis due to solids and liquids** (5.1 percent), **Diabetes mellitus** (3.6 percent), **Chronic lower respiratory diseases** (3.5 percent), **Septicemia** (3.4 percent), and **Accidents (unintentional injuries)** (1.9 percent). Although there were declines in the death rates for kidney disease, suicide, and Parkinson's disease, these declines were not statistically significant.

Although **Human immunodeficiency virus (HIV) disease** was not among the 15 leading causes of death, it is still a major public health concern. The preliminary age-adjusted death rate for HIV disease declined significantly by 6.4 percent between 2003 and 2004 (Table 2). From 1987 to 1994, HIV disease mortality increased an average of 16 percent annually. In 1995, the rate for this disease reached a plateau, not differing significantly from the 1994 rate. Subsequently, the rate decreased an average of 33 percent from 1995 to 1998, and 3 percent from 1999 to 2002. HIV disease is currently the sixth leading cause of death for all races combined for the age group 25–44 years. It is also the 9th leading cause of death for the age group 15–24 years—an upward movement in the leading-cause rankings relative to its 2003 position of 10th place for this group (Table 7). In 2004, HIV disease exited the list of top 10 leading causes of death for the age group 45–64 years.

Increases occurred for **Essential hypertension and hypertensive renal disease** (2.7 percent) and **Alzheimer's disease** (1.4 percent). The latter moved from eighth to seventh place in the leading-cause list.

Between 2003 and 2004, the preliminary age-adjusted death rate declined by 4.9 percent for **Firearm injuries**, 2.9 percent for **Alcohol-induced deaths**, and 2.0 percent for **Drug-induced deaths** (Table 2). The age-adjusted death rate for **Injury at work** decreased by 4.5 percent between 2003 and 2004.

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.

## Infant mortality

The preliminary infant mortality rate for 2004 was 6.76 infant deaths per 1,000 live births. The slight decrease of 1.3 percent relative to the rate in 2003 was not statistically significant (see Tables A and 4). The neonatal mortality rate for 2004 decreased significantly by 2.6 percent relative to the rate in 2003. The most dramatic decrease in neonatal mortality rate was observed for the black population (down 4.6 percent from 2003; see Table 4).

The infant mortality rate has either decreased or remained level each successive year between 1958 and 2001 (2,6,23). The increase in 2002 was concentrated among neonates, and most of the increase in the infant mortality rate that year was due to the change in the distribution of births by birthweight, particularly an increase in infants born weighing less than 750 grams (24).

The 2004 preliminary infant mortality rate for black infants was 13.65 infant deaths per 1,000 live births, more than double the rate for white infants (Table A). Because of inconsistencies in the reporting of some race groups and Hispanic origin on birth and death certificates, infant mortality rates for some groups are likely to be underestimated (20,21). The linked birth/infant death data set provides a better source of data for infant deaths and mortality rates by maternal race and ethnicity (25).

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 is also shown in this report; the infant death rate (see section "Infant mortality" in the "Technical Notes"). The two measures typically are similar yet they can differ because the denominator of the infant death rate includes a combination of infants born the previous year who have not reached their first birthday and infants born before the reference date for the population estimate, whereas the denominator of the infant mortality rate is **all births occurring during the reference year**. For example, the preliminary number of live births for 2004 is about 1.0 percent greater than the infant population in 2004. This difference in the denominators of the two measures of mortality is large enough that the decrease in the infant mortality rate between 2003 and 2004 is not statistically significant, whereas the decrease measured in the infant death rate for the same period is.

The 10 leading causes of infant mortality for 2004 were:

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

The only differences between the leading causes as shown for 2003 (4) and those for 2004 concern the dropping off of Diseases of the circulatory system from the list (it was previously the 10th leading cause of infant death) and the incorporation of Intrauterine hypoxia and birth asphyxia to the 2004 list as the 10th leading cause of infant mortality.

The infant mortality rate did not change significantly between 2003 and 2004 for the leading cause of infant mortality, Congenital malformations, deformations and chromosomal abnormalities. There was, however, a significant decrease of 4.0 percent in the mortality rate of the second leading cause of infant death, Disorders related to short gestation and low birth weight, not elsewhere classified (Tables 5 and 8). Deaths from these two conditions combined accounted for more than 10,000 deaths, 37 percent of infant deaths in 2004.

Among the leading causes of infant death, a significant decrease in the infant mortality rate was also documented for the fifth leading cause, Newborn affected by complications of placenta, cord and membranes. The rate dropped 10.0 percent between 2003 and 2004.

Deaths due to SIDS, currently the third leading cause of infant death, have been declining since 1988 (8). The slight decline of 3.2 percent in the mortality rate of SIDS between 2003 and 2004 is not statistically significant. The general consensus concerning recent declines in mortality due to SIDS is that they mostly reflect a change in the way SIDS is diagnosed and reported by medical examiners and coroners (26).

## References


1. Anderson R, Kochanek K, Murphy S. Report of final mortality statistics, 1995. Monthly vital statistics report; vol 45 no 11 supp 2. Hyattsville, MD: National Center for Health Statistics. 1997.
2. Arias E, Anderson R, Kung H, Murphy S, Kochanek K. Deaths: Final data for 2001. National vital statistics reports; vol 52 no 3. Hyattsville, MD: National Center for Health Statistics. 2003.
3. Hoyert D, Arias E, Smith B, Murphy S, Kochanek K. Deaths: Final data for 1999. National vital statistics reports; vol 49 no 8. Hyattsville, MD: National Center for Health Statistics. 2001. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49_08.pdf.
4. Hoyert D, Heron M, Murphy S, Kung H. Deaths: Final data for 2003. National vital statistics reports; vol 54 no 13. Hyattsville, MD: National Center for Health Statistics. 2006. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr54/nvsr54_13.pdf.
5. Hoyert D, Kochanek K, Murphy S. Deaths: Final data for 1997. National vital statistics reports; vol 47 no 19. Hyattsville, MD: National Center for Health Statistics. 1999.
6. Kochanek K, Murphy S, Anderson R, Scott C. Deaths: Final data for 2002. National vital statistics reports; vol 53 no 5. Hyattsville, MD: National Center for Health Statistics. 2004. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr53/nvsr53_05.pdf.
7. Miniño A, Arias E, Kochanek K, Murphy S, Smith B. Deaths: Final data for 2000. National vital statistics reports; vol 50 no 15. Hyattsville, MD: National Center for Health Statistics. 2002.
8. Murphy S. Deaths: Final data for 1998. National vital statistics reports; vol 48 no 11. Hyattsville, MD: National Center for Health Statistics. 2000.
9. Peters K, Kochanek K, Murphy S. Deaths: Final data for 1996. National vital statistics reports; vol 47 no 9. Hyattsville, MD: National Center for Health Statistics. 1998.
10. National Center for Health Statistics. 2003 revision of the U.S. Standard Certificate of Death. 2003. Available from: http://www.cdc.gov/nchs/data/dvs/DEATH11-03final-acc.pdf.

11. National Center for Health Statistics. Report of the panel to evaluate the U.S. Standard Certificates. 2000. Available from: http://www.cdc.gov/nchs/data/dvs/panelreport_acc.pdf.
12. Office of Management and Budget. Race and ethnic standards for federal statistics and administrative reporting. Statistical Policy Directive 15. 1977.
13. U.S. Census Bureau. Age, sex, race and Hispanic origin information from the 1990 census: A comparison of census results with results where age and race have been modified, 1990. CPH-L-74 Washington, DC. U.S. Department of Commerce. 1991.
14. Ingram DD, Weed J, Parker J, Hamilton B, Schenker N, et al. United States census 2000 population with bridged race categories. National Center for Health Statistics. Vital Health Stat 2(135). 2003.
15. Schenker N, Parker JD. From single-race reporting to multiple-race reporting: Using imputation methods to bridge the transition. Stat Med 22 1571–87. 2003.
16. Office of Management and Budget. Revisions to the standards for the classification of federal data on race and ethnicity. Federal Register 62FR58782–58790. October 30, 1997. Available from: http://www.whitehouse.gov/omb/fedreg/ombdir15.html.
17. CDC. Update: Influenza activity—United States, 1998–99 season. MMWR; vol 48 no 9. Washington: Public Health Service. 1999.
18. CDC. Update: Influenza activity—United States, 1999–2000 season. MMWR; vol 49 no 9. Washington: Public Health Service. 2000.
19. Arias E. Quality of race and Hispanic origin reporting on death certificates in the United States. Presented at the 2004 NCHS Data Users Conference. Washington: National Center for Health Statistics. Available from: http://www.cdc.gov/nchs/ppt/duc2004/arias.pps. 2004.
20. Rosenberg HM, Maurer JD, Sorlie PD, et al. Quality of death rates by race and Hispanic origin: A summary of current research, 1999. National Center for Health Statistics. Vital Health Stat 2(128). 1999.
21. Sorlie PD, Rogot E, Johnson NJ. Validity of demographic characteristics on the death certificate. Epidemiology 3(2):181–4. 1992.
22. Arias E. United States life tables, 2002. National vital statistics reports; vol 53 no 6. Hyattsville, MD: National Center for Health Statistics. 2004.
23. National Center for Health Statistics. Vital statistics of the United States, 1993, vol II, mortality, part A. Hyattsville, MD. 2002.
24. MacDorman MF, Martin JA, Mathews TJ, et al. Explaining the 2001–02 infant mortality increase: Data from the linked birth/infant death data set. National vital statistics reports; vol 53 no 12. Hyattsville, MD: National Center for Health Statistics. 2005.
25. Mathews TJ, Menacker F, MacDorman MF. Infant mortality statistics from the 2002 period linked birth/infant death data set. National vital statistics reports; vol 53 no 10. Hyattsville, MD: National Center for Health Statistics. 2004.
26. Shapiro-Mendoza C, Tomashek K, Anderson R. Recent national trends in sudden, unexpected infant deaths: more evidence supporting a change in classification or reporting. Am J Epidemiol. Forthcoming.
27. National Center for Health Statistics. Technical appendix. Vital statistics of the United States: Mortality, 1999. Available from: http://www.cdc.gov/nchs/datawh/statab/pubd/ta.htm.
28. National Center for Health Statistics. Vital statistics, instructions for classifying the underlying cause of death. NCHS instruction manual, part 2a. Hyattsville, MD: Public Health Service. Published annually.
29. World Health Organization. International Statistical Classification of Diseases and Related Health Problems, Tenth Revision. Geneva: World Health Organization. 1992.
30. World Health Organization. Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death, Ninth Revision. Geneva: World Health Organization. 1977.
31. National Center for Health Statistics. Comparability of Cause of death between ICD revisions. Available from: http://www.cdc.gov/nchs/datawh/statab/unpubd/comp.htm#A%20guide%20to%20state%20implementation%20of%20ICD-10.
32. Anderson RN, Miniño AM, Hoyert DL, Rosenberg HM. Comparability of cause of death between ICD–9 and ICD–10: Preliminary estimates. National vital statistics reports; vol 49 no 2. Hyattsville, MD: National Center for Health Statistics. 2001.
33. National Center for Health Statistics. ICD-10 Cause-of-death lists for tabulating mortality statistics, updated October 2002. NCHS instruction manual, part 9. Hyattsville, MD: Public Health Service. 2002. Available from: http://www.cdc.gov/nchs/about/major/dvs/im.htm.
34. Heron MP, Smith BL. Deaths: Leading causes for 2003. National vital statistics reports. Hyattsville, MD: National Center for Health Statistics. Forthcoming.
35. Hamilton BE, Martin JA, Ventura S, Sutton P, Menacker F. Births: Preliminary data for 2004. National vital statistics reports; vol 54 no 8. Hyattsville, MD: National Center for Health Statistics. 2005.
36. Mathews TJ, MacDorman MF. Infant mortality statistics from the 2003 period linked birth/infant death data set. National vital statistics reports; vol 54 no 16. Hyattsville, MD: National Center for Health Statistics. 2006.
37. Sirken MG. Comparison of two methods of constructing abridged life tables by reference to a "standard" table. National Center for Health Statistics. Vital Health Stat 2(4). 1966.
38. Anderson RN. Methodology for constructing complete annual U.S. life tables. National Center for Health Statistics. Vital Health Stat 2(129). 1999.
39. National Center for Health Statistics. U.S. decennial life tables for 1989–91, vol 1 no 2, methodology of the national and state life tables. Hyattsville, MD. 1998.
40. Kestenbaum B. A description of the extreme aged population based on improved Medicare enrollment data. Demography 29: 565–80. 1992.
41. National Center for Health Statistics. Bridged-race vintage 2003 postcensal estimates of the resident population of the United States as of July 1, 2003, by age, sex, race, and Hispanic origin (pcen_v2003.txt). Prepared under a collaborative agreement with the U.S. Census Bureau. 2004. Available from: http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm.
42. National Center for Health Statistics. Bridged-race vintage 2004 postcensal population estimates of the resident population of the United States for July 1, 2000–July 1, 2004, by year, county, single-year of age, bridged-race, Hispanic origin, and sex (pcen_v2004.txt). Prepared under a collaborative agreement with the U.S. Census Bureau. 2005. Available from: http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm.
43. Anderson RN, Rosenberg HM. Age standardization of death rates: Implementation of the year 2000 standard. National vital statistics reports; vol 47 no 3. Hyattsville, MD: National Center for Health Statistics. 1998.


## List of Detailed Tables


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 2003 and preliminary 2004 . . . . . 8
2. Deaths, death rates, and age-adjusted death rates for 113 selected causes, Injury by firearms, Drug-induced deaths, Alcohol-induced deaths, and Injury at work: United States, final 2003 and preliminary 2004 . . . . . 16

3. Deaths, death rates, and age-adjusted death rates: United States, and each state and territory, final 2003 and preliminary 2004 . . 20
4. Infant deaths and infant mortality rates, by age and race and Hispanic origin: United States, final 2003 and preliminary 2004 . . . . . 21
5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2003 and preliminary 2004 . . . . . 22
6. Expectation of life by age, race, and sex: United States, final 2003 and preliminary 2004 . . . . . 26
7. Deaths and death rates for the 10 leading causes of death in specified age groups: United States, preliminary 2004 . . . . . 28
8. Infant deaths and infant mortality rates for the 10 leading causes of infant death, by race and Hispanic origin: United States, preliminary 2004 . . . . . 31

## 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 2003 and preliminary 2004

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." The number of deaths and death rates 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 censuses and surveys; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines. Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

| Age, race, and sex | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| All races, both sexes | | | | |
| All ages | 2,398,343 | 816.7 | 2,448,288 | 841.9 |
| Under 1 year[1] | 27,838 | 682.8 | 28,025 | 700.0 |
| 1–4 years | 4,801 | 30.0 | 4,965 | 31.5 |
| 5–14 years | 6,756 | 16.6 | 6,954 | 17.0 |
| 15–24 years | 33,020 | 79.2 | 33,568 | 81.5 |
| 25–34 years | 40,244 | 100.5 | 41,300 | 103.6 |
| 35–44 years | 84,310 | 191.1 | 89,461 | 201.6 |
| 45–54 years | 176,105 | 423.1 | 176,781 | 433.2 |
| 55–64 years | 263,413 | 905.9 | 262,519 | 940.9 |
| 65–74 years | 399,841 | 2,165.6 | 413,497 | 2,255.0 |
| 75–84 years | 686,293 | 5,291.0 | 703,024 | 5,463.1 |
| 85 years and over | 675,296 | 13,896.0 | 687,852 | 14,593.3 |
| Not stated | 426 | . . . | 342 | . . . |
| Age-adjusted rate[2] | . . . | 801.0 | . . . | 832.7 |
| All races, male | | | | |
| All ages | 1,179,995 | 816.4 | 1,201,964 | 840.3 |
| Under 1 year[1] | 15,690 | 752.4 | 15,902 | 777.4 |
| 1–4 years | 2,635 | 32.2 | 2,826 | 35.1 |
| 5–14 years | 3,934 | 18.9 | 4,150 | 19.8 |
| 15–24 years | 24,260 | 113.2 | 24,670 | 116.5 |
| 25–34 years | 27,904 | 137.2 | 28,602 | 141.4 |
| 35–44 years | 52,867 | 239.9 | 56,435 | 255.0 |
| 45–54 years | 110,257 | 539.1 | 110,682 | 552.2 |
| 55–64 years | 156,968 | 1,121.2 | 156,461 | 1,165.5 |
| 65–74 years | 223,079 | 2,647.0 | 231,421 | 2,771.7 |
| 75–84 years | 334,415 | 6,408.6 | 342,332 | 6,641.8 |
| 85 years and over | 227,684 | 15,099.7 | 228,212 | 15,794.0 |
| Not stated | 302 | . . . | 271 | . . . |
| Age-adjusted rate[2] | . . . | 955.1 | . . . | 994.3 |
| All races, female | | | | |
| All ages | 1,218,348 | 817.0 | 1,246,324 | 843.4 |
| Under 1 year[1] | 12,149 | 610.0 | 12,123 | 619.1 |
| 1–4 years | 2,166 | 27.7 | 2,139 | 27.8 |
| 5–14 years | 2,822 | 14.2 | 2,804 | 14.0 |
| 15–24 years | 8,760 | 43.2 | 8,898 | 44.4 |
| 25–34 years | 12,340 | 62.7 | 12,698 | 64.6 |
| 35–44 years | 31,443 | 142.4 | 33,026 | 148.5 |
| 45–54 years | 65,847 | 311.1 | 66,099 | 318.4 |
| 55–64 years | 106,446 | 705.9 | 106,058 | 732.7 |
| 65–74 years | 176,762 | 1,761.3 | 182,076 | 1,823.0 |
| 75–84 years | 351,878 | 4,538.8 | 360,692 | 4,675.5 |
| 85 years and over | 447,612 | 13,354.5 | 459,640 | 14,062.5 |
| Not stated | 124 | . . . | 71 | . . . |
| Age-adjusted rate[2] | . . . | 680.1 | . . . | 706.2 |

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 2003 and preliminary 2004—Con.**

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." The number of deaths and death rates 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 censuses and surveys; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines. Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

| Age, race, and sex | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| Total white[3], both sexes | | | | |
| All ages | 2,059,949 | 864.6 | 2,103,714 | 890.1 |
| Under 1 year[1] | 18,240 | 574.3 | 18,440 | 591.3 |
| 1–4 years | 3,377 | 27.1 | 3,509 | 28.5 |
| 5–14 years | 4,851 | 15.3 | 5,031 | 15.8 |
| 15–24 years | 24,791 | 75.7 | 24,976 | 77.1 |
| 25–34 years | 28,818 | 91.5 | 29,689 | 94.3 |
| 35–44 years | 63,259 | 177.6 | 66,748 | 185.7 |
| 45–54 years | 134,793 | 391.3 | 134,512 | 397.5 |
| 55–64 years | 213,420 | 860.4 | 212,821 | 892.2 |
| 65–74 years | 338,816 | 2,123.9 | 350,549 | 2,207.0 |
| 75–84 years | 612,138 | 5,294.2 | 627,452 | 5,457.8 |
| 85 years and over | 617,115 | 14,087.2 | 629,695 | 14,792.3 |
| Not stated | 331 | . . . | 292 | . . . |
| Age-adjusted rate[2] | . . . | 787.4 | . . . | 817.0 |
| White[3] male | | | | |
| All ages | 1,007,294 | 854.3 | 1,025,650 | 877.6 |
| Under 1 year[1] | 10,313 | 634.5 | 10,500 | 658.7 |
| 1–4 years | 1,857 | 29.1 | 1,981 | 31.5 |
| 5–14 years | 2,862 | 17.6 | 3,008 | 18.4 |
| 15–24 years | 18,112 | 107.2 | 18,219 | 108.9 |
| 25–34 years | 20,239 | 124.9 | 20,814 | 128.8 |
| 35–44 years | 40,588 | 225.6 | 43,083 | 237.6 |
| 45–54 years | 85,682 | 500.6 | 85,587 | 509.2 |
| 55–64 years | 127,976 | 1,061.0 | 127,752 | 1,102.3 |
| 65–74 years | 190,519 | 2,589.4 | 197,853 | 2,707.3 |
| 75–84 years | 300,346 | 6,406.2 | 307,050 | 6,620.6 |
| 85 years and over | 208,562 | 15,322.2 | 209,575 | 16,037.9 |
| Not stated | 236 | . . . | 228 | . . . |
| Age-adjusted rate[2] | . . . | 937.4 | . . . | 973.9 |
| White[3] female | | | | |
| All ages | 1,052,656 | 874.6 | 1,078,064 | 902.3 |
| Under 1 year[1] | 7,927 | 511.1 | 7,940 | 520.7 |
| 1–4 years | 1,520 | 25.0 | 1,528 | 25.5 |
| 5–14 years | 1,989 | 12.9 | 2,023 | 13.1 |
| 15–24 years | 6,679 | 42.2 | 6,757 | 43.2 |
| 25–34 years | 8,578 | 56.1 | 8,875 | 58.0 |
| 35–44 years | 22,671 | 128.6 | 23,665 | 132.9 |
| 45–54 years | 49,111 | 283.4 | 48,925 | 287.2 |
| 55–64 years | 85,444 | 670.6 | 85,069 | 693.7 |
| 65–74 years | 148,296 | 1,725.4 | 152,696 | 1,780.6 |
| 75–84 years | 311,792 | 4,535.8 | 320,402 | 4,671.6 |
| 85 years and over | 408,553 | 13,530.5 | 420,120 | 14,240.6 |
| Not stated | 95 | . . . | 64 | . . . |
| Age-adjusted rate[2] | . . . | 668.6 | . . . | 693.1 |

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 2003 and preliminary 2004—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." The number of deaths and death rates 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 censuses and surveys; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines. Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

| Age, race, and sex | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| Non-Hispanic white, both sexes | | | | |
| All ages | 1,937,440 | 969.8 | 1,979,465 | 993.6 |
| Under 1 year[1] | 13,073 | 565.6 | 13,223 | 576.5 |
| 1–4 years | 2,470 | 26.9 | 2,539 | 27.6 |
| 5–14 years | 3,803 | 15.5 | 3,884 | 15.6 |
| 15–24 years | 19,626 | 75.0 | 19,640 | 75.8 |
| 25–34 years | 23,076 | 94.6 | 23,557 | 95.8 |
| 35–44 years | 55,008 | 184.1 | 58,095 | 190.9 |
| 45–54 years | 122,245 | 398.3 | 121,832 | 402.3 |
| 55–64 years | 198,288 | 872.7 | 197,598 | 902.4 |
| 65–74 years | 318,192 | 2,156.4 | 329,570 | 2,237.2 |
| 75–84 years | 584,872 | 5,359.3 | 600,563 | 5,515.4 |
| 85 years and over | 596,619 | 14,268.5 | 608,843 | 14,944.8 |
| Not stated | 168 | . . . | 121 | . . . |
| Age-adjusted rate[2] | . . . | 798.6 | . . . | 826.1 |
| Non-Hispanic white male | | | | |
| All ages | 938,800 | 958.1 | 956,194 | 979.1 |
| Under 1 year[1] | 7,446 | 629.1 | 7,591 | 647.2 |
| 1–4 years | 1,356 | 28.8 | 1,423 | 30.2 |
| 5–14 years | 2,256 | 17.9 | 2,319 | 18.1 |
| 15–24 years | 13,944 | 104.2 | 14,022 | 105.9 |
| 25–34 years | 15,885 | 129.1 | 16,097 | 129.9 |
| 35–44 years | 34,836 | 232.9 | 37,123 | 243.8 |
| 45–54 years | 77,246 | 507.2 | 77,106 | 513.2 |
| 55–64 years | 118,692 | 1,072.1 | 118,383 | 1,110.5 |
| 65–74 years | 179,056 | 2,624.0 | 186,112 | 2,738.5 |
| 75–84 years | 286,737 | 6,483.7 | 293,774 | 6,692.2 |
| 85 years and over | 201,249 | 15,558.2 | 202,148 | 16,234.4 |
| Not stated | 97 | . . . | 96 | . . . |
| Age-adjusted rate[2] | . . . | 949.9 | . . . | 984.0 |
| Non-Hispanic white female | | | | |
| All ages | 998,640 | 981.1 | 1,023,271 | 1,007.6 |
| Under 1 year[1] | 5,627 | 498.9 | 5,632 | 502.5 |
| 1–4 years | 1,114 | 24.9 | 1,116 | 24.9 |
| 5–14 years | 1,547 | 12.9 | 1,565 | 12.9 |
| 15–24 years | 5,682 | 44.5 | 5,618 | 44.3 |
| 25–34 years | 7,191 | 59.5 | 7,460 | 61.2 |
| 35–44 years | 20,172 | 135.2 | 20,972 | 138.0 |
| 45–54 years | 44,999 | 291.0 | 44,726 | 293.1 |
| 55–64 years | 79,596 | 683.1 | 79,215 | 705.0 |
| 65–74 years | 139,136 | 1,754.2 | 143,458 | 1,807.9 |
| 75–84 years | 298,135 | 4,593.1 | 306,789 | 4,720.5 |
| 85 years and over | 395,370 | 13,690.8 | 406,695 | 14,377.2 |
| Not stated | 72 | . . . | 25 | . . . |
| Age-adjusted rate[2] | . . . | 679.3 | . . . | 702.1 |

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 2003 and preliminary 2004—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." The number of deaths and death rates 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 censuses and surveys; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines. Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

| Age, race, and sex | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| Total black[3], both sexes | | | | |
| All ages | 284,877 | 738.0 | 291,300 | 763.6 |
| Under 1 year[1] | 8,359 | 1,264.3 | 8,402 | 1,273.8 |
| 1–4 years | 1,172 | 45.1 | 1,199 | 46.8 |
| 5–14 years | 1,574 | 23.4 | 1,551 | 22.9 |
| 15–24 years | 6,899 | 107.1 | 7,145 | 113.1 |
| 25–34 years | 9,780 | 176.7 | 9,942 | 181.6 |
| 35–44 years | 18,265 | 318.6 | 19,784 | 343.6 |
| 45–54 years | 36,240 | 735.2 | 37,006 | 771.4 |
| 55–64 years | 43,081 | 1,485.5 | 42,823 | 1,549.9 |
| 65–74 years | 51,278 | 2,959.3 | 53,128 | 3,108.4 |
| 75–84 years | 60,975 | 6,129.7 | 62,372 | 6,353.9 |
| 85 years and over | 47,176 | 13,303.5 | 47,908 | 13,976.7 |
| Not stated | 78 | . . . | 40 | . . . |
| Age-adjusted rate[2] | . . . | 1,019.3 | . . . | 1,065.9 |
| Black[3] male | | | | |
| All ages | 144,503 | 784.6 | 148,022 | 813.7 |
| Under 1 year[1] | 4,672 | 1,385.4 | 4,740 | 1,410.0 |
| 1–4 years | 649 | 49.2 | 699 | 53.7 |
| 5–14 years | 874 | 25.6 | 922 | 26.8 |
| 15–24 years | 5,220 | 160.7 | 5,448 | 171.3 |
| 25–34 years | 6,599 | 249.1 | 6,693 | 256.2 |
| 35–44 years | 10,556 | 391.6 | 11,544 | 426.7 |
| 45–54 years | 21,547 | 945.8 | 21,986 | 991.4 |
| 55–64 years | 24,980 | 1,932.0 | 24,770 | 2,011.2 |
| 65–74 years | 27,362 | 3,791.5 | 28,291 | 3,981.3 |
| 75–84 years | 27,471 | 7,647.9 | 28,600 | 8,067.0 |
| 85 years and over | 14,517 | 14,421.7 | 14,294 | 14,903.4 |
| Not stated | 56 | . . . | 35 | . . . |
| Age-adjusted rate[2] | . . . | 1,258.4 | . . . | 1,319.1 |
| Black[3] female | | | | |
| All ages | 140,374 | 695.5 | 143,278 | 717.9 |
| Under 1 year[1] | 3,686 | 1,137.9 | 3,662 | 1,132.2 |
| 1–4 years | 523 | 40.9 | 500 | 39.7 |
| 5–14 years | 700 | 21.2 | 629 | 18.9 |
| 15–24 years | 1,679 | 52.6 | 1,697 | 54.0 |
| 25–34 years | 3,180 | 110.2 | 3,249 | 113.5 |
| 35–44 years | 7,709 | 253.8 | 8,240 | 270.0 |
| 45–54 years | 14,693 | 554.3 | 15,020 | 582.3 |
| 55–64 years | 18,102 | 1,126.3 | 18,053 | 1,178.8 |
| 65–74 years | 23,917 | 2,365.4 | 24,837 | 2,487.2 |
| 75–84 years | 33,504 | 5,271.7 | 33,772 | 5,385.5 |
| 85 years and over | 32,660 | 12,860.7 | 33,614 | 13,616.7 |
| Not stated | 22 | . . . | 5 | . . . |
| Age-adjusted rate[2] | . . . | 849.6 | . . . | 885.6 |

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 2003 and preliminary 2004—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." The number of deaths and death rates 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 censuses and surveys; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines. Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

| Age, race, and sex | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| Non-Hispanic black, both sexes | | | | |
| All ages | 281,807 | 763.3 | 287,968 | 788.8 |
| Under 1 year[1] | 8,134 | 1,283.5 | 8,159 | 1,290.0 |
| 1–4 years | 1,138 | 45.9 | 1,169 | 48.0 |
| 5–14 years | 1,541 | 24.2 | 1,530 | 23.8 |
| 15–24 years | 6,782 | 110.5 | 7,021 | 116.6 |
| 25–34 years | 9,656 | 184.3 | 9,795 | 188.9 |
| 35–44 years | 18,042 | 328.7 | 19,561 | 354.2 |
| 45–54 years | 35,855 | 752.5 | 36,584 | 788.3 |
| 55–64 years | 42,640 | 1,515.2 | 42,350 | 1,578.4 |
| 65–74 years | 50,764 | 3,010.8 | 52,583 | 3,158.7 |
| 75–84 years | 60,420 | 6,218.0 | 61,770 | 6,433.0 |
| 85 years and over | 46,792 | 13,467.7 | 47,426 | 14,107.7 |
| Not stated | 44 | . . . | 20 | . . . |
| Age-adjusted rate[2] | . . . | 1,037.7 | . . . | 1,083.2 |
| Non-Hispanic black male | | | | |
| All ages | 142,749 | 811.5 | 146,136 | 840.6 |
| Under 1 year[1] | 4,537 | 1,404.1 | 4,601 | 1,427.7 |
| 1–4 years | 635 | 50.4 | 681 | 55.1 |
| 5–14 years | 853 | 26.4 | 911 | 27.9 |
| 15–24 years | 5,127 | 165.8 | 5,343 | 176.5 |
| 25–34 years | 6,503 | 259.7 | 6,592 | 266.6 |
| 35–44 years | 10,414 | 404.0 | 11,405 | 440.0 |
| 45–54 years | 21,282 | 967.3 | 21,708 | 1,012.8 |
| 55–64 years | 24,708 | 1,971.3 | 24,468 | 2,047.7 |
| 65–74 years | 27,074 | 3,858.2 | 27,957 | 4,041.1 |
| 75–84 years | 27,197 | 7,757.0 | 28,297 | 8,165.7 |
| 85 years and over | 14,387 | 14,618.9 | 14,156 | 15,082.2 |
| Not stated | 33 | . . . | 17 | . . . |
| Age-adjusted rate[2] | . . . | 1,281.7 | . . . | 1,341.1 |
| Non-Hispanic black female | | | | |
| All ages | 139,058 | 719.4 | 141,832 | 741.6 |
| Under 1 year[1] | 3,597 | 1,158.1 | 3,558 | 1,146.9 |
| 1–4 years | 503 | 41.2 | 488 | 40.7 |
| 5–14 years | 688 | 22.0 | 619 | 19.6 |
| 15–24 years | 1,655 | 54.3 | 1,678 | 56.0 |
| 25–34 years | 3,153 | 115.3 | 3,203 | 118.0 |
| 35–44 years | 7,628 | 262.1 | 8,156 | 278.4 |
| 45–54 years | 14,573 | 568.3 | 14,876 | 595.7 |
| 55–64 years | 17,933 | 1,148.9 | 17,882 | 1,201.6 |
| 65–74 years | 23,690 | 2,406.7 | 24,626 | 2,531.2 |
| 75–84 years | 33,222 | 5,349.0 | 33,473 | 5,454.6 |
| 85 years and over | 32,405 | 13,012.7 | 33,270 | 13,730.3 |
| Not stated | 11 | . . . | 3 | . . . |
| Age-adjusted rate[2] | . . . | 864.7 | . . . | 899.8 |

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 2003 and preliminary 2004—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." The number of deaths and death rates 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 censuses and surveys; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines. Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

| Age, race, and sex | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| Total American Indian or Alaska Native[3,4], both sexes | | | | |
| All ages | 13,047 | 414.4 | 13,147 | 422.6 |
| Under 1 year[1] | 391 | 903.6 | 335 | 795.8 |
| 1–4 years | 99 | 55.5 | 95 | 50.3 |
| 5–14 years | 126 | 22.0 | 137 | 23.7 |
| 15–24 years | 577 | 98.7 | 621 | 108.6 |
| 25–34 years | 687 | 145.7 | 643 | 138.6 |
| 35–44 years | 1,187 | 254.8 | 1,244 | 266.6 |
| 45–54 years | 1,733 | 437.2 | 1,812 | 470.7 |
| 55–64 years | 2,067 | 876.3 | 2,042 | 916.7 |
| 65–74 years | 2,323 | 1,925.1 | 2,256 | 1,953.4 |
| 75–84 years | 2,338 | 3,910.9 | 2,363 | 4,170.3 |
| 85 years and over | 1,509 | 7,392.0 | 1,594 | 8,452.2 |
| Not stated | 10 | . . . | 5 | . . . |
| Age-adjusted rate[2] | . . . | 646.2 | . . . | 685.0 |
| American Indian or Alaska Native[3,4] male | | | | |
| All ages | 7,067 | 449.5 | 7,106 | 457.6 |
| Under 1 year[1] | 237 | 1,076.0 | 195 | 911.5 |
| 1–4 years | 50 | 55.3 | 55 | 57.3 |
| 5–14 years | 69 | 23.8 | 86 | 29.3 |
| 15–24 years | 397 | 132.5 | 450 | 153.1 |
| 25–34 years | 453 | 185.6 | 444 | 185.3 |
| 35–44 years | 749 | 322.1 | 784 | 338.1 |
| 45–54 years | 1,044 | 542.9 | 1,090 | 583.6 |
| 55–64 years | 1,209 | 1,064.6 | 1,136 | 1,058.3 |
| 65–74 years | 1,212 | 2,173.5 | 1,191 | 2,237.3 |
| 75–84 years | 1,112 | 4,448.2 | 1,092 | 4,644.0 |
| 85 years and over | 528 | 7,984.3 | 578 | 9,583.8 |
| Not stated | 8 | . . . | 5 | . . . |
| Age-adjusted rate[2] | . . . | 750.2 | . . . | 797.0 |
| American Indian or Alaska Native[3,4] female | | | | |
| All ages | 5,980 | 379.3 | 6,041 | 387.7 |
| Under 1 year[1] | 154 | 724.8 | 140 | 676.2 |
| 1–4 years | 49 | 55.7 | 40 | 43.0 |
| 5–14 years | 57 | 20.2 | 51 | 17.9 |
| 15–24 years | 180 | 63.2 | 171 | 61.5 |
| 25–34 years | 233 | 102.5 | 199 | 88.7 |
| 35–44 years | 439 | 188.2 | 460 | 196.0 |
| 45–54 years | 689 | 337.6 | 722 | 364.4 |
| 55–64 years | 859 | 702.3 | 906 | 785.0 |
| 65–74 years | 1,111 | 1,711.7 | 1,065 | 1,710.7 |
| 75–84 years | 1,226 | 3,524.8 | 1,271 | 3,834.3 |
| 85 years and over | 981 | 7,108.2 | 1,016 | 7,920.2 |
| Not stated | 2 | . . . | – | . . . |
| Age-adjusted rate[2] | . . . | 557.4 | . . . | 592.1 |

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 2003 and preliminary 2004—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." The number of deaths and death rates 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 censuses and surveys; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines. Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

| Age, race, and sex | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| Total Asian or Pacific Islander[3], both sexes | | | | |
| All ages | 40,469 | 296.7 | 40,127 | 303.9 |
| Under 1 year[1] | 848 | 431.6 | 848 | 463.1 |
| 1–4 years | 152 | 20.1 | 162 | 22.5 |
| 5–14 years | 205 | 11.2 | 235 | 13.1 |
| 15–24 years | 754 | 38.7 | 826 | 42.8 |
| 25–34 years | 960 | 38.1 | 1,026 | 41.6 |
| 35–44 years | 1,599 | 69.8 | 1,685 | 76.4 |
| 45–54 years | 3,339 | 180.6 | 3,451 | 193.7 |
| 55–64 years | 4,845 | 425.2 | 4,833 | 455.6 |
| 65–74 years | 7,424 | 1,129.4 | 7,564 | 1,203.0 |
| 75–84 years | 10,842 | 3,062.6 | 10,837 | 3,244.8 |
| 85 years and over | 9,495 | 9,136.7 | 8,655 | 9,116.3 |
| Not stated | 7 | . . . | 5 | . . . |
| Age-adjusted rate[2] | . . . | 445.6 | . . . | 465.7 |
| Asian or Pacific Islander[3] male | | | | |
| All ages | 21,131 | 318.6 | 21,186 | 330.0 |
| Under 1 year[1] | 467 | 462.9 | 467 | 496.9 |
| 1–4 years | 78 | 20.2 | 91 | 24.8 |
| 5–14 years | 129 | 13.9 | 134 | 14.6 |
| 15–24 years | 531 | 53.4 | 553 | 56.3 |
| 25–34 years | 612 | 49.5 | 651 | 53.8 |
| 35–44 years | 974 | 87.6 | 1,024 | 95.9 |
| 45–54 years | 1,984 | 229.0 | 2,019 | 242.6 |
| 55–64 years | 2,803 | 528.3 | 2,803 | 565.5 |
| 65–74 years | 3,986 | 1,362.7 | 4,086 | 1,472.8 |
| 75–84 years | 5,486 | 3,766.3 | 5,590 | 4,041.0 |
| 85 years and over | 4,077 | 10,341.4 | 3,765 | 10,391.7 |
| Not stated | 2 | . . . | 3 | . . . |
| Age-adjusted rate[2] | . . . | 534.1 | . . . | 562.7 |
| Asian or Pacific Islander[3] female | | | | |
| All ages | 19,338 | 276.1 | 18,941 | 279.2 |
| Under 1 year[1] | 381 | 398.5 | 381 | 427.5 |
| 1–4 years | 74 | 20.1 | 71 | 20.1 |
| 5–14 years | 76 | 8.5 | 101 | 11.5 |
| 15–24 years | 222 | 23.3 | 273 | 28.8 |
| 25–34 years | 348 | 27.2 | 375 | 29.9 |
| 35–44 years | 624 | 52.9 | 661 | 58.2 |
| 45–54 years | 1,354 | 137.8 | 1,432 | 150.8 |
| 55–64 years | 2,042 | 335.3 | 2,030 | 359.2 |
| 65–74 years | 3,438 | 942.3 | 3,478 | 989.9 |
| 75–84 years | 5,356 | 2,570.7 | 5,247 | 2,681.8 |
| 85 years and over | 5,418 | 8,400.3 | 4,890 | 8,329.2 |
| Not stated | 4 | . . . | 2 | . . . |
| Age-adjusted rate[2] | . . . | 379.0 | . . . | 392.7 |

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 2003 and preliminary 2004—Con.

[Data are based on a continuous file of records received from the states. Age-specific rates are per 100,000 population in specified group. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." The number of deaths and death rates 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 censuses and surveys; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines. Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

| Age, race, and sex | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| Hispanic[5], both sexes | | | | |
| All ages | 121,173 | 293.2 | 122,026 | 305.8 |
| Under 1 year[1] | 5,262 | 580.4 | 5,281 | 610.1 |
| 1–4 years | 943 | 27.2 | 993 | 30.2 |
| 5–14 years | 1,070 | 14.0 | 1,173 | 15.7 |
| 15–24 years | 5,251 | 74.0 | 5,394 | 77.1 |
| 25–34 years | 5,789 | 76.0 | 6,189 | 83.9 |
| 35–44 years | 8,272 | 134.3 | 8,576 | 144.9 |
| 45–54 years | 12,411 | 308.1 | 12,516 | 327.8 |
| 55–64 years | 14,964 | 673.4 | 14,913 | 714.3 |
| 65–74 years | 20,325 | 1,600.1 | 20,596 | 1,685.6 |
| 75–84 years | 26,832 | 3,919.9 | 26,219 | 4,093.5 |
| 85 years and over | 19,998 | 9,512.8 | 20,129 | 10,431.5 |
| Not stated | 54 | . . . | 47 | . . . |
| Age-adjusted rate[2] | . . . | 583.2 | . . . | 621.2 |
| Hispanic[5] male | | | | |
| All ages | 67,681 | 317.1 | 68,119 | 330.7 |
| Under 1 year[1] | 2,934 | 633.5 | 2,940 | 665.5 |
| 1–4 years | 518 | 29.3 | 569 | 33.8 |
| 5–14 years | 620 | 15.8 | 706 | 18.4 |
| 15–24 years | 4,251 | 112.0 | 4,244 | 112.9 |
| 25–34 years | 4,391 | 105.5 | 4,742 | 118.1 |
| 35–44 years | 5,751 | 177.4 | 5,887 | 189.8 |
| 45–54 years | 8,305 | 410.6 | 8,336 | 436.4 |
| 55–64 years | 9,118 | 861.9 | 9,122 | 920.8 |
| 65–74 years | 11,217 | 1,983.3 | 11,465 | 2,115.7 |
| 75–84 years | 13,370 | 4,782.0 | 12,904 | 4,948.5 |
| 85 years and over | 7,154 | 10,022.4 | 7,165 | 11,029.2 |
| Not stated | 52 | . . . | 39 | . . . |
| Age-adjusted rate[2] | . . . | 702.7 | . . . | 748.1 |
| Hispanic[5] female | | | | |
| All ages | 53,492 | 267.8 | 53,907 | 279.3 |
| Under 1 year[1] | 2,328 | 525.0 | 2,341 | 552.4 |
| 1–4 years | 425 | 25.1 | 424 | 26.3 |
| 5–14 years | 450 | 12.0 | 467 | 12.8 |
| 15–24 years | 1,000 | 30.3 | 1,150 | 35.5 |
| 25–34 years | 1,398 | 40.5 | 1,447 | 43.0 |
| 35–44 years | 2,522 | 86.4 | 2,689 | 95.5 |
| 45–54 years | 4,107 | 204.8 | 4,180 | 219.1 |
| 55–64 years | 5,846 | 502.2 | 5,791 | 527.9 |
| 65–74 years | 9,109 | 1,292.6 | 9,131 | 1,342.9 |
| 75–84 years | 13,462 | 3,324.6 | 13,315 | 3,506.4 |
| 85 years and over | 12,844 | 9,250.9 | 12,964 | 10,128.1 |
| Not stated | 2 | . . . | 8 | . . . |
| Age-adjusted rate[2] | . . . | 483.5 | . . . | 515.8 |

. . . Category not applicable.

– Quantity zero.

[1]Death rates for Under 1 year (based on population estimates) differ from infant mortality rates (based on live births). See text and Health E-Stats report at http://www.cdc.gov/nchs for additional information on the infant mortality rate.

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

[3]Race and Hispanic origin are reported separately on the death certificate. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. California, Hawaii, Idaho, Maine, Michigan, Minnesota, Montana, New Hampshire, New Jersey, New York, Oklahoma, South Dakota, Washington, Wisconsin, and Wyoming reported multiple-race data in 2004. The multiple-race data for these states were bridged to the single race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes." Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see "Technical Notes."

[4]Includes deaths among Aleuts and Eskimos.

[5]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 the variability of the data, see "Technical Notes."

## Table 2. Deaths, death rates, and age-adjusted death rates for 113 selected causes, Injury by firearms, Drug-induced deaths, Alcohol-induced deaths, and Injury at work: United States, final 2003 and preliminary 2004

[Data are based on a continuous file of records received from the states. Rates per 100,000 population. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | | 2004 | | | 2003 | | |
|---|---|---|---|---|---|---|---|
| | | Number | Rate | Age-adjusted rate | Number | Rate | Age-adjusted rate |
| All causes | | 2,398,365 | 816.7 | 801.1 | 2,448,288 | 841.9 | 832.7 |
| Salmonella infections | (A01–A02) | 30 | 0.0 | 0.0 | 43 | 0.0 | 0.0 |
| Shigellosis and amebiasis | (A03,A06) | 2 | * | * | 7 | * | * |
| Certain other intestinal infections | (A04,A07–A09) | 4,357 | 1.5 | 1.4 | 3,090 | 1.1 | 1.0 |
| Tuberculosis | (A16–A19) | 662 | 0.2 | 0.2 | 711 | 0.2 | 0.2 |
| Respiratory tuberculosis | (A16) | 509 | 0.2 | 0.2 | 562 | 0.2 | 0.2 |
| Other tuberculosis | (A17–A19) | 153 | 0.1 | 0.1 | 149 | 0.1 | 0.0 |
| Whooping cough | (A37) | 13 | * | * | 11 | * | * |
| Scarlet fever and erysipelas | (A38,A46) | 2 | * | * | 1 | * | * |
| Meningococcal infection | (A39) | 141 | 0.0 | 0.0 | 161 | 0.1 | 0.0 |
| Septicemia | (A40–A41) | 33,464 | 11.4 | 11.2 | 34,069 | 11.7 | 11.6 |
| Syphilis | (A50–A53) | 38 | 0.0 | 0.0 | 34 | 0.0 | 0.0 |
| Acute poliomyelitis | (A80) | – | * | * | – | * | * |
| Arthropod-borne viral encephalitis | (A83–A84,A85.2) | 5 | * | * | 13 | * | * |
| Measles | (B05) | 1 | * | * | 1 | * | * |
| Viral hepatitis | (B15–B19) | 5,392 | 1.8 | 1.8 | 5,431 | 1.9 | 1.8 |
| Human immunodeficiency virus (HIV) disease | (B20–B24) | 12,995 | 4.4 | 4.4 | 13,658 | 4.7 | 4.7 |
| Malaria | (B50–B54) | 10 | * | * | 4 | * | * |
| Other and unspecified infectious and parasitic diseases and their sequelae | (A00,A05,A20–A36, A42–A44, A48–A49,A54–A79,A81–A82,A85.0–A85.1,A85.8,A86–B04,B06–B09,B25–B49,B55–B99) | 7,526 | 2.6 | 2.5 | 7,427 | 2.6 | 2.5 |
| Malignant neoplasms | (C00–C97) | 550,270 | 187.4 | 184.6 | 556,902 | 191.5 | 190.1 |
| Malignant neoplasms of lip, oral cavity and pharynx | (C00–C14) | 7,712 | 2.6 | 2.6 | 7,778 | 2.7 | 2.6 |
| Malignant neoplasm of esophagus | (C15) | 12,916 | 4.4 | 4.3 | 12,860 | 4.4 | 4.4 |
| Malignant neoplasm of stomach | (C16) | 11,635 | 4.0 | 3.9 | 12,110 | 4.2 | 4.1 |
| Malignant neoplasms of colon, rectum and anus | (C18–C21) | 53,614 | 18.3 | 17.9 | 55,958 | 19.2 | 19.1 |
| Malignant neoplasms of liver and intrahepatic bile ducts | (C22) | 15,133 | 5.2 | 5.0 | 14,706 | 5.1 | 5.0 |
| Malignant neoplasm of pancreas | (C25) | 31,447 | 10.7 | 10.5 | 30,777 | 10.6 | 10.5 |
| Malignant neoplasm of larynx | (C32) | 3,646 | 1.2 | 1.2 | 3,792 | 1.3 | 1.3 |
| Malignant neoplasms of trachea, bronchus and lung | (C33–C34) | 157,218 | 53.5 | 52.9 | 158,086 | 54.4 | 54.1 |
| Malignant melanoma of skin | (C43) | 7,895 | 2.7 | 2.6 | 7,818 | 2.7 | 2.7 |
| Malignant neoplasm of breast | (C50) | 40,880 | 13.9 | 13.6 | 42,000 | 14.4 | 14.2 |
| Malignant neoplasm of cervix uteri | (C53) | 3,806 | 1.3 | 1.3 | 3,919 | 1.3 | 1.3 |
| Malignant neoplasms of corpus uteri and uterus, part unspecified | (C54–C55) | 6,912 | 2.4 | 2.3 | 6,899 | 2.4 | 2.3 |
| Malignant neoplasm of ovary | (C56) | 14,604 | 5.0 | 4.9 | 14,657 | 5.0 | 5.0 |
| Malignant neoplasm of prostate | (C61) | 28,922 | 9.8 | 9.7 | 29,554 | 10.2 | 10.1 |
| Malignant neoplasms of kidney and renal pelvis | (C64–C65) | 12,127 | 4.1 | 4.0 | 12,286 | 4.2 | 4.2 |
| Malignant neoplasm of bladder | (C67) | 12,862 | 4.4 | 4.3 | 12,483 | 4.3 | 4.3 |
| Malignant neoplasms of meninges, brain and other parts of central nervous system | (C70–C72) | 12,668 | 4.3 | 4.2 | 12,901 | 4.4 | 4.4 |
| Malignant neoplasms of lymphoid, hematopoietic and related tissue | (C81–C96) | 54,485 | 18.6 | 18.3 | 55,679 | 19.1 | 19.1 |
| Hodgkin's disease | (C81) | 1,265 | 0.4 | 0.4 | 1,347 | 0.5 | 0.5 |
| Non-Hodgkin's lymphoma | (C82–C85) | 20,867 | 7.1 | 7.0 | 21,475 | 7.4 | 7.3 |
| Leukemia | (C91–C95) | 21,367 | 7.3 | 7.2 | 21,535 | 7.4 | 7.4 |
| Multiple myeloma and immunoproliferative neoplasms | (C88,C90) | 10,919 | 3.7 | 3.7 | 11,267 | 3.9 | 3.8 |

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, and Injury at work: United States, final 2003 and preliminary 2004—Con.**

[Data are based on a continuous file of records received from the states. Rates per 100,000 population. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | 2004 | | | 2003 | | |
|---|---|---|---|---|---|---|
| | Number | Rate | Age-adjusted rate | Number | Rate | Age-adjusted rate |
| Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue (C96) | 66 | 0.0 | 0.0 | 55 | 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) | 61,788 | 21.0 | 20.7 | 62,639 | 21.5 | 21.4 |
| In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48) | 13,521 | 4.6 | 4.5 | 13,563 | 4.7 | 4.6 |
| Anemias (D50–D64) | 4,569 | 1.6 | 1.5 | 4,594 | 1.6 | 1.6 |
| Diabetes mellitus (E10–E14) | 72,815 | 24.8 | 24.4 | 74,219 | 25.5 | 25.3 |
| Nutritional deficiencies (E40–E64) | 3,042 | 1.0 | 1.0 | 3,338 | 1.1 | 1.1 |
| Malnutrition (E40–E46) | 2,860 | 1.0 | 0.9 | 3,153 | 1.1 | 1.1 |
| Other nutritional deficiencies (E50–E64) | 181 | 0.1 | 0.1 | 185 | 0.1 | 0.1 |
| Meningitis (G00,G03) | 720 | 0.2 | 0.2 | 730 | 0.3 | 0.3 |
| Parkinson's disease (G20–G21) | 18,018 | 6.1 | 6.1 | 17,997 | 6.2 | 6.2 |
| Alzheimer's disease (G30) | 65,829 | 22.4 | 21.7 | 63,457 | 21.8 | 21.4 |
| Major cardiovascular diseases (I00–I78) | 862,800 | 293.8 | 287.0 | 902,443 | 310.3 | 306.1 |
| Diseases of heart (I00–I09,I11,I13,I20–I51) | 654,092 | 222.7 | 217.5 | 685,089 | 235.6 | 232.3 |
| Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09) | 3,248 | 1.1 | 1.1 | 3,624 | 1.2 | 1.2 |
| Hypertensive heart disease (I11) | 28,262 | 9.6 | 9.3 | 28,345 | 9.7 | 9.6 |
| Hypertensive heart and renal disease (I13) | 2,971 | 1.0 | 1.0 | 3,108 | 1.1 | 1.1 |
| Ischemic heart diseases (I20–I25) | 452,327 | 154.0 | 150.5 | 480,028 | 165.1 | 162.9 |
| Acute myocardial infarction (I21–I22) | 157,559 | 53.7 | 52.5 | 170,564 | 58.7 | 57.9 |
| Other acute ischemic heart diseases (I24) | 2,435 | 0.8 | 0.8 | 3,158 | 1.1 | 1.1 |
| Other forms of chronic ischemic heart disease (I20,I25) | 292,333 | 99.5 | 97.2 | 306,306 | 105.3 | 103.8 |
| Atherosclerotic cardiovascular disease, so described (I25.0) | 63,355 | 21.6 | 21.0 | 67,232 | 23.1 | 22.7 |
| All other forms of chronic ischemic heart disease (I20,I25.1–I25.9) | 228,978 | 78.0 | 76.2 | 239,074 | 82.2 | 81.1 |
| Other heart diseases (I26–I51) | 167,285 | 57.0 | 55.6 | 169,984 | 58.5 | 57.6 |
| Acute and subacute endocarditis (I33) | 1,214 | 0.4 | 0.4 | 1,245 | 0.4 | 0.4 |
| Diseases of pericardium and acute myocarditis (I30–I31,I40) | 766 | 0.3 | 0.3 | 868 | 0.3 | 0.3 |
| Heart failure (I50) | 57,700 | 19.6 | 19.1 | 57,448 | 19.8 | 19.4 |
| All other forms of heart disease (I26–I28,I34–I38,I42–I49,I51) | 107,604 | 36.6 | 35.8 | 110,423 | 38.0 | 37.5 |
| Essential (primary) hypertension and hypertensive renal disease (I10,I12) | 22,953 | 7.8 | 7.6 | 21,940 | 7.5 | 7.4 |
| Cerebrovascular diseases (I60–I69) | 150,147 | 51.1 | 50.0 | 157,689 | 54.2 | 53.5 |
| Atherosclerosis (I70) | 11,898 | 4.1 | 3.9 | 13,053 | 4.5 | 4.4 |
| Other diseases of circulatory system (I71–I78) | 23,709 | 8.1 | 7.9 | 24,672 | 8.5 | 8.4 |
| Aortic aneurysm and dissection (I71) | 13,765 | 4.7 | 4.6 | 14,810 | 5.1 | 5.1 |
| Other diseases of arteries, arterioles and capillaries (I72–I78) | 9,944 | 3.4 | 3.3 | 9,862 | 3.4 | 3.3 |
| Other disorders of circulatory system (I80–I99) | 4,734 | 1.6 | 1.6 | 4,737 | 1.6 | 1.6 |
| Influenza and pneumonia (J10–J18) | 61,472 | 20.9 | 20.4 | 65,163 | 22.4 | 22.0 |
| Influenza (J10–J11) | 1,265 | 0.4 | 0.4 | 1,792 | 0.6 | 0.6 |
| Pneumonia (J12–J18) | 60,207 | 20.5 | 20.0 | 63,371 | 21.8 | 21.4 |
| Other acute lower respiratory infections (J20–J22) | 310 | 0.1 | 0.1 | 421 | 0.1 | 0.1 |
| Acute bronchitis and bronchiolitis (J20–J21) | 221 | 0.1 | 0.1 | 304 | 0.1 | 0.1 |
| Unspecified acute lower respiratory infection (J22) | 89 | 0.0 | 0.0 | 117 | 0.0 | 0.0 |
| Chronic lower respiratory diseases (J40–J47) | 123,884 | 42.2 | 41.8 | 126,382 | 43.5 | 43.3 |

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, and Injury at work: United States, final 2003 and preliminary 2004—Con.**

[Data are based on a continuous file of records received from the states. Rates per 100,000 population. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | 2004 | | | 2003 | | |
|---|---|---|---|---|---|---|
| | Number | Rate | Age-adjusted rate | Number | Rate | Age-adjusted rate |
| Bronchitis, chronic and unspecified (J40–J42) | 798 | 0.3 | 0.3 | 850 | 0.3 | 0.3 |
| Emphysema (J43) | 13,913 | 4.7 | 4.7 | 14,861 | 5.1 | 5.1 |
| Asthma (J45–J46) | 3,780 | 1.3 | 1.3 | 4,099 | 1.4 | 1.4 |
| Other chronic lower respiratory diseases J44,J47) | 105,393 | 35.9 | 35.5 | 106,572 | 36.6 | 36.5 |
| Pneumoconioses and chemical effects (J60–J66,J68) | 1,018 | 0.3 | 0.3 | 1,114 | 0.4 | 0.4 |
| Pneumonitis due to solids and liquids (J69) | 16,959 | 5.8 | 5.6 | 17,335 | 6.0 | 5.9 |
| Other diseases of respiratory system (J00–J06,J30–J39,J67,J70–J98) | 27,391 | 9.3 | 9.2 | 25,520 | 8.8 | 8.7 |
| Peptic ulcer (K25–K28) | 3,770 | 1.3 | 1.3 | 3,913 | 1.3 | 1.3 |
| Diseases of appendix (K35–K38) | 446 | 0.2 | 0.1 | 439 | 0.2 | 0.1 |
| Hernia (K40–K46) | 1,605 | 0.5 | 0.5 | 1,613 | 0.6 | 0.6 |
| Chronic liver disease and cirrhosis (K70,K73–K74) | 26,549 | 9.0 | 8.8 | 27,503 | 9.5 | 9.3 |
| Alcoholic liver disease (K70) | 12,283 | 4.2 | 4.1 | 12,360 | 4.3 | 4.2 |
| Other chronic liver disease and cirrhosis (K73–K74) | 14,265 | 4.9 | 4.7 | 15,143 | 5.2 | 5.2 |
| Cholelithiasis and other disorders of gallbladder (K80–K82) | 3,045 | 1.0 | 1.0 | 2,948 | 1.0 | 1.0 |
| Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27) | 42,762 | 14.6 | 14.3 | 42,453 | 14.6 | 14.4 |
| Acute and rapidly progressive nephritic and nephrotic syndrome (N00–N01,N04) | 164 | 0.1 | 0.0 | 148 | 0.1 | 0.1 |
| Chronic glomerulonephritis, nephritis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified (N02–N03,N05–N07,N26) | 559 | 0.2 | 0.2 | 537 | 0.2 | 0.2 |
| Renal failure (N17–N19) | 42,000 | 14.3 | 14.0 | 41,737 | 14.4 | 14.2 |
| Other disorders of kidney (N25,N27) | 39 | 0.0 | 0.0 | 31 | 0.0 | 0.0 |
| Infections of kidney (N10–N12,N13.6,N15.1) | 769 | 0.3 | 0.3 | 823 | 0.3 | 0.3 |
| Hyperplasia of prostate (N40) | 493 | 0.2 | 0.2 | 477 | 0.2 | 0.2 |
| Inflammatory diseases of female pelvic organs (N70–N76) | 106 | 0.0 | 0.0 | 125 | 0.0 | 0.0 |
| Pregnancy, childbirth and the puerperium (O00–099) | 654 | 0.2 | 0.2 | 545 | 0.2 | 0.2 |
| Pregnancy with abortive outcome (O00–O07) | 26 | 0.0 | 0.0 | 40 | 0.0 | 0.0 |
| Other complications of pregnancy, childbirth and the puerperium (O10–O99) | 628 | 0.2 | 0.2 | 505 | 0.2 | 0.2 |
| Certain conditions originating in the perinatal period (P00–P96) | 14,046 | 4.8 | 4.8 | 14,378 | 4.9 | 4.9 |
| Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99) | 10,459 | 3.6 | 3.5 | 10,518 | 3.6 | 3.6 |
| Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99) | 34,708 | 11.8 | 11.5 | 31,444 | 10.8 | 10.6 |
| All other diseases (Residual) | 201,989 | 68.8 | 67.1 | 201,676 | 69.3 | 68.3 |
| Accidents (unintentional injuries) (V01–X59,Y85–Y86) | 108,694 | 37.0 | 36.6 | 109,277 | 37.6 | 37.3 |
| Transport accidents (V01–V99,Y85) | 46,933 | 16.0 | 15.8 | 48,071 | 16.5 | 16.4 |
| 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) | 43,947 | 15.0 | 14.8 | 44,757 | 15.4 | 15.3 |
| Other land transport accidents (V01,V05–V06,V09.1,V09.3–V09.9,V10–V11,V15–V18,V19.3, V19.8–V19.9, V80.0–V80.2,V80.6–V80.9,V81.2–V81.9,V82.2–V82.9,V87.9,V88.9,V89.1, V89.3,V89.9) | 1,131 | 0.4 | 0.4 | 1,357 | 0.5 | 0.4 |
| Water, air and space, and other and unspecified transport accidents and their sequelae (V90–V99,Y85) | 1,855 | 0.6 | 0.6 | 1,957 | 0.7 | 0.7 |
| Nontransport accidents (W00–X59,Y86) | 61,761 | 21.0 | 20.8 | 61,206 | 21.0 | 20.9 |
| Falls (W00–W19) | 18,535 | 6.3 | 6.2 | 17,229 | 5.9 | 5.9 |
| Accidental discharge of firearms (W32–W34) | 661 | 0.2 | 0.2 | 730 | 0.3 | 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, and Injury at work: United States, final 2003 and preliminary 2004—Con.**

[Data are based on a continuous file of records received from the states. Rates per 100,000 population. Age-adjusted rates are per 100,000 U.S. standard population; see "Technical Notes." For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | | 2004 | | | 2003 | | |
|---|---|---|---|---|---|---|---|
| | | Number | Rate | Age-adjusted rate | Number | Rate | Age-adjusted rate |
| Accidental drowning and submersion | (W65–W74) | 3,180 | 1.1 | 1.1 | 3,306 | 1.1 | 1.1 |
| Accidental exposure to smoke, fire and flames | (X00–X09) | 3,223 | 1.1 | 1.1 | 3,369 | 1.2 | 1.2 |
| Accidental poisoning and exposure to noxious substances | (X40–X49) | 19,250 | 6.6 | 6.5 | 19,457 | 6.7 | 6.7 |
| Other and unspecified nontransport accidents and their sequelae | (W20–W31,W35–W64, W75–W99,X10–X39,X50–X59,Y86) | 16,912 | 5.8 | 5.6 | 17,115 | 5.9 | 5.8 |
| Intentional self-harm (suicide) | (*U03,X60–X84,Y87.0) | 31,647 | 10.8 | 10.7 | 31,484 | 10.8 | 10.8 |
| Intentional self-harm (suicide) by discharge of firearms | (X72–X74) | 16,603 | 5.7 | 5.6 | 16,907 | 5.8 | 5.8 |
| Intentional self-harm (suicide) by other and unspecified means and their sequelae | (*U03, X60–X71,X75–X84,Y87.0) | 15,044 | 5.1 | 5.1 | 14,577 | 5.0 | 5.0 |
| Assault (homicide) | (*U01–*U02,X85–Y09,Y87.1) | 16,611 | 5.7 | 5.6 | 17,732 | 6.1 | 6.0 |
| Assault (homicide) by discharge of firearms | (*U01.4,X93–X95) | 11,250 | 3.8 | 3.8 | 11,920 | 4.1 | 4.1 |
| Assault (homicide) by other and unspecified means and their sequelae | (*U01.0–*U01.3, *U01.5–*U01.9,*U02,X85–X92,X96–Y09,Y87.1) | 5,360 | 1.8 | 1.8 | 5,812 | 2.0 | 2.0 |
| Legal intervention | (Y35,Y89.0) | 356 | 0.1 | 0.1 | 423 | 0.1 | 0.1 |
| Events of undetermined intent | (Y10–Y34,Y87.2,Y89.9) | 4,750 | 1.6 | 1.6 | 5,072 | 1.7 | 1.7 |
| Discharge of firearms, undetermined intent | (Y22–Y24) | 222 | 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) | 4,529 | 1.5 | 1.5 | 4,840 | 1.7 | 1.7 |
| Operations of war and their sequelae | (Y36,Y89.1) | 28 | 0.0 | 0.0 | 14 | * | * |
| Complications of medical and surgical care | (Y40–Y84,Y88) | 2,889 | 1.0 | 1.0 | 2,855 | 1.0 | 1.0 |
| Injury by firearms[1] | (*U01.4,W32–W34,X72–X74,X93–X95,Y22–Y24,Y35.0) | 29,036 | 9.9 | 9.8 | 30,136 | 10.4 | 10.3 |
| Drug-induced deaths[1] | (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–F15.6,F15.7–F15.9,F16.0–F16.5,F16.7–F16.9,F17.0,F17.3–F17.5,F17.7–F17.9, F18.0–F18.5,F18.7–F18.9,F19.0–F19.5,F19.7–F19.9,G21.1,G24.0,G25.1,G25.4,G25.6,G44.4, G62.0,G72.0,I95.2,J70.2–J70.4,L10.5,L27.0–L27.1,M10.2,M32.0,M80.4,M81.4,M83.5,M87.1, R78.1–R78.5,X40–X44,X60–X64,X85,Y10–Y14) | 28,457 | 9.7 | 9.7 | 28,723 | 9.9 | 9.9 |
| Alcohol-induced deaths[1] | (E24.4,F10,G31.2,G62.1,G72.1,I42.6,K29.2,K70,K86.0,R78.0,X45,X65,Y15) | 20,398 | 6.9 | 6.8 | 20,687 | 7.1 | 7.0 |
| Injury at work[2] | | 4,971 | 2.1 | 2.1 | 5,025 | 2.2 | 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]Included in selected categories.

[2]Injury at work described in "Technical Notes."

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

## Table 3. Deaths, death rates, and age-adjusted death rates: United States and each state and territory, final 2003 and preliminary 2004

[By place of residence. Data are based on a continuous file of records received from the states. Rates are per 100,000 population. Age-adjusted rates per 100,000 U.S. standard population; see "Technical Notes." Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

| Area | 2004 | | | 2003 | | |
|---|---|---|---|---|---|---|
| | Number | Rate | Age-adjusted rate | Number | Rate | Age-adjusted rate |
| United States[1] | 2,398,343 | 816.7 | 801.0 | 2,448,288 | 841.9 | 832.7 |
| Alabama | 46,111 | 1,017.9 | 992.3 | 46,716 | 1,038.0 | 1,001.7 |
| Alaska | 3,049 | 465.2 | 749.5 | 3,180 | 490.1 | 829.8 |
| Arizona | 43,172 | 751.6 | 757.6 | 43,392 | 777.5 | 787.1 |
| Arkansas | 27,539 | 1,000.5 | 925.2 | 27,918 | 1,024.2 | 937.5 |
| California[2] | - - - | - - - | - - - | 239,371 | 674.6 | 754.3 |
| Colorado | 28,310 | 615.2 | 736.5 | 29,506 | 648.4 | 784.3 |
| Connecticut | 29,289 | 836.0 | 705.6 | 29,627 | 850.5 | 734.6 |
| Delaware | 7,153 | 861.4 | 824.7 | 7,070 | 864.8 | 844.4 |
| District of Columbia | 5,432 | 981.4 | 970.2 | 5,573 | 987.5 | 982.3 |
| Florida | 168,952 | 971.1 | 763.3 | 168,657 | 991.0 | 776.0 |
| Georgia | 65,859 | 745.9 | 925.2 | 66,478 | 765.5 | 946.4 |
| Hawaii | 9,038 | 715.7 | 623.6 | 8,978 | 713.9 | 649.3 |
| Idaho | 10,044 | 720.9 | 754.7 | 10,380 | 759.7 | 797.1 |
| Illinois[2] | - - - | - - - | - - - | 105,325 | 832.4 | 834.5 |
| Indiana | 54,260 | 869.9 | 850.3 | 55,968 | 903.3 | 894.5 |
| Iowa | 26,884 | 909.9 | 728.9 | 28,062 | 953.2 | 768.4 |
| Kansas | 23,816 | 870.6 | 793.5 | 24,593 | 903.0 | 824.0 |
| Kentucky | 38,668 | 932.7 | 935.4 | 40,241 | 977.2 | 977.7 |
| Louisiana | 42,304 | 936.8 | 988.1 | 42,719 | 950.1 | 1,004.5 |
| Maine | 12,405 | 941.7 | 803.6 | 12,540 | 960.4 | 822.3 |
| Maryland | 43,224 | 777.7 | 805.8 | 44,499 | 807.8 | 852.9 |
| Massachusetts | 54,546 | 850.1 | 741.1 | 56,291 | 875.0 | 778.7 |
| Michigan | 85,160 | 842.1 | 812.6 | 86,728 | 860.4 | 850.5 |
| Minnesota | 37,074 | 726.8 | 692.0 | 37,620 | 743.6 | 713.0 |
| Mississippi | 27,870 | 960.1 | 998.2 | 28,489 | 988.8 | 1,014.0 |
| Missouri | 53,933 | 937.2 | 871.7 | 55,582 | 974.4 | 902.6 |
| Montana | 8,097 | 873.6 | 778.8 | 8,467 | 922.7 | 828.1 |
| Nebraska | 14,648 | 838.4 | 746.4 | 15,465 | 889.2 | 790.4 |
| Nevada | 17,864 | 765.1 | 877.9 | 17,858 | 796.8 | 924.5 |
| New Hampshire | 10,110 | 778.0 | 761.0 | 9,708 | 753.9 | 749.8 |
| New Jersey[2] | - - - | - - - | - - - | 73,689 | 853.0 | 794.8 |
| New Mexico | 14,292 | 750.9 | 778.5 | 14,805 | 789.8 | 823.8 |
| New York | 152,665 | 794.0 | 733.7 | 155,877 | 812.3 | 760.1 |
| North Carolina | 72,383 | 847.5 | 874.9 | 73,459 | 873.8 | 905.8 |
| North Dakota | 5,603 | 883.2 | 697.6 | 6,090 | 960.8 | 766.6 |
| Ohio | 106,350 | 928.1 | 848.5 | 109,110 | 954.1 | 889.8 |
| Oklahoma | 34,477 | 978.5 | 947.5 | 35,721 | 1,017.2 | 974.3 |
| Oregon | 30,332 | 843.8 | 778.1 | 30,912 | 868.4 | 808.5 |
| Pennsylvania | 127,630 | 1,028.8 | 814.5 | 129,769 | 1,049.4 | 849.2 |
| Rhode Island | 9,767 | 903.8 | 740.9 | 10,039 | 932.8 | 786.9 |
| South Carolina | 37,289 | 888.2 | 898.2 | 38,112 | 919.0 | 934.8 |
| South Dakota | 6,839 | 887.2 | 747.1 | 7,132 | 933.1 | 790.5 |
| Tennessee | 55,835 | 946.2 | 954.1 | 57,313 | 981.1 | 982.2 |
| Texas | 153,031 | 680.4 | 836.5 | 154,870 | 700.2 | 855.7 |
| Utah | 13,327 | 557.8 | 760.3 | 13,412 | 570.4 | 782.3 |
| Vermont | 4,995 | 803.8 | 730.9 | 5,120 | 827.0 | 765.3 |
| Virginia | 56,549 | 758.0 | 809.2 | 58,282 | 789.1 | 850.9 |
| Washington | 44,820 | 722.5 | 739.1 | 45,920 | 748.9 | 775.9 |
| West Virginia | 20,795 | 1,145.5 | 966.1 | 21,306 | 1,176.9 | 994.9 |
| Wisconsin | 45,607 | 827.9 | 749.9 | 46,177 | 843.8 | 772.5 |
| Wyoming | 3,950 | 779.8 | 788.5 | 4,172 | 832.3 | 849.9 |
| Puerto Rico | 28,922 | 742.6 | 782.1 | 28,202 | 727.1 | 779.8 |
| Virgin Islands | 624 | 573.7 | 691.2 | 631 | 579.9 | 717.7 |
| Guam | 683 | 411.2 | 686.0 | 680 | 415.7 | 755.8 |
| American Samoa | 286 | 493.9 | 1,352.2 | 256 | 442.6 | 1,209.7 |
| Northern Marianas | 165 | 210.9 | 1,161.3 | 142 | 186.5 | 805.1 |

- - - Data not available.

[1]Excludes data for U.S. territories.

[2]California, Illinois, and New Jersey data are not shown separately but are included in U.S. totals; see "Technical Notes."

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

## Table 4. Infant deaths and infant mortality rates, by age and race and Hispanic origin: United States, final 2003 and preliminary 2004

[Data are based on the continuous file of records received from the states. Rates per 1,000 live births. Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals. Rates for Hispanic origin should be interpreted with caution because of the inconsistencies between reporting Hispanic origin on birth and death certificates; see " Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines]

| Age and race and Hispanic origin | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| All races[1] | | | | |
| Under 1 year | 27,838 | 6.76 | 28,025 | 6.85 |
| Under 28 days | 18,532 | 4.50 | 18,893 | 4.62 |
| 28 days–11 months | 9,307 | 2.26 | 9,132 | 2.23 |
| Total white[2] | | | | |
| Under 1 year | 18,240 | 5.65 | 18,440 | 5.72 |
| Under 28 days | 12,238 | 3.79 | 12,495 | 3.87 |
| 28 days–11 months | 6,003 | 1.86 | 5,945 | 1.84 |
| Non-Hispanic white | | | | |
| Under 1 year | 13,073 | 5.67 | 13,223 | 5.69 |
| Under 28 days | 8,684 | 3.77 | 8,906 | 3.84 |
| 28 days–11 months | 4,389 | 1.90 | 4,317 | 1.86 |
| Total black[2] | | | | |
| Under 1 year | 8,359 | 13.65 | 8,402 | 14.01 |
| Under 28 days | 5,495 | 8.97 | 5,640 | 9.40 |
| 28 days–11 months | 2,864 | 4.68 | 2,762 | 4.60 |
| Hispanic[3] | | | | |
| Under 1 year | 5,262 | 5.57 | 5,281 | 5.79 |
| Under 28 days | 3,598 | 3.81 | 3,601 | 3.95 |
| 28 days–11 months | 1,664 | 1.76 | 1,680 | 1.84 |

[1]Includes races other than white or black.

[2]Race and Hispanic origin are reported separately on both the birth and death certificate. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. California, Hawaii, Idaho, Maine, Michigan, Minnesota, Montana, New Hampshire, New Jersey, New York, Oklahoma, South Dakota, Washington, Wisconsin, and Wyoming reported multiple-race data in 2004. The multiple-race data for these states were bridged to the single race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes." Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see "Technical Notes."

[3]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 the variability of the data, see "Technical Notes." Although the infant mortality rate is the preferred indicator of the risk of dying during the first year of life, another measure of infant mortality, the infant death rate, is shown elsewhere in this report. The two measures typically are similar yet they can differ because the denominators used for these measures are different. For more information on these measures of risk, see section Infant mortality in the "Technical Notes."

## Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2003 and preliminary 2004

[Data are based on a continuous file of records from the states. Rates per 100,000 live births. For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| All causes | 27,835 | 676.3 | 28,025 | 685.2 |
| Certain infectious and parasitic diseases (A00–B99) | 492 | 12.0 | 494 | 12.1 |
| Certain intestinal infectious diseases (A00–A08) | 9 | * | 13 | * |
| Diarrhea and gastroenteritis of infectious origin (A09) | – | * | 1 | * |
| Tuberculosis (A16–A19) | 1 | * | – | * |
| Tetanus (A33,A35) | – | * | – | * |
| Diphtheria (A36) | – | * | – | * |
| Whooping cough (A37) | 13 | * | 10 | * |
| Meningococcal infection (A39) | 11 | * | 12 | * |
| Septicemia (A40–A41) | 288 | 7.0 | 278 | 6.8 |
| Congenital syphilis (A50) | – | * | – | * |
| Gonococcal infection (A54) | – | * | – | * |
| Viral diseases (A80–B34) | 120 | 2.9 | 116 | 2.8 |
| Acute poliomyelitis (A80) | – | * | – | * |
| Varicella (chickenpox) (B01) | – | * | 1 | * |
| Measles (B05) | – | * | – | * |
| Human immunodeficiency virus (HIV) disease (B20–B24) | 3 | * | 5 | * |
| Mumps (B26) | – | * | – | * |
| Other and unspecified viral diseases (A81–B00,B02–B04,B06–B19,B25,B27–B34) | 117 | 2.8 | 110 | 2.7 |
| Candidiasis (B37) | 17 | * | 22 | 0.5 |
| Malaria (B50–B54) | – | * | – | * |
| Pneumocystosis (B59) | 1 | * | 3 | * |
| 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) | 32 | 0.8 | 39 | 1.0 |
| Neoplasms (C00–D48) | 152 | 3.7 | 137 | 3.3 |
| Malignant neoplasms (C00–C97) | 79 | 1.9 | 75 | 1.8 |
| Hodgkin's disease and non-Hodgkin's lymphomas (C81–C85) | 2 | * | – | * |
| Leukemia (C91–C95) | 30 | 0.7 | 30 | 0.7 |
| Other and unspecified malignant neoplasms (C00–C80,C88–C90,C96–C97) | 47 | 1.1 | 45 | 1.1 |
| In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48) | 73 | 1.8 | 62 | 1.5 |
| Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89) | 95 | 2.3 | 105 | 2.6 |
| Anemias (D50–D64) | 16 | * | 22 | 0.5 |
| Hemorrhagic conditions and other diseases of blood and blood-forming organs (D65–D76) | 60 | 1.5 | 63 | 1.5 |
| Certain disorders involving the immune mechanism (D80–D89) | 19 | * | 20 | 0.5 |
| Endocrine, nutritional and metabolic diseases (E00–E88) | 241 | 5.9 | 248 | 6.1 |
| Short stature, not elsewhere classified (E34.3) | 6 | * | 12 | * |
| Nutritional deficiencies (E40–E64) | 5 | * | 10 | * |
| Cystic fibrosis (E84) | 7 | * | 5 | * |
| Volume depletion, disorders of fluid, electrolyte and acid-base balance (E86–E87) | 76 | 1.8 | 78 | 1.9 |
| All other endocrine, nutritional and metabolic diseases (E00–E32,E34.0–E34.2, E34.4–E34.9,E65–E83,E85,E88) | 147 | 3.6 | 143 | 3.5 |
| Diseases of the nervous system (G00–G98) | 370 | 9.0 | 400 | 9.8 |
| Meningitis (G00,G03) | 68 | 1.7 | 77 | 1.9 |
| Infantile spinal muscular atrophy, type I (Werdnig-Hoffman) (G12.0) | 9 | * | 18 | * |

See footnotes at end of table.

## Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2003 and preliminary 2004—Con.

[Data are based on a continuous file of records from the states. Rates per 100,000 live births. For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| Infantile cerebral palsy (G80) | 12 | * | 11 | * |
| Anoxic brain damage, not elsewhere classified (G93.1) | 41 | 1.0 | 50 | 1.2 |
| Other diseases of nervous system (G04,G06–G11,G12.1–G12.9,G20–G72,G81–G92,G93.0, G93.2–G93.9,G95–G98) | 240 | 5.8 | 244 | 6.0 |
| Diseases of the ear and mastoid process (H60–H93) | 6 | * | 8 | * |
| Diseases of the circulatory system (I00–I99) | 605 | 14.7 | 591 | 14.5 |
| Pulmonary heart disease and diseases of pulmonary circulation (I26–I28) | 173 | 4.2 | 132 | 3.2 |
| Pericarditis, endocarditis and myocarditis (I30,I33,I40) | 12 | * | 26 | 0.6 |
| Cardiomyopathy (I42) | 104 | 2.5 | 126 | 3.1 |
| Cardiac arrest (I46) | 24 | 0.6 | 20 | 0.5 |
| Cerebrovascular diseases (I60–I69) | 131 | 3.2 | 101 | 2.5 |
| All other diseases of circulatory system (I00–I25,I31,I34–I38,I44–I45,I47–I51,I70–I99) | 161 | 3.9 | 186 | 4.5 |
| Diseases of the respiratory system (J00–J98) | 635 | 15.4 | 699 | 17.1 |
| Acute upper respiratory infections (J00–J06) | 6 | * | 14 | * |
| Influenza and pneumonia (J10–J18) | 275 | 6.7 | 322 | 7.9 |
| Influenza (J10–J11) | 16 | * | 31 | 0.8 |
| Pneumonia (J12–J18) | 259 | 6.3 | 291 | 7.1 |
| Acute bronchitis and acute bronchiolitis (J20–J21) | 53 | 1.3 | 53 | 1.3 |
| Bronchitis, chronic and unspecified (J40–J42) | 17 | * | 20 | 0.5 |
| Asthma (J45–J46) | 5 | * | 7 | * |
| Pneumonitis due to solids and liquids (J69) | 9 | * | 13 | * |
| Other and unspecified diseases of respiratory system (J22,J30–J39,J43–J44,J47–J68,J70–J98) | 270 | 6.6 | 270 | 6.6 |
| Diseases of the digestive system (K00–K92) | 566 | 13.8 | 551 | 13.5 |
| Gastritis, duodenitis, and noninfective enteritis and colitis (K29,K50–K55) | 302 | 7.3 | 310 | 7.6 |
| Hernia of abdominal cavity and intestinal obstruction without hernia (K40–K46,K56) | 76 | 1.8 | 65 | 1.6 |
| All other and unspecified diseases of digestive system (K00–K28,K30–K38,K57–K92) | 188 | 4.6 | 176 | 4.3 |
| Diseases of the genitourinary system (N00–N98) | 213 | 5.2 | 206 | 5.0 |
| Renal failure and other disorders of kidney (N17–N19,N25,N27) | 180 | 4.4 | 170 | 4.2 |
| Other and unspecified diseases of genitourinary system (N00–N15,N20–N23,N26,N28–N98) | 33 | 0.8 | 36 | 0.9 |
| Certain conditions originating in the perinatal period (P00–P96) | 13,908 | 337.9 | 14,254 | 348.5 |
| Newborn affected by maternal factors and by complications of pregnancy, labor and delivery (P00–P04) | 3,050 | 74.1 | 3,166 | 77.4 |
| Newborn affected by maternal hypertensive disorders (P00.0) | 83 | 2.0 | 69 | 1.7 |
| Newborn affected by other maternal conditions which may be unrelated to present pregnancy (P00.1–P00.9) | 72 | 1.7 | 83 | 2.0 |
| Newborn affected by maternal complications of pregnancy (P01) | 1,705 | 41.4 | 1,710 | 41.8 |
| Newborn affected by incompetent cervix (P01.0) | 462 | 11.2 | 444 | 10.9 |
| Newborn affected by premature rupture of membranes (P01.1) | 768 | 18.7 | 731 | 17.9 |
| Newborn affected by multiple pregnancy (P01.5) | 262 | 6.4 | 305 | 7.5 |
| Newborn affected by other maternal complications of pregnancy (P01.2–P01.4, P01.6–P01.9) | 213 | 5.2 | 230 | 5.6 |
| Newborn affected by complications of placenta, cord and membranes (P02) | 998 | 24.2 | 1,099 | 26.9 |
| Newborn affected by complications involving placenta (P02.0–P02.3) | 526 | 12.8 | 597 | 14.6 |
| Newborn affected by complications involving cord (P02.4–P02.6) | 58 | 1.4 | 41 | 1.0 |
| Newborn affected by chorioamnionitis (P02.7) | 414 | 10.1 | 458 | 11.2 |
| Newborn affected by other and unspecified abnormalities of membranes (P02.8–P02.9) | – | * | 3 | * |
| Newborn affected by other complications of labor and delivery (P03) | 147 | 3.6 | 163 | 4.0 |

See footnotes at end of table.

## Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2003 and preliminary 2004—Con.

[Data are based on a continuous file of records from the states. Rates per 100,000 live births. For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| Newborn affected by noxious influences transmitted via placenta or breast milk (P04) | 47 | 1.1 | 42 | 1.0 |
| Disorders related to length of gestation and fetal malnutrition (P05–P08) | 4,755 | 115.5 | 4,912 | 120.1 |
| Slow fetal growth and fetal malnutrition (P05) | 70 | 1.7 | 63 | 1.5 |
| Disorders related to short gestation and low birth weight, not elsewhere classified (P07) | 4,685 | 113.8 | 4,849 | 118.6 |
| Extremely low birth weight or extreme immaturity (P07.0,P07.2) | 3,596 | 87.4 | 3,683 | 90.0 |
| Other low birth weight or preterm (P07.1,P07.3) | 1,089 | 26.5 | 1,166 | 28.5 |
| Disorders related to long gestation and high birth weight (P08) | – | * | – | * |
| Birth trauma (P10–P15) | 21 | 0.5 | 26 | 0.6 |
| Intrauterine hypoxia and birth asphyxia (P20–P21) | 502 | 12.2 | 558 | 13.6 |
| Intrauterine hypoxia (P20) | 92 | 2.2 | 109 | 2.7 |
| Birth asphyxia (P21) | 410 | 10.0 | 449 | 11.0 |
| Respiratory distress of newborn (P22) | 877 | 21.3 | 831 | 20.3 |
| Other respiratory conditions originating in the perinatal period (P23–P28) | 1,202 | 29.2 | 1,217 | 29.8 |
| Congenital pneumonia (P23) | 88 | 2.1 | 78 | 1.9 |
| Neonatal aspiration syndromes (P24) | 40 | 1.0 | 56 | 1.4 |
| Interstitial emphysema and related conditions originating in the perinatal period (P25) | 134 | 3.3 | 151 | 3.7 |
| Pulmonary hemorrhage originating in the perinatal period (P26) | 173 | 4.2 | 163 | 4.0 |
| Chronic respiratory disease originating in the perinatal period (P27) | 255 | 6.2 | 262 | 6.4 |
| Atelectasis (P28.0–P28.1) | 443 | 10.8 | 441 | 10.8 |
| All other respiratory conditions originating in the perinatal period (P28.2–P28.9) | 68 | 1.7 | 66 | 1.6 |
| Infections specific to the perinatal period (P35–P39) | 995 | 24.2 | 967 | 23.6 |
| Bacterial sepsis of newborn (P36) | 798 | 19.4 | 772 | 18.9 |
| Omphalitis of newborn with or without mild hemorrhage (P38) | 2 | * | 4 | * |
| All other infections specific to the perinatal period (P35,P37,P39) | 195 | 4.7 | 191 | 4.7 |
| Hemorrhagic and hematological disorders of newborn (P50–P61) | 697 | 16.9 | 746 | 18.2 |
| Neonatal hemorrhage (P50–P52,P54) | 593 | 14.4 | 649 | 15.9 |
| Hemorrhagic disease of newborn (P53) | – | * | – | * |
| Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice (P55–P59) | 9 | * | 10 | * |
| Hematological disorders (P60–P61) | 95 | 2.3 | 87 | 2.1 |
| Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (P70.0–P70.2) | 7 | * | 7 | * |
| Necrotizing enterocolitis of newborn (P77) | 438 | 10.6 | 405 | 9.9 |
| Hydrops fetalis not due to hemolytic disease (P83.2) | 198 | 4.8 | 188 | 4.6 |
| Other perinatal conditions (P29,P70.3–P76,P78–P81,P83.0–P83.1,P83.3–P96) | 1,167 | 28.4 | 1,231 | 30.1 |
| Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99) | 5,627 | 136.7 | 5,621 | 137.4 |
| Anencephaly and similar malformations (Q00) | 288 | 7.0 | 334 | 8.2 |
| Congenital hydrocephalus (Q03) | 88 | 2.1 | 101 | 2.5 |
| Spina bifida (Q05) | 20 | 0.5 | 11 | * |
| Other congenital malformations of nervous system (Q01–Q02,Q04,Q06–Q07) | 343 | 8.3 | 319 | 7.8 |
| Congenital malformations of heart (Q20–Q24) | 1,396 | 33.9 | 1,445 | 35.3 |
| Other congenital malformations of circulatory system (Q25–Q28) | 239 | 5.8 | 237 | 5.8 |
| Congenital malformations of respiratory system (Q30–Q34) | 631 | 15.3 | 619 | 15.1 |
| Congenital malformations of digestive system (Q35–Q45) | 99 | 2.4 | 94 | 2.3 |
| Congenital malformations of genitourinary system (Q50–Q64) | 338 | 8.2 | 332 | 8.1 |
| Congenital malformations and deformations of musculoskeletal system, limbs and integument (Q65–Q85) | 534 | 13.0 | 548 | 13.4 |
| Down's syndrome (Q90) | 107 | 2.6 | 116 | 2.8 |

See footnotes at end of table.

## Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2003 and preliminary 2004—Con.

[Data are based on a continuous file of records from the states. Rates per 100,000 live births. For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes." Figures for 2004 are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | 2004 | | 2003 | |
|---|---|---|---|---|
| | Number | Rate | Number | Rate |
| Edward's syndrome . . . (Q91.0–Q91.3) | 509 | 12.4 | 469 | 11.5 |
| Patau's syndrome . . . (Q91.4–Q91.7) | 311 | 7.6 | 274 | 6.7 |
| Other congenital malformations and deformations . . . (Q10–Q18,Q86–Q89) | 525 | 12.8 | 526 | 12.9 |
| Other chromosomal abnormalities, not elsewhere classified . . . (Q92–Q99) | 201 | 4.9 | 196 | 4.8 |
| Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified . . . (R00–R99) | 3,501 | 85.1 | 3,318 | 81.1 |
| Sudden infant death syndrome . . . (R95) | 2,109 | 51.2 | 2,162 | 52.9 |
| Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified . . . (R00–R53,R55–594,R96–R99) | 1,392 | 33.8 | 1,156 | 28.3 |
| All other diseases . . . (Residual) | 22 | 0.5 | 17 | * |
| External causes of mortality . . . (*U01,V01–Y84) | 1,403 | 34.1 | 1,376 | 33.6 |
| Accidents (unintentional injuries) . . . (V01–X59) | 995 | 24.2 | 945 | 23.1 |
| Transport accidents . . . (V01–V99) | 156 | 3.8 | 148 | 3.6 |
| Motor vehicle accidents . . . (V02–V04,V09.0,V09.2,V12–V14,V19.0–V19.2,V19.4–V19.6,V20–V79,V80.3–V80.5, V81.0–V81.1,V82.0–V82.1,V83–V86,V87.0–V87.8,V88.0–V88.8, V89.0,V89.2) | 154 | 3.7 | 145 | 3.5 |
| 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 | * | 3 | * |
| Falls . . . (W00–W19) | 21 | 0.5 | 14 | * |
| Accidental discharge of firearms . . . (W32–W34) | 1 | * | – | * |
| Accidental drowning and submersion . . . (W65–W74) | 53 | 1.3 | 58 | 1.4 |
| Accidental suffocation and strangulation in bed . . . (W75) | 480 | 11.7 | 418 | 10.2 |
| Other accidental suffocation and strangulation . . . (W76–W77,W81–W84) | 138 | 3.4 | 140 | 3.4 |
| Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract . . . (W78–W80) | 51 | 1.2 | 61 | 1.5 |
| Accidents caused by exposure to smoke, fire and flames . . . (X00–X09) | 28 | 0.7 | 30 | 0.7 |
| Accidental poisoning and exposure to noxious substances . . . (X40–X49) | 13 | * | 20 | 0.5 |
| Other and unspecified accidents . . . (W20–W31,W35–W64,W85–W99,X10–X39,X50–X59) | 55 | 1.3 | 56 | 1.4 |
| Assault (homicide) . . . (*U01,X85–Y09) | 299 | 7.3 | 341 | 8.3 |
| Assault (homicide) by hanging, strangulation and suffocation . . . (X91) | 38 | 0.9 | 39 | 1.0 |
| Assault (homicide) by discharge of firearms . . . (*U01.4,X93–X95) | 7 | * | 8 | * |
| Neglect, abandonment and other maltreatment syndromes . . . (Y06–Y07) | 89 | 2.2 | 100 | 2.4 |
| Assault (homicide) by other and unspecified means . . . (*U01.0–*U01.3, *U01.5–*U01.9,X85–X90,X92,X96–X99,Y00–Y05,Y08–Y09) | 164 | 4.0 | 194 | 4.7 |
| Complications of medical and surgical care . . . (Y40–Y84) | 19 | * | 15 | * |
| Other external causes and their sequelae . . . (X60–X84,Y10–Y36) | 90 | 2.2 | 75 | 1.8 |

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

– Quantity zero.

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

## Table 6. Expectation of life by age, race, and sex: United States, final 2003 and preliminary 2004

[Data are based on a continuous file of records from the states. Calculations of life expectancy employ populations estimated as of July 1 for 2003 and 2004; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines]

| Age (years) and race | Both sexes | | Male | | Female | |
|---|---|---|---|---|---|---|
| | 2004 | 2003 | 2004 | 2003 | 2004 | 2003 |
| All races[1] | | | | | | |
| 0 | 77.9 | 77.5 | 75.2 | 74.8 | 80.4 | 80.1 |
| 1 | 77.4 | 77.0 | 74.8 | 74.3 | 79.9 | 79.6 |
| 5 | 73.5 | 73.1 | 70.9 | 70.4 | 76.0 | 75.7 |
| 10 | 68.6 | 68.2 | 65.9 | 65.5 | 71.0 | 70.7 |
| 15 | 63.6 | 63.2 | 61.0 | 60.6 | 66.1 | 65.8 |
| 20 | 58.8 | 58.4 | 56.3 | 55.8 | 61.2 | 60.9 |
| 25 | 54.1 | 53.7 | 51.6 | 51.2 | 56.4 | 56.0 |
| 30 | 49.3 | 48.9 | 47.0 | 46.5 | 51.5 | 51.2 |
| 35 | 44.6 | 44.2 | 42.3 | 41.9 | 46.7 | 46.4 |
| 40 | 39.9 | 39.5 | 37.7 | 37.3 | 41.9 | 41.6 |
| 45 | 35.3 | 35.0 | 33.2 | 32.8 | 37.2 | 37.0 |
| 50 | 30.9 | 30.6 | 28.8 | 28.5 | 32.7 | 32.4 |
| 55 | 26.6 | 26.3 | 24.7 | 24.4 | 28.3 | 28.0 |
| 60 | 22.5 | 22.2 | 20.8 | 20.4 | 24.0 | 23.8 |
| 65 | 18.7 | 18.4 | 17.1 | 16.8 | 20.0 | 19.8 |
| 70 | 15.2 | 14.9 | 13.7 | 13.5 | 16.2 | 16.0 |
| 75 | 12.0 | 11.8 | 10.7 | 10.5 | 12.8 | 12.6 |
| 80 | 9.2 | 9.0 | 8.2 | 8.0 | 9.8 | 9.6 |
| 85 | 6.9 | 6.8 | 6.1 | 6.0 | 7.2 | 7.2 |
| 90 | 5.0 | 5.0 | 4.4 | 4.4 | 5.2 | 5.2 |
| 95 | 3.6 | 3.6 | 3.2 | 3.2 | 3.7 | 3.7 |
| 100 | 2.6 | 2.6 | 2.3 | 2.3 | 2.6 | 2.6 |
| White[2] | | | | | | |
| 0 | 78.3 | 78.0 | 75.7 | 75.3 | 80.8 | 80.5 |
| 1 | 77.8 | 77.4 | 75.2 | 74.8 | 80.2 | 79.9 |
| 5 | 73.8 | 73.5 | 71.3 | 70.9 | 76.3 | 76.0 |
| 10 | 68.9 | 68.5 | 66.3 | 66.0 | 71.3 | 71.0 |
| 15 | 63.9 | 63.6 | 61.4 | 61.0 | 66.4 | 66.1 |
| 20 | 59.1 | 58.8 | 56.7 | 56.3 | 61.5 | 61.2 |
| 25 | 54.4 | 54.1 | 52.0 | 51.6 | 56.6 | 56.3 |
| 30 | 49.6 | 49.3 | 47.3 | 46.9 | 51.8 | 51.5 |
| 35 | 44.8 | 44.5 | 42.6 | 42.2 | 46.9 | 46.6 |
| 40 | 40.1 | 39.8 | 38.0 | 37.6 | 42.1 | 41.9 |
| 45 | 35.5 | 35.2 | 33.4 | 33.1 | 37.4 | 37.2 |
| 50 | 31.1 | 30.8 | 29.1 | 28.8 | 32.9 | 32.6 |
| 55 | 26.7 | 26.5 | 24.9 | 24.6 | 28.4 | 28.1 |
| 60 | 22.6 | 22.3 | 20.9 | 20.6 | 24.1 | 23.8 |
| 65 | 18.7 | 18.5 | 17.1 | 16.9 | 20.0 | 19.8 |
| 70 | 15.1 | 14.9 | 13.7 | 13.5 | 16.2 | 16.0 |
| 75 | 11.9 | 11.7 | 10.7 | 10.5 | 12.8 | 12.6 |
| 80 | 9.1 | 9.0 | 8.1 | 8.0 | 9.7 | 9.6 |
| 85 | 6.8 | 6.7 | 6.0 | 5.9 | 7.1 | 7.1 |
| 90 | 4.9 | 4.9 | 4.3 | 4.3 | 5.1 | 5.1 |
| 95 | 3.5 | 3.5 | 3.1 | 3.1 | 3.6 | 3.6 |
| 100 | 2.5 | 2.5 | 2.2 | 2.2 | 2.5 | 2.5 |

See footnotes at end of table.

## Table 6. Expectation of life by age, race, and sex: United States, final 2003 and preliminary 2004—Con.

[Data are based on a continuous file of records from the states. Calculations of life expectancy employ populations estimated as of July 1 for 2003 and 2004; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines]

| Age (years) and race | Both sexes | | Male | | Female | |
|---|---|---|---|---|---|---|
| | 2004 | 2003 | 2004 | 2003 | 2004 | 2003 |
| Black[2] | | | | | | |
| 0 | 73.3 | 72.7 | 69.8 | 69.0 | 76.5 | 76.1 |
| 1 | 73.3 | 72.7 | 69.8 | 69.1 | 76.4 | 76.0 |
| 5 | 69.4 | 68.9 | 65.9 | 65.3 | 72.5 | 72.2 |
| 10 | 64.5 | 63.9 | 61.0 | 60.3 | 67.6 | 67.2 |
| 15 | 59.6 | 59.0 | 56.1 | 55.4 | 62.7 | 62.3 |
| 20 | 54.8 | 54.2 | 51.4 | 50.7 | 57.8 | 57.4 |
| 25 | 50.2 | 49.6 | 46.9 | 46.3 | 53.0 | 52.6 |
| 30 | 45.5 | 45.0 | 42.5 | 41.8 | 48.2 | 47.8 |
| 35 | 41.0 | 40.4 | 38.0 | 37.3 | 43.5 | 43.1 |
| 40 | 36.4 | 36.0 | 33.6 | 32.9 | 38.9 | 38.6 |
| 45 | 32.1 | 31.6 | 29.3 | 28.7 | 34.5 | 34.1 |
| 50 | 28.0 | 27.6 | 25.3 | 24.8 | 30.2 | 29.9 |
| 55 | 24.2 | 23.8 | 21.7 | 21.2 | 26.1 | 25.9 |
| 60 | 20.6 | 20.2 | 18.3 | 17.9 | 22.3 | 22.1 |
| 65 | 17.3 | 17.0 | 15.3 | 14.9 | 18.7 | 18.5 |
| 70 | 14.2 | 14.0 | 12.6 | 12.1 | 15.4 | 15.3 |
| 75 | 11.5 | 11.4 | 10.1 | 9.8 | 12.3 | 12.4 |
| 80 | 9.2 | 9.2 | 8.2 | 7.9 | 9.7 | 9.8 |
| 85 | 7.3 | 7.4 | 6.6 | 6.4 | 7.6 | 7.8 |
| 90 | 5.7 | 5.7 | 5.2 | 5.0 | 5.8 | 6.0 |
| 95 | 4.4 | 4.4 | 4.0 | 3.8 | 4.3 | 4.5 |
| 100 | 3.4 | 3.4 | 3.1 | 3.0 | 3.3 | 3.4 |

[1]Includes races other than white and black.

[2]Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. California, Hawaii, Idaho, Maine, Michigan, Minnesota, Montana, New Hampshire, New Jersey, New York, Oklahoma, South Dakota, Washington, Wisconsin, and Wyoming reported multiple-race data in 2004. The multiple-race data for these states were bridged to the single race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

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 2004

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

| Rank[1] | Cause of death and age (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Number | Rate |
|---|---|---|---|
| | All ages[2] | | |
| . . . | All causes | 2,398,365 | 816.7 |
| 1 | Diseases of heart (I00–I09,I11,I13,I20–I51) | 654,092 | 222.7 |
| 2 | Malignant neoplasms (C00–C97) | 550,270 | 187.4 |
| 3 | Cerebrovascular diseases (I60–I69) | 150,147 | 51.1 |
| 4 | Chronic lower respiratory diseases (J40–J47) | 123,884 | 42.2 |
| 5 | Accidents (unintentional injuries) (V01–X59,Y85–Y86) | 108,694 | 37.0 |
| . . . | 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) | 43,947 | 15.0 |
| . . . | 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) | 64,747 | 22.0 |
| 6 | Diabetes mellitus (E10–E14) | 72,815 | 24.8 |
| 7 | Alzheimer's disease (G30) | 65,829 | 22.4 |
| 8 | Influenza and pneumonia (J10–J18) | 61,472 | 20.9 |
| 9 | Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27) | 42,762 | 14.6 |
| 10 | Septicemia (A40–A41) | 33,464 | 11.4 |
| . . . | All other causes (Residual) | 534,936 | 182.2 |
| | 1–4 years | | |
| . . . | All causes | 4,775 | 29.9 |
| 1 | Accidents (unintentional injuries) (V01–X59,Y85–Y86) | 1,606 | 10.0 |
| . . . | 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) | 630 | 3.9 |
| . . . | All other accidents (V01,V05–V06,V09.1,V09.3–V09.9,V10–V12,V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2, V80.6–V80.9,V81.2–V81.9,V82.2–V82.9,V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99,W00–X59,Y85–Y86) | 976 | 6.1 |
| 2 | Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99) | 580 | 3.6 |
| 3 | Malignant neoplasms (C00–C97) | 388 | 2.4 |
| 4 | Assault (homicide) (*U01–*U02,X85–Y09,Y87.1) | 354 | 2.2 |
| 5 | Diseases of heart (I00–I09,I11,I13,I20–I51) | 191 | 1.2 |
| 6 | Influenza and pneumonia (J10–J18) | 132 | 0.8 |
| 7 | Septicemia (A40–A41) | 76 | 0.5 |
| 8 | Certain conditions originating in the perinatal period (P00–P96) | 58 | 0.4 |
| 9 | In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48) | 53 | 0.3 |
| 10 | Chronic lower respiratory diseases (J10–J47) | 43 | 0.3 |
| . . . | All other causes (Residual) | 1,294 | 8.1 |
| | 5–14 years | | |
| . . . | All causes | 6,755 | 16.6 |
| 1 | Accidents (unintentional injuries) (V01–X59,Y85–Y86) | 2,578 | 6.3 |
| . . . | 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) | 1,592 | 3.9 |
| . . . | All other accidents (V01,V05–V06,V09.1,V09.3–V09.9,V10–V12,V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2, V80.6–V80.9,V81.2–V81.9,V82.2–V82.9,V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99,W00–X59,Y85–Y86) | 986 | 2.4 |
| 2 | Malignant neoplasms (C00–C97) | 1,028 | 2.5 |
| 3 | Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99) | 385 | 0.9 |
| 4 | Assault (homicide) (*U01–*U02,X85–Y09,Y87.1) | 318 | 0.8 |
| 5 | Intentional self-harm (suicide) (*U03,X60–X84,Y87.0) | 292 | 0.7 |
| 6 | Diseases of heart (I00–I09,I11,I13,I20–I51) | 233 | 0.6 |
| 7 | Chronic lower respiratory diseases (J40–J47) | 113 | 0.3 |
| 8 | In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48) | 91 | 0.2 |
| 9 | Influenza and pneumonia (J10–J18) | 84 | 0.2 |
| 10 | Cerebrovascular diseases (I60–I69) | 77 | 0.2 |
| . . . | All other causes (Residual) | 1,556 | 3.8 |

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 2004—Con.

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

| Rank[1] | Cause of death and age (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Number | Rate |
|---|---|---|---|
| | 15–24 years | | |
| . . . | All causes | 32,904 | 78.9 |
| 1 | Accidents (unintentional injuries) (V01–X59,Y85–Y86) | 15,163 | 36.4 |
| . . . | 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) | 10,874 | 26.1 |
| . . . | All other accidents (V01,V05–V06,V09.1,V09.3–V09.9,V10–V12,V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2, V80.6–V80.9,V81.2–V81.9,V82.2–V82.9,V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99,W00–X59,Y85–Y86) | 4,289 | 10.3 |
| 2 | Assault (homicide) (*U01–*U02,X85–Y09,Y87.1) | 4,877 | 11.7 |
| 3 | Intentional self-harm (suicide) (*U03,X60–X84,Y87.0) | 4,214 | 10.1 |
| 4 | Malignant neoplasms (C00–C97) | 1,680 | 4.0 |
| 5 | Diseases of heart (I00–I09,I11,I13,I20–I51) | 978 | 2.3 |
| 6 | Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99) | 482 | 1.2 |
| 7 | Cerebrovascular diseases (I60–I69) | 207 | 0.5 |
| 8 | Influenza and pneumonia (J10–J18) | 193 | 0.5 |
| 9 | Human immunodeficiency virus (HIV) disease (B20–B24) | 191 | 0.5 |
| 10 | Chronic lower respiratory diseases (J40–J47) | 168 | 0.4 |
| . . . | All other causes (Residual) | 4,751 | 11.4 |
| | 25–44 years | | |
| . . . | All causes | 124,376 | 147.8 |
| 1 | Accidents (unintentional injuries) (V01–X59,Y85–Y86) | 28,273 | 33.6 |
| . . . | Motor vehicle accidents (V02–V04,V09.0,V09.2,V12–V14,V19.0–V19.2,V19.4–V19.6,V20–V79,V80.3–V80.5, V81.0–V81.1,V82.0–V82.1,V83–V86,V87.0–V87.8,V88.0–V88.8,V89.0,V89.2) | 13,370 | 15.9 |
| . . . | All other accidents (V01,V05–V06,V09.1,V09.3–V09.9,V10–V12,V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2, V80.6–V80.9,V81.2–V81.9,V82.2–V82.9,V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99,W00–X59,Y85–Y86) | 14,903 | 17.7 |
| 2 | Malignant neoplasms (C00–C97) | 18,263 | 21.7 |
| 3 | Diseases of heart (I00–I09,I11,I13,I20–I51) | 15,744 | 18.7 |
| 4 | Intentional self-harm (suicide) (*U03,X60–X84,Y87.0) | 11,403 | 13.6 |
| 5 | Assault (homicide) (*U01–*U02,X85–Y09,Y87.1) | 7,192 | 8.5 |
| 6 | Human immunodeficiency virus (HIV) disease (B20–B24) | 6,312 | 7.5 |
| 7 | Chronic liver disease and cirrhosis (K70,K73–K74) | 3,035 | 3.6 |
| 8 | Cerebrovascular diseases (I60–I69) | 2,893 | 3.4 |
| 9 | Diabetes mellitus (E10–E14) | 2,568 | 3.1 |
| 10 | Influenza and pneumonia (J10–J18) | 1,204 | 1.4 |
| . . . | All other causes (Residual) | 27,489 | 32.7 |
| | 45–64 years | | |
| . . . | All causes | 439,003 | 621.0 |
| 1 | Malignant neoplasms (C00–C97) | 145,293 | 205.5 |
| 2 | Diseases of heart (I00–I09,I11,I13,I20–I51) | 100,037 | 141.5 |
| 3 | Accidents (unintentional injuries) (V01–X59,Y85–Y86) | 25,307 | 35.8 |
| . . . | Motor vehicle accidents (V02–V04,V09.0,V09.2,V12–V14,V19.0–V19.2,V19.4–V19.6,V20–V79,V80.3–V80.5, V81.0–V81.1,V82.0–V82.1,V83–V86,V87.0–V87.8,V88.0–V88.8,V89.0,V89.2) | 10,069 | 14.2 |
| . . . | 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) | 15,237 | 21.6 |
| 4 | Diabetes mellitus (E10–E14) | 16,252 | 23.0 |
| 5 | Cerebrovascular diseases (I60–I69) | 16,051 | 22.7 |
| 6 | Chronic lower respiratory diseases (J40–J47) | 15,324 | 21.7 |
| 7 | Chronic liver disease and cirrhosis (K70,K73–K74) | 13,784 | 19.5 |
| 8 | Intentional self-harm (suicide) (*U03,X60–X84,Y87.0) | 10,622 | 15.0 |
| 9 | Nephritis, nephrotic syndrome and nephrosis (N00–N07, N17–N19, N25–N27) | 6,006 | 8.5 |
| 10 | Septicemia (A40–A41) | 5,955 | 8.4 |
| . . . | All other causes (Residual) | 84,372 | 119.3 |

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 2004—Con.

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

| Rank[1] | Cause of death and age (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Number | Rate |
|---|---|---|---|
| | 65 years and over | | |
| . . . | All causes | 1,762,293 | 4,855.6 |
| 1 | Diseases of heart (I00–I09,I11,I13,I20–I51) | 536,428 | 1,478.0 |
| 2 | Malignant neoplasms (C00–C97) | 383,528 | 1,056.7 |
| 3 | Cerebrovascular diseases (I60–I69) | 130,745 | 360.2 |
| 4 | Chronic lower respiratory diseases (J40–J47) | 107,113 | 295.1 |
| 5 | Alzheimer's disease (G30) | 65,188 | 179.6 |
| 6 | Influenza and pneumonia (J10–J18) | 54,485 | 150.1 |
| 7 | Diabetes mellitus (E10–E14) | 53,797 | 148.2 |
| 8 | Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27) | 35,402 | 97.5 |
| 9 | Accidents (unintentional injuries) (V01–X59,Y85–Y86) | 34,689 | 95.6 |
| . . . | Motor vehicle accidents (V02–V04,V09.0,V09.2,V12–V14,V19.0–V19.2,V19.4–V19.6,V20–V79,V80.3–V80.5, V81.0–V81.1,V82.0–V82.1,V83–V86,V87.0–V87.8,V88.0–V88.8,V89.0,V89.2) | 7,233 | 19.9 |
| . . . | All other accidents (V01,V05–V06,V09.1,V09.3–V09.9,V10–V12,V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2, V80.6–V80.9,V81.2–V81.9,V82.2–V82.9,V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99,W00–X59,Y85–Y86) | 27,455 | 75.6 |
| 10 | Septicemia (A40–A41) | 25,787 | 71.1 |
| . . . | All other causes (Residual) | 335,131 | 923.4 |

. . . Category not applicable.

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

[2]Includes deaths under 1 year of age.

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

## Table 8. Infant deaths and infant mortality rates for the 10 leading causes of infant death, by race and Hispanic origin: United States, preliminary 2004

[Data are based on a continuous file of records received from the states. Rates are per 100,000 live births. Figures are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals. Rates for Hispanic origin should be interpreted with caution because of inconsistencies between reporting Hispanic origin on birth and death certificates; see "Technical Notes"]

| Rank[1] | Cause of death and age (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Number | Rate |
|---|---|---|---|
| | All races[2] | | |
| ... | All causes | 27,835 | 676.3 |
| 1 | Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99) | 5,623 | 136.6 |
| 2 | Disorders related to short gestation and low birth weight, not elsewhere classified (P07) | 4,685 | 113.8 |
| 3 | Sudden infant death syndrome (R95) | 2,109 | 51.2 |
| 4 | Newborn affected by maternal complications of pregnancy (P01) | 1,705 | 41.4 |
| 5 | Newborn affected by complications of placenta, cord and membranes (P02) | 998 | 24.2 |
| 6 | Accidents (unintentional injuries) (V01–X59) | 995 | 24.2 |
| 7 | Respiratory distress of newborn (P22) | 877 | 21.3 |
| 8 | Bacterial sepsis of newborn (P36) | 798 | 19.4 |
| 9 | Neonatal hemorrhage (P50–P52,P54) | 593 | 14.4 |
| 10 | Intrauterine hypoxia and birth asphyxia (P20–P21) | 502 | 12.2 |
| ... | All other causes (Residual) | 8,950 | 217.5 |
| | Total white[3] | | |
| ... | All causes | 18,243 | 564.8 |
| 1 | Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99) | 4,271 | 132.2 |
| 2 | Disorders related to short gestation and low birth weight, not elsewhere classified (P07) | 2,727 | 84.4 |
| 3 | Sudden infant death syndrome (R95) | 1,352 | 41.9 |
| 4 | Newborn affected by maternal complications of pregnancy (P01) | 1,005 | 31.1 |
| 5 | Accidents (unintentional injuries) (V01–X59) | 658 | 20.4 |
| 6 | Newborn affected by complications of placenta, cord and membranes (P02) | 656 | 20.3 |
| 7 | Respiratory distress of newborn (P22) | 551 | 17.1 |
| 8 | Bacterial sepsis of newborn (P36) | 499 | 15.5 |
| 9 | Neonatal hemorrhage (P50–P52,P54) | 403 | 12.5 |
| 10 | Intrauterine hypoxia and birth asphyxia (P20–P21) | 354 | 11.0 |
| ... | All other causes (Residual) | 5,766 | 178.5 |
| | Non-Hispanic white | | |
| ... | All causes | 13,084 | 567.8 |
| 1 | Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99) | 3,002 | 130.3 |
| 2 | Disorders related to short gestation and low birth weight, not elsewhere classified (P07) | 1,895 | 82.3 |
| 3 | Sudden infant death syndrome (R95) | 1,123 | 48.8 |
| 4 | Newborn affected by maternal complications of pregnancy (P01) | 753 | 32.7 |
| 5 | Accidents (unintentional injuries) (V01–X59) | 534 | 23.2 |
| 6 | Newborn affected by complications of placenta, cord and membranes (P02) | 482 | 20.9 |
| 7 | Respiratory distress of newborn (P22) | 398 | 17.3 |
| 8 | Bacterial sepsis of newborn (P36) | 344 | 14.9 |
| 9 | Neonatal hemorrhage (P50–P52,P54) | 277 | 12.0 |
| 10 | Intrauterine hypoxia and birth asphyxia (P20–P21) | 264 | 11.4 |
| ... | All other causes (Residual) | 4,013 | 174.2 |
| | Total black[3] | | |
| ... | All causes | 8,347 | 1,362.8 |
| 1 | Disorders related to short gestation and low birth weight, not elsewhere classified (P07) | 1,766 | 288.4 |
| 2 | Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99) | 1,049 | 171.3 |
| 3 | Sudden infant death syndrome (R95) | 683 | 111.5 |
| 4 | Newborn affected by maternal complications of pregnancy (P01) | 624 | 101.9 |
| 5 | Newborn affected by complications of placenta, cord and membranes (P02) | 306 | 49.9 |
| 6 | Respiratory distress of newborn (P22) | 302 | 49.4 |
| 7 | Accidents (unintentional injuries) (V01–X59) | 300 | 49.0 |
| 8 | Bacterial sepsis of newborn (P36) | 268 | 43.7 |
| 9 | Neonatal hemorrhage (P50–P52,P54) | 157 | 25.6 |
| 10 | Necrotizing enterocolitis of newborn (P77) | 151 | 24.6 |
| ... | All other causes (Residual) | 2,741 | 447.5 |

See footnotes at end of table.

## Table 8. Infant deaths and infant mortality rates for the 10 leading causes of infant death, by race and Hispanic origin: United States, preliminary 2004—Con.

[Data are based on a continuous file of records received from the states. Rates are per 100,000 live births. Figures are based on weighted data rounded to the nearest individual, so categories may not add to totals or subtotals. Rates for Hispanic origin should be interpreted with caution because of inconsistencies between reporting Hispanic origin on birth and death certificates; see "Technical Notes"]

| Rank[1] | Cause of death and age (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Number | Rate |
|---|---|---|---|
| | Hispanic[4] | | |
| . . . | All causes | 3,782 | 400.2 |
| 1 | Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99) | 1,288 | 136.3 |
| 2 | Disorders related to short gestation and low birth weight, not elsewhere classified (P07) | 828 | 87.7 |
| 3 | Newborn affected by maternal complications of pregnancy (P01) | 268 | 28.3 |
| 4 | Sudden infant death syndrome (R95) | 241 | 25.5 |
| 5 | Newborn affected by complications of placenta, cord and membranes (P02) | 174 | 18.4 |
| 6 | Bacterial sepsis of newborn (P36) | 163 | 17.2 |
| 7 | Respiratory distress of newborn (P22) | 160 | 16.9 |
| 8 | Accidents (unintentional injuries) (V01–X59) | 132 | 14.0 |
| 9 | Neonatal hemorrhage (P50–P52,P54) | 127 | 13.5 |
| 10 | Atelectasis (P28.0–P28.1) | 108 | 11.4 |
| . . . | All other causes (Residual) | 294 | 31.1 |

. . . Category not applicable.

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

[2]Includes races other than white and black.

[3]Race and Hispanic origin are reported separately on both the birth and death certificate. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. California, Hawaii, Idaho, Maine, Michigan, Minnesota, Montana, New Hampshire, New Jersey, New York, Oklahoma, South Dakota, Washington, Wisconsin, and Wyoming reported multiple-race data in 2004. The multiple-race data for these states were bridged to the single race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes." Data for persons of Hispanic origin are included in the data for each race group, according to the decedent's reported race; see "Technical Notes."

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

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

# Technical Notes

## Nature and sources of data

Preliminary mortality data for 2004 are based on a substantial proportion of death records for that year. The data for 2004 are based on a continuous receipt and processing of statistical records through September 12, 2005, by the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS). NCHS received the data from the states' vital registration systems through the Vital Statistics Cooperative Program. In this report, U.S. totals include only events occurring within the 50 states and the District of Columbia. Data for Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Northern Marianas that are included in tables showing data by state are not included in U.S. totals.

For 2004, individual records of infant deaths (deaths under 1 year of age) 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, containing records that include demographic and medical information that is used to generate tables showing cause of death; and the demographic file, which includes records from the medical file as well as additional records containing demographic information only and 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. Because there are two separate files, with two separate sets of weights, slight inconsistencies may occur between the demographic and medical tables in this report. Table I shows the percentage completeness of the preliminary file by place of occurrence. The percentage completeness is obtained by dividing the number of records in the preliminary file 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 file, unknown or not stated values are imputed. The percentage not stated was less than 2.0 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* (27).

## 2003 revision of the U.S. Standard Certificate of Death

This report includes data for 12 areas (California, Idaho, Michigan, Montana, New Hampshire, New Jersey, New York City, New York State, Oklahoma, South Dakota, Washington, and Wyoming), which implemented the 2003 revision of the U.S. Standard Certificate of Death by 2004 and for the remaining 39 states and the District of Columbia that collected and reported death data in 2004 based on the 1989 revision of the U.S. Standard Certificate of Death. The 2003 revision is described in detail elsewhere (10,11). 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) (10). This change was implemented to reflect the increasing diversity of the population of the United States and to be consistent with the decennial census. The race and ethnicity items on the revised certificate are compliant with the revisions to the 1977 Race and Ethnic Standards for Federal Statistics and Administrative Reporting, which were issued by the Office of Management and Budget (OMB) in 1997. The new standards mandate the collection of more than one race for federal data (see "Population denominators") (16). 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.

For the 2004 report, multiple race was reported on the revised death certificates of California, Idaho, Michigan, Montana, New Jersey, New York (state and city), Oklahoma, South Dakota, Washington, and Wyoming, as well as on the unrevised certificates of Hawaii, Maine, Minnesota, and Wisconsin. New Hampshire fully began reporting multiple race data using the revised certificate of death in mid-April 2004. Earlier in 2004, only a portion of the records submitted by this state contained multiple race data. Data from the vital records of the remaining 35 states and the District of Columbia are based on the 1989 revision of the U.S. Standard Certificate of Death, which follows the 1977 OMB standard, allowing only a single race to be reported (11,12). In addition, these states report a minimum set of four races as stipulated in the 1977 standard. These are White, Black or African American, AIAN, and Asian or Pacific Islander (API).

In order to provide uniformity and comparability of the data during the transition period, before all or most of the data would be available in the new multiple race format, it was necessary to adjust the population denominators by "bridging" the responses of those who reported more than one race (multiple race) to one, single race (see "Population denominators"). The bridging procedure used for mortality numerators is similar to the procedure used to bridge multiracial population estimates (14,15). Multiracial decedents are imputed to a single race (either white, black, AIAN, or API) according to their combination of races, Hispanic origin, sex, and age indicated on the death certificate. The imputation procedure is described in detail at http://www.cdc.gov/nchs/data/dvs/Multiple_race_docu_5-10-04.pdf.

Race and Hispanic origin are reported separately on the death certificate. Therefore, 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 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 the death certificate as compared with race on censuses, surveys, and birth certificates. Studies have shown underreporting on death certificates of AIAN, API, and Hispanic decedents; and undercounts of these groups in the censuses (19–21).

**Table I. Total count of records and percentage completeness of preliminary files of infant deaths and deaths 1 year and over: United States, each State and territory, preliminary 2004**

[By place of occurrence]

| Area | Infant deaths (under 1 year) | | | Deaths 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] | 27,896 | 90.3 | 89.7 | 2,374,177 | 90.9 | 90.1 |
| Alabama | 519 | 100.0 | 100.0 | 44,858 | 100.0 | 100.0 |
| Alaska | 62 | 100.0 | 100.0 | 2,938 | 100.0 | 100.0 |
| Arizona | 629 | 100.0 | 100.0 | 43,534 | 100.0 | 100.0 |
| Arkansas | 312 | 100.0 | 100.0 | 26,700 | 100.0 | 100.0 |
| California | 2,787 | 41.4 | 41.4 | 230,525 | 45.3 | 45.3 |
| Colorado | 468 | 100.0 | 100.0 | 28,260 | 100.0 | 100.0 |
| Connecticut | 223 | 100.0 | 100.0 | 29,041 | 100.0 | 100.0 |
| Delaware | 117 | 100.0 | 100.0 | 6,944 | 100.0 | 100.0 |
| District of Columbia | 204 | 100.0 | 99.0 | 6,292 | 100.0 | 100.0 |
| Florida | 1,568 | 100.0 | 100.0 | 168,710 | 100.0 | 100.0 |
| Georgia | 1,196 | 100.0 | 100.0 | 65,405 | 100.0 | 100.0 |
| Hawaii | 102 | 100.0 | 100.0 | 9,150 | 100.0 | 100.0 |
| Idaho | 120 | 100.0 | 100.0 | 9,713 | 100.0 | 100.0 |
| Illinois | 1,233 | 32.4 | 32.4 | 98,796 | 34.8 | 34.8 |
| Indiana | 687 | 99.9 | 98.5 | 54,144 | 100.0 | 99.5 |
| Iowa | 179 | 100.0 | 100.0 | 26,460 | 100.0 | 100.0 |
| Kansas | 252 | 100.0 | 100.0 | 23,115 | 100.0 | 100.0 |
| Kentucky | 340 | 100.0 | 87.4 | 38,068 | 100.0 | 97.6 |
| Louisiana | 716 | 100.0 | 99.9 | 41,889 | 100.0 | 100.0 |
| Maine | 81 | 100.0 | 100.0 | 12,256 | 100.0 | 99.9 |
| Maryland | 537 | 100.0 | 100.0 | 42,564 | 100.0 | 100.0 |
| Massachusetts | 398 | 100.0 | 100.0 | 54,766 | 100.0 | 99.9 |
| Michigan | 999 | 100.0 | 100.0 | 83,035 | 100.0 | 100.0 |
| Minnesota | 366 | 100.0 | 98.9 | 36,737 | 100.0 | 100.0 |
| Mississippi | 371 | 100.0 | 100.0 | 26,930 | 100.0 | 100.0 |
| Missouri | 674 | 100.0 | 99.9 | 54,689 | 100.0 | 100.0 |
| Montana | 49 | 100.0 | 98.0 | 8,030 | 100.0 | 100.0 |
| Nebraska | 186 | 100.0 | 89.2 | 14,628 | 100.0 | 83.7 |
| Nevada | 228 | 93.4 | 93.4 | 18,283 | 99.4 | 99.4 |
| New Hampshire | 74 | 100.0 | 37.8 | 9,919 | 100.0 | 42.6 |
| New Jersey | 551 | 61.5 | 56.1 | 69,376 | 62.1 | 48.5 |
| New Mexico | 165 | 100.0 | 100.0 | 13,881 | 100.0 | 99.8 |
| New York | 1,524 | 100.0 | 100.0 | 150,634 | 100.0 | 100.0 |
| New York excluding New York City | 764 | 100.0 | 100.0 | 93,933 | 100.0 | 100.0 |
| New York City | 760 | 100.0 | 100.0 | 56,701 | 100.0 | 100.0 |
| North Carolina | 1,054 | 100.0 | 100.0 | 71,948 | 100.0 | 100.0 |
| North Dakota | 40 | 100.0 | 100.0 | 5,928 | 100.0 | 100.0 |
| Ohio | 1,166 | 99.5 | 99.5 | 105,003 | 100.0 | 100.0 |
| Oklahoma | 410 | 99.8 | 99.8 | 33,300 | 100.0 | 100.0 |
| Oregon | 269 | 100.0 | 100.0 | 30,085 | 100.0 | 100.0 |
| Pennsylvania | 1,121 | 100.0 | 100.0 | 127,275 | 100.0 | 100.0 |
| Rhode Island | 77 | 100.0 | 100.0 | 9,864 | 100.0 | 100.0 |
| South Carolina | 485 | 99.4 | 99.4 | 36,007 | 100.0 | 100.0 |
| South Dakota | 95 | 100.0 | 100.0 | 6,921 | 100.0 | 100.0 |
| Tennessee | 773 | 100.0 | 100.0 | 58,013 | 100.0 | 100.0 |
| Texas | 2,409 | 100.0 | 100.0 | 152,334 | 100.0 | 100.0 |
| Utah | 285 | 100.0 | 100.0 | 13,420 | 100.0 | 100.0 |
| Vermont | 30 | 100.0 | 100.0 | 4,963 | 100.0 | 100.0 |
| Virginia | 743 | 100.0 | 100.0 | 55,357 | 100.0 | 100.0 |
| Washington | 442 | 100.0 | 100.0 | 44,333 | 100.0 | 100.0 |
| West Virginia | 146 | 100.0 | 97.9 | 20,408 | 100.0 | 100.0 |
| Wisconsin | 401 | 100.0 | 100.0 | 45,027 | 100.0 | 100.0 |
| Wyoming | 33 | 100.0 | 100.0 | 3,721 | 100.0 | 100.0 |
| Puerto Rico | 415 | 100.0 | 100.0 | 28,662 | 100.0 | 100.0 |
| Virgin Islands | 8 | 100.0 | 100.0 | 620 | 100.0 | 99.5 |
| Guam | 40 | 100.0 | 100.0 | 653 | 100.0 | 100.0 |
| American Samoa | 26 | 100.0 | 100.0 | 263 | 100.0 | 100.0 |
| Northern Marianas | 12 | 100.0 | 100.0 | 160 | 100.0 | 100.0 |

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

NOTE: Percentage completeness = 100 • (Number of records in preliminary file / count of records).

## 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 ages 15 years and over, excluding age not stated, are shown in Table 2. Age-adjusted death rates presented in this report for injury at work were computed using age-specific death rates and the U.S. standard population based on year 2000 standard for ages 15 years and over, excluding age not stated. If the estimated "employed" population aged 15 years and over had been used instead in the denominator, higher death rates would have resulted, especially for population groups with lower employment rates. See section on "Computing rates and percentages."

## Cause-of-death classification

Mortality statistics are compiled in accordance with the World Health Organization regulations that specify 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 by procedures described in annual issues of part 2a of the NCHS Instruction Manual (28).

Effective with deaths occurring in 1999, the United States began using the Tenth Revision of this classification (ICD–10) (29). During the period 1979–98 causes were coded and classified according to the Ninth Revision (ICD–9) (30). The change from ICD–9 to ICD–10 resulted in discontinuities for selected cause-of-death trends. These discontinuities are measured using comparability ratios from a comparability study (31,32).

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 the *International Classification of Diseases, Tenth Revision* (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 for Assault (homicide) in the 130 causes-of-infant-death list (Table 5). Additional information on these new categories is available from: http://www.cdc.gov/nchs/about/otheract/icd9/terrorism_code.htm.

*Codes for drug-induced deaths*—The list of codes included in drug-induced causes was expanded in the 2003 data year to be more comprehensive. Specifically, 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.

Numbers of deaths and death rates based on the newly modified list of causes may differ slightly from those previously published. For example, for 2002, the addition of the 37 codes increased the total number of deaths from drug-induced causes from 26,018 to 26,040 (an increase of 22 deaths); the crude and age-adjusted death rates were unaffected.

*Codes for alcohol-induced deaths*—The list of codes included in alcohol-induced causes was expanded in the 2003 data year to be more comprehensive. Specifically, the following three ICD–10 codes were added to the previous list of alcohol-induced codes: E24.4, G72.1, and K86.0.

Numbers of deaths and death rates based on the newly modified list of causes may differ slightly from those previously published. For example, for 2002, the addition of the three codes increased the total number of deaths from alcohol-induced causes from 19,928 to 20,218 (an increase of 290) and increased the total crude death rate, although not significantly, from 6.9 to 7.0. The age-adjusted death rate remained the same.

## Nonsampling error

Causes of death in this report are subject to nonsampling error because of the nature of the preliminary file. Inasmuch as the preliminary file is processed before a full year of data are available, it is 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 and that fatal respiratory conditions are more prevalent during the winter. Accordingly, the truncated nature of the preliminary file may systematically overemphasize or underemphasize causes with pronounced seasonality.

Furthermore, for some deaths, especially those subject to medicolegal investigation such as unintentional injuries, homicides, suicides, and 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 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 for the leading causes of death for the total U.S. population from 2001 to 2003 indicates that preliminary estimates for some causes of death are sometimes underestimated and sometimes overestimated in the preliminary file (see Table II). Thus, the number of deaths for unintentional injuries was underestimated in 2001 by 3.8 percent, in 2002 by 4.2 percent, and in 2003 by 3.3 percent. A similar error occurred for suicide with underestimates of 3.9 percent in 2001, 3.2 percent in 2002, and 2.7 percent in 2003. Likewise, homicide showed a 2.9 percent underestimate in 2001, 3.4 percent in 2002, and 3.6 percent in 2003. Chronic lower respiratory disease was overestimated by 0.8 percent in 2001 and 0.6 percent in 2002, but was underestimated by 0.2 percent in 2003 when an influenza outbreak occurred at the end of the year (Table II).

Comparisons showing nonsampling error in estimates for causes of infant death are shown in Table III, where Congenital malformations,

## Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 2001–03

[For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes"]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Preliminary number of deaths 2003 | Final number of deaths 2003 | Ratio of preliminary to final 2003 | Preliminary number of deaths 2002 | Final number of deaths 2002 | Ratio of preliminary to final 2002 | Preliminary number of deaths 2001 | Final number of deaths 2001 | Ratio of preliminary to final 2001 |
|---|---|---|---|---|---|---|---|---|---|
| All causes | 2,443,930 | 2,448,288 | 0.9982 | 2,447,862 | 2,443,387 | 1.0018 | 2,417,798 | 2,416,425 | 1.0006 |
| Salmonella infections (A01–A02) | 42 | 43 | 0.9767 | 22 | 21 | 1.0476 | 38 | 41 | 0.9268 |
| Shigellosis and amebiasis (A03,A06) | 11 | 7 | 1.5714 | 7 | 8 | 0.8750 | 7 | 7 | 1.0000 |
| Certain other intestinal infections (A04,A07–A09) | 3,028 | 3,090 | 0.9799 | 2,183 | 2,465 | 0.8856 | 1,539 | 1,537 | 1.0013 |
| Tuberculosis (A16–A19) | 704 | 711 | 0.9902 | 802 | 784 | 1.0230 | 749 | 764 | 0.9804 |
| Respiratory tuberculosis (A16) | 564 | 562 | 1.0036 | 642 | 626 | 1.0256 | 585 | 600 | 0.9750 |
| Other tuberculosis (A17–A19) | 140 | 149 | 0.9396 | 160 | 158 | 1.0127 | 164 | 164 | 1.0000 |
| Whooping cough (A37) | 10 | 11 | 0.9091 | 17 | 18 | 0.9444 | 14 | 17 | 0.8235 |
| Scarlet fever and erysipelas (A38,A46) | 1 | 1 | 1.0000 | 2 | 2 | 1.0000 | 2 | 3 | 0.6667 |
| Meningococcal infection (A39) | 152 | 161 | 0.9441 | 155 | 161 | 0.9627 | 204 | 199 | 1.0251 |
| Septicemia (A40–A41) | 34,243 | 34,069 | 1.0051 | 33,881 | 33,865 | 1.0005 | 32,275 | 32,238 | 1.0011 |
| Syphilis (A50–A53) | 32 | 34 | 0.9412 | 42 | 41 | 1.0244 | 33 | 36 | 0.9167 |
| Acute poliomyelitis (A80) | 5 | – | . . . | – | – | . . . | – | – | . . . |
| Arthropod-borne viral encephalitis (A83–A84,A85.2) | 12 | 13 | 0.9231 | 69 | 9 | 7.6667 | 9 | 9 | 1.0000 |
| Measles (B05) | 1 | 1 | 1.0000 | 1 | – | . . . | 1 | 1 | 1.0000 |
| Viral hepatitis (B15–B19) | 5,345 | 5,431 | 0.9842 | 5,706 | 5,793 | 0.9850 | 5,094 | 5,585 | 0.9121 |
| Human immunodeficiency virus (HIV) disease (B20–B24) | 13,544 | 13,658 | 0.9917 | 13,991 | 14,095 | 0.9926 | 14,132 | 14,175 | 0.9970 |
| Malaria (B50–B54) | 5 | 4 | 1.2500 | 13 | 12 | 1.0833 | 9 | 9 | 1.0000 |
| Other and unspecified infectious and parasitic diseases and their sequelae (A00,A05, A20–A36,A42–A44,A48–A49,A54–A79,A81–A82, A85.0–A85.1,A85.8,A86–B04,B06–B09, B25–B49,B55–B99) | 7,430 | 7,427 | 1.0004 | 6,641 | 6,707 | 0.9902 | 6,266 | 5,715 | 1.0964 |
| Malignant neoplasms (C00–C97) | 554,643 | 556,902 | 0.9959 | 558,847 | 557,271 | 1.0028 | 553,251 | 553,768 | 0.9991 |
| Malignant neoplasms of lip, oral cavity and pharynx (C00–C14) | 7,712 | 7,778 | 0.9915 | 7,732 | 7,737 | 0.9994 | 7,638 | 7,702 | 0.9917 |
| Malignant neoplasm of esophagus (C15) | 12,768 | 12,860 | 0.9928 | 12,766 | 12,701 | 1.0051 | 12,509 | 12,530 | 0.9983 |
| Malignant neoplasm of stomach (C16) | 12,025 | 12,110 | 0.9930 | 12,265 | 12,198 | 1.0055 | 12,340 | 12,319 | 1.0017 |
| Malignant neoplasms of colon, rectum and anus (C18–C21) | 55,616 | 55,958 | 0.9939 | 56,866 | 56,741 | 1.0022 | 56,799 | 56,887 | 0.9985 |
| Malignant neoplasms of liver and intrahepatic bile ducts (C22) | 14,572 | 14,706 | 0.9909 | 14,046 | 14,047 | 0.9999 | 13,263 | 13,351 | 0.9934 |
| Malignant neoplasm of pancreas (C25) | 30,566 | 30,777 | 0.9931 | 30,323 | 30,264 | 1.0019 | 29,723 | 29,803 | 0.9973 |
| Malignant neoplasm of larynx (C32) | 3,783 | 3,792 | 0.9976 | 3,731 | 3,723 | 1.0021 | 3,826 | 3,797 | 1.0076 |
| Malignant neoplasms of trachea, bronchus and lung (C33–C34) | 157,521 | 158,086 | 0.9964 | 158,258 | 157,713 | 1.0035 | 156,005 | 156,058 | 0.9997 |
| Malignant melanoma of skin (C43) | 7,762 | 7,818 | 0.9928 | 7,563 | 7,514 | 1.0065 | 7,543 | 7,542 | 1.0001 |
| Malignant neoplasm of breast (C50) | 41,941 | 42,000 | 0.9986 | 41,989 | 41,883 | 1.0025 | 41,844 | 41,809 | 1.0008 |
| Malignant neoplasm of cervix uteri (C53) | 3,899 | 3,919 | 0.9949 | 3,965 | 3,952 | 1.0033 | 4,064 | 4,092 | 0.9932 |
| Malignant neoplasms of corpus uteri and uterus, part unspecified (C54–C55) | 6,852 | 6,899 | 0.9932 | 6,876 | 6,853 | 1.0034 | 6,835 | 6,784 | 1.0075 |
| Malignant neoplasm of ovary (C56) | 14,644 | 14,657 | 0.9991 | 14,678 | 14,682 | 0.9997 | 14,361 | 14,414 | 0.9963 |
| Malignant neoplasm of prostate (C61) | 29,578 | 29,554 | 1.0008 | 30,571 | 30,446 | 1.0041 | 30,714 | 30,719 | 0.9998 |
| Malignant neoplasms of kidney and renal pelvis (C64–C65) | 12,179 | 12,286 | 0.9913 | 12,184 | 12,165 | 1.0016 | 12,084 | 12,078 | 1.0005 |
| Malignant neoplasm of bladder (C67) | 12,390 | 12,483 | 0.9925 | 12,670 | 12,628 | 1.0033 | 12,115 | 12,225 | 0.9910 |
| Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72) | 12,804 | 12,901 | 0.9925 | 12,777 | 12,830 | 0.9959 | 12,567 | 12,609 | 0.9967 |
| Malignant neoplasms of lymphoid, hematopoietic and related tissue (C81–C96) | 55,571 | 55,679 | 0.9981 | 56,377 | 56,225 | 1.0027 | 56,350 | 56,341 | 1.0002 |
| Hodgkin's disease (C81) | 1,340 | 1,347 | 0.9948 | 1,356 | 1,352 | 1.0030 | 1,315 | 1,323 | 0.9940 |
| Non-Hodgkin's lymphoma (C82–C85) | 21,443 | 21,475 | 0.9985 | 21,998 | 21,910 | 1.0040 | 22,340 | 22,305 | 1.0016 |
| Leukemia (C91–C95) | 21,446 | 21,535 | 0.9959 | 21,575 | 21,498 | 1.0036 | 21,518 | 21,451 | 1.0031 |
| Multiple myeloma and immunoproliferative neoplasms (C88,C90) | 11,288 | 11,267 | 1.0019 | 11,374 | 11,392 | 0.9984 | 11,088 | 11,172 | 0.9925 |

See footnotes at end of table.

## Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 2001–03—Con.

[For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes"]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Preliminary number of deaths 2003 | Final number of deaths 2003 | Ratio of preliminary to final 2003 | Preliminary number of deaths 2002 | Final number of deaths 2002 | Ratio of preliminary to final 2002 | Preliminary number of deaths 2001 | Final number of deaths 2001 | Ratio of preliminary to final 2001 |
|---|---|---|---|---|---|---|---|---|---|
| Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue (C96) | 54 | 55 | 0.9818 | 74 | 73 | 1.0137 | 89 | 90 | 0.9889 |
| 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) | 62,458 | 62,639 | 0.9971 | 63,209 | 62,969 | 1.0038 | 62,669 | 62,708 | 0.9994 |
| In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48) | 13,495 | 13,563 | 0.9950 | 13,370 | 13,299 | 1.0053 | 13,673 | 13,676 | 0.9998 |
| Anemias (D50–D64) | 4,599 | 4,594 | 1.0011 | 4,601 | 4,614 | 0.9972 | 4,611 | 4,627 | 0.9965 |
| Diabetes mellitus (E10–E14) | 73,965 | 74,219 | 0.9966 | 73,119 | 73,249 | 0.9982 | 71,252 | 71,372 | 0.9983 |
| Nutritional deficiencies (E40–E64) | 3,358 | 3,338 | 1.0060 | 3,785 | 3,779 | 1.0016 | 3,725 | 3,704 | 1.0057 |
| Malnutrition (E40–E46) | 3,170 | 3,153 | 1.0054 | 3,515 | 3,510 | 1.0014 | 3,433 | 3,454 | 0.9939 |
| Other nutritional deficiencies (E50–E64) | 188 | 185 | 1.0162 | 270 | 269 | 1.0037 | 293 | 250 | 1.1720 |
| Meningitis (G00,G03) | 708 | 730 | 0.9699 | 694 | 700 | 0.9914 | 718 | 727 | 0.9876 |
| Parkinson's disease (G20–G21) | 17,898 | 17,997 | 0.9945 | 16,961 | 16,959 | 1.0001 | 16,576 | 16,544 | 1.0019 |
| Alzheimer's disease (G30) | 63,343 | 63,457 | 0.9982 | 58,785 | 58,866 | 0.9986 | 53,679 | 53,852 | 0.9968 |
| Major cardiovascular diseases (I00–I78) | 901,753 | 902,443 | 0.9992 | 917,839 | 918,628 | 0.9991 | 921,819 | 922,334 | 0.9994 |
| Diseases of heart (I00–I09,I11,I13,I20–I51) | 684,462 | 685,089 | 0.9991 | 695,754 | 696,947 | 0.9983 | 699,697 | 700,142 | 0.9994 |
| Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09) | 3,554 | 3,624 | 0.9807 | 3,743 | 3,579 | 1.0458 | 3,475 | 3,489 | 0.9960 |
| Hypertensive heart disease (I11) | 27,653 | 28,345 | 0.9756 | 25,938 | 26,551 | 0.9769 | 24,496 | 24,689 | 0.9922 |
| Hypertensive heart and renal disease (I13) | 3,110 | 3,108 | 1.0006 | 2,888 | 2,895 | 0.9976 | 2,797 | 2,826 | 0.9897 |
| Ischemic heart diseases (I20–I25) | 479,304 | 480,028 | 0.9985 | 493,542 | 494,382 | 0.9983 | 501,691 | 502,189 | 0.9990 |
| Acute myocardial infarction (I21–I22) | 170,960 | 170,564 | 1.0023 | 179,869 | 179,514 | 1.0020 | 184,697 | 184,757 | 0.9997 |
| Other acute ischemic heart diseases (I24) | 3,182 | 3,158 | 1.0076 | 3,416 | 3,407 | 1.0026 | 3,356 | 3,351 | 1.0015 |
| Other forms of chronic ischemic heart disease (I20,I25) | 305,163 | 306,306 | 0.9963 | 310,257 | 311,461 | 0.9961 | 313,638 | 314,081 | 0.9986 |
| Atherosclerotic cardiovascular disease, so described (I25.0) | 65,678 | 67,232 | 0.9769 | 67,104 | 68,129 | 0.9850 | 67,531 | 68,103 | 0.9916 |
| All other forms of chronic ischemic heart disease (I20,I25.1–I25.9) | 239,485 | 239,074 | 1.0017 | 243,153 | 243,332 | 0.9993 | 246,107 | 245,978 | 1.0005 |
| Other heart diseases (I26–I51) | 170,841 | 169,984 | 1.0050 | 169,643 | 169,540 | 1.0006 | 167,237 | 166,949 | 1.0017 |
| Acute and subacute endocarditis (I33) | 1,214 | 1,245 | 0.9751 | 1,149 | 1,154 | 0.9957 | 1,175 | 1,178 | 0.9975 |
| Diseases of pericardium and acute myocarditis (I30–I31,I40) | 826 | 868 | 0.9516 | 802 | 848 | 0.9458 | 832 | 839 | 0.9917 |
| Heart failure (I50) | 57,218 | 57,448 | 0.9960 | 56,790 | 56,494 | 1.0052 | 57,345 | 56,934 | 1.0072 |
| All other forms of heart disease (I26–I28,I34–I38,I42–I49,I51) | 111,583 | 110,423 | 1.0105 | 110,902 | 111,044 | 0.9987 | 107,885 | 107,998 | 0.9990 |
| Essential (primary) hypertension and hypertensive renal disease (I10,I12) | 21,841 | 21,940 | 0.9955 | 20,241 | 20,261 | 0.9990 | 19,054 | 19,250 | 0.9898 |
| Cerebrovascular diseases (I60–I69) | 157,803 | 157,689 | 1.0007 | 163,010 | 162,672 | 1.0021 | 163,601 | 163,538 | 1.0004 |
| Atherosclerosis (I70) | 13,030 | 13,053 | 0.9982 | 13,942 | 13,821 | 1.0088 | 14,111 | 14,086 | 1.0018 |
| Other diseases of circulatory system (I71–I78) | 24,617 | 24,672 | 0.9978 | 24,891 | 24,927 | 0.9986 | 25,356 | 25,318 | 1.0015 |
| Aortic aneurysm and dissection (I71) | 14,751 | 14,810 | 0.9960 | 14,746 | 14,818 | 0.9951 | 15,218 | 15,234 | 0.9989 |
| Other diseases of arteries, arterioles and capillaries (I72–I78) | 9,867 | 9,862 | 1.0005 | 10,146 | 10,109 | 1.0037 | 10,137 | 10,084 | 1.0053 |
| Other disorders of circulatory system (I80–I99) | 4,683 | 4,737 | 0.9886 | 4,679 | 4,711 | 0.9932 | 4,632 | 4,665 | 0.9929 |
| Influenza and pneumonia (J10–J18) | 64,847 | 65,163 | 0.9952 | 65,984 | 65,681 | 1.0046 | 62,123 | 62,034 | 1.0014 |
| Influenza (J10–J11) | 1,605 | 1,792 | 0.8956 | 753 | 727 | 1.0358 | 267 | 257 | 1.0389 |
| Pneumonia (J12–J18) | 63,241 | 63,371 | 0.9979 | 65,231 | 64,954 | 1.0043 | 61,856 | 61,777 | 1.0013 |
| Other acute lower respiratory infections (J20–J22) | 406 | 421 | 0.9644 | 361 | 386 | 0.9352 | 359 | 347 | 1.0346 |
| Acute bronchitis and bronchiolitis (J20–J21) | 292 | 304 | 0.9605 | 257 | 279 | 0.9211 | 269 | 263 | 1.0228 |
| Unspecified acute lower respiratory infection (J22) | 114 | 117 | 0.9744 | 103 | 107 | 0.9626 | 91 | 84 | 1.0833 |
| Chronic lower respiratory diseases (J40–J47) | 126,128 | 126,382 | 0.9980 | 125,500 | 124,816 | 1.0055 | 123,974 | 123,013 | 1.0078 |
| Bronchitis, chronic and unspecified (J40–J42) | 851 | 850 | 1.0012 | 961 | 955 | 1.0063 | 980 | 959 | 1.0219 |
| Emphysema (J43) | 14,793 | 14,861 | 0.9954 | 15,568 | 15,489 | 1.0051 | 16,407 | 16,242 | 1.0102 |
| Asthma (J45–J46) | 3,964 | 4,099 | 0.9671 | 4,157 | 4,261 | 0.9756 | 4,222 | 4,269 | 0.9890 |

See footnotes at end of table.

## Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 2001–03—Con.

[For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes"]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Preliminary number of deaths 2003 | Final number of deaths 2003 | Ratio of preliminary to final 2003 | Preliminary number of deaths 2002 | Final number of deaths 2002 | Ratio of preliminary to final 2002 | Preliminary number of deaths 2001 | Final number of deaths 2001 | Ratio of preliminary to final 2001 |
|---|---|---|---|---|---|---|---|---|---|
| Other chronic lower respiratory diseases (J44,J47) | 106,520 | 106,572 | 0.9995 | 104,814 | 104,111 | 1.0068 | 102,365 | 101,543 | 1.0081 |
| Pneumoconioses and chemical effects (J60–J66,J68) | 1,107 | 1,114 | 0.9937 | 1,139 | 1,114 | 1.0224 | 1,155 | 1,136 | 1.0167 |
| Pneumonitis due to solids and liquids (J69) | 17,457 | 17,335 | 1.0070 | 17,693 | 17,593 | 1.0057 | 17,392 | 17,301 | 1.0053 |
| Other diseases of respiratory system (J00–J06,J30–J39,J67,J70–J98) | 25,304 | 25,520 | 0.9915 | 25,194 | 25,039 | 1.0062 | 26,225 | 26,178 | 1.0018 |
| Peptic ulcer (K25–K28) | 3,888 | 3,913 | 0.9936 | 4,081 | 4,079 | 1.0005 | 4,462 | 4,491 | 0.9935 |
| Diseases of appendix (K35–K38) | 432 | 439 | 0.9841 | 474 | 480 | 0.9875 | 425 | 428 | 0.9930 |
| Hernia (K40–K46) | 1,617 | 1,613 | 1.0025 | 1,595 | 1,595 | 1.0000 | 1,529 | 1,522 | 1.0046 |
| Chronic liver disease and cirrhosis (K70,K73–K74) | 27,201 | 27,503 | 0.9890 | 27,045 | 27,257 | 0.9922 | 26,751 | 27,035 | 0.9895 |
| Alcoholic liver disease (K70) | 12,064 | 12,360 | 0.9761 | 11,965 | 12,121 | 0.9871 | 12,000 | 12,207 | 0.9830 |
| Other chronic liver disease and cirrhosis (K73–K74) | 15,137 | 15,143 | 0.9996 | 15,079 | 15,136 | 0.9962 | 14,751 | 14,828 | 0.9948 |
| Cholelithiasis and other disorders of gallbladder (K80–K82) | 2,934 | 2,948 | 0.9953 | 2,965 | 2,979 | 0.9953 | 2,960 | 2,965 | 0.9983 |
| Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27) | 42,536 | 42,453 | 1.0020 | 41,018 | 40,974 | 1.0011 | 39,661 | 39,480 | 1.0046 |
| Acute and rapidly progressive nephritic and nephrotic syndrome (N00–N01,N04) | 149 | 148 | 1.0068 | 168 | 166 | 1.0120 | 165 | 156 | 1.0577 |
| Chronic glomerulonephritis, nephritis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified (N02–N03,N05–N07,N26) | 542 | 537 | 1.0093 | 545 | 553 | 0.9855 | 512 | 511 | 1.0020 |
| Renal failure (N17–N19) | 41,818 | 41,737 | 1.0019 | 40,272 | 40,222 | 1.0012 | 38,957 | 38,784 | 1.0045 |
| Other disorders of kidney (N25,N27) | 27 | 31 | 0.8710 | 34 | 33 | 1.0303 | 28 | 29 | 0.9655 |
| Infections of kidney (N10–N12,N13.6,N15.1) | 821 | 823 | 0.9976 | 792 | 788 | 1.0051 | 750 | 748 | 1.0027 |
| Hyperplasia of prostate (N40) | 487 | 477 | 1.0210 | 431 | 437 | 0.9863 | 426 | 439 | 0.9704 |
| Inflammatory diseases of female pelvic organs (N70–N76) | 131 | 125 | 1.0480 | 110 | 114 | 0.9649 | 128 | 127 | 1.0079 |
| Pregnancy, childbirth and the puerperium (O00–099) | 515 | 545 | 0.9450 | 358 | 379 | 0.9446 | 401 | 416 | 0.9639 |
| Pregnancy with abortive outcome (O00–O07) | 42 | 40 | 1.0500 | 22 | 22 | 1.0000 | 38 | 38 | 1.0000 |
| Other complications of pregnancy, childbirth and the puerperium (O10–O99) | 473 | 505 | 0.9366 | 336 | 357 | 0.9412 | 363 | 378 | 0.9603 |
| Certain conditions originating in the perinatal period (P00–P96) | 14,352 | 14,378 | 0.9982 | 14,148 | 14,254 | 0.9926 | 13,925 | 13,887 | 1.0027 |
| Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99) | 10,430 | 10,518 | 0.9916 | 10,635 | 10,687 | 0.9951 | 10,490 | 10,442 | 1.0046 |
| Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99) | 38,795 | 31,444 | 1.2338 | 40,532 | 29,975 | 1.3522 | 39,689 | 32,326 | 1.2278 |
| All other diseases (Residual) | 200,322 | 201,676 | 0.9933 | 193,974 | 194,591 | 0.9968 | 186,446 | 186,406 | 1.0002 |
| Accidents (unintentional injuries) (V01–X59,Y85–Y86) | 105,695 | 109,277 | 0.9672 | 102,303 | 106,742 | 0.9584 | 97,707 | 101,537 | 0.9623 |
| Transport accidents (V01–V99,Y85) | 47,325 | 48,071 | 0.9845 | 47,478 | 48,366 | 0.9816 | 45,911 | 47,288 | 0.9709 |
| 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) | 44,059 | 44,757 | 0.9844 | 44,572 | 45,380 | 0.9822 | 41,967 | 43,293 | 0.9694 |
| 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) | 1,352 | 1,357 | 0.9963 | 1,064 | 1,086 | 0.9797 | 1,885 | 1,900 | 0.9921 |
| Water, air and space, and other and unspecified transport accidents and their sequelae (V90–V99,Y85) | 1,913 | 1,957 | 0.9775 | 1,842 | 1,900 | 0.9695 | 2,059 | 2,095 | 0.9828 |
| Nontransport accidents (W00–X59,Y86) | 58,371 | 61,206 | 0.9537 | 54,825 | 58,376 | 0.9392 | 51,796 | 54,249 | 0.9548 |
| Falls (W00–W19) | 16,926 | 17,229 | 0.9824 | 15,848 | 16,257 | 0.9748 | 14,543 | 15,019 | 0.9683 |
| Accidental discharge of firearms (W32–W34) | 752 | 730 | 1.0301 | 813 | 762 | 1.0669 | 924 | 802 | 1.1521 |
| Accidental drowning and submersion (W65–W74) | 3,222 | 3,306 | 0.9746 | 3,399 | 3,447 | 0.9861 | 3,247 | 3,281 | 0.9896 |
| Accidental exposure to smoke, fire and flames (X00–X09) | 3,363 | 3,369 | 0.9982 | 3,024 | 3,159 | 0.9573 | 3,223 | 3,309 | 0.9740 |
| Accidental poisoning and exposure to noxious substances (X40–X49) | 16,969 | 19,457 | 0.8721 | 14,670 | 17,550 | 0.8359 | 12,030 | 14,078 | 0.8545 |
| Other and unspecified nontransport accidents and their sequelae (W20–W31,W35–W64,W75–W99,X10–X39,X50–X59,Y86) | 17,138 | 17,115 | 1.0013 | 17,070 | 17,201 | 0.9924 | 17,829 | 17,760 | 1.0039 |

See footnotes at end of table.

## Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 2001–03—Con.

[For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes"]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Preliminary number of deaths 2003 | Final number of deaths 2003 | Ratio of preliminary to final 2003 | Preliminary number of deaths 2002 | Final number of deaths 2002 | Ratio of preliminary to final 2002 | Preliminary number of deaths 2001 | Final number of deaths 2001 | Ratio of preliminary to final 2001 |
|---|---|---|---|---|---|---|---|---|---|
| Intentional self-harm (suicide) . . . . . (*U03,X60–X84,Y87.0) | 30,642 | 31,484 | 0.9733 | 30,646 | 31,655 | 0.9681 | 29,423 | 30,622 | 0.9608 |
| Intentional self-harm (suicide) by discharge of firearms. . . . . (X72–X74) | 16,859 | 16,907 | 0.9972 | 16,882 | 17,108 | 0.9868 | 16,455 | 16,869 | 0.9755 |
| Intentional self-harm (suicide) by other and unspecified means and their sequelae . . . . . (*U03,X60–X71,X75–X84,Y87.0) | 13,782 | 14,577 | 0.9455 | 13,763 | 14,547 | 0.9461 | 12,968 | 13,749 | 0.9432 |
| Assault (homicide). . . . . (*U01–*U02,X85–Y09,Y87.1) | 17,096 | 17,732 | 0.9641 | 17,045 | 17,638 | 0.9664 | 19,727 | 20,308 | 0.9714 |
| Assault (homicide) by discharge of firearms . . . . . (*U01.4,X93–X95) | 11,599 | 11,920 | 0.9731 | 11,546 | 11,829 | 0.9761 | 11,001 | 11,348 | 0.9694 |
| 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) | 5,498 | 5,812 | 0.9460 | 5,500 | 5,809 | 0.9468 | 8,726 | 8,960 | 0.9739 |
| Legal intervention . . . . . (Y35,Y89.0) | 394 | 423 | 0.9314 | 365 | 384 | 0.9505 | 387 | 396 | 0.9773 |
| Events of undetermined intent. . . . . (Y10–Y34,Y87.2,Y89.9) | 4,602 | 5,072 | 0.9073 | 4,423 | 4,830 | 0.9157 | 3,868 | 4,198 | 0.9214 |
| Discharge of firearms, undetermined intent. . . . . .(Y22–Y24) | 197 | 232 | 0.8491 | 214 | 243 | 0.8807 | 222 | 231 | 0.9610 |
| Other and unspecified events of undetermined intent and their sequelae . . . . . (Y10–Y21,Y25–Y34,Y87.2,Y89.9) | 4,405 | 4,840 | 0.9101 | 4,209 | 4,587 | 0.9176 | 3,646 | 3,967 | 0.9191 |
| Operations of war and their sequelae . . . . . (Y36,Y89.1) | 16 | 14 | 1.1429 | 21 | 20 | 1.0500 | 17 | 17 | 1.0000 |
| Complications of medical and surgical care. . . . . (Y40–Y84,Y88) | 2,766 | 2855 | 0.9688 | 2,820 | 2,843 | 0.9919 | 3,089 | 3,021 | 1.0225 |

– Quantity zero.

. . . Category not applicable.

SOURCE: Preliminary and final data from the National Vital Statistics System, National Center for Health Statistics.

## Table III. Ratios of preliminary to final reported numbers of deaths from 130 selected causes of infant death: United States, 2001–03

[For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes"]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Preliminary number of deaths 2003 | Final number of deaths 2003 | Ratio of preliminary to final 2003 | Preliminary number of deaths 2002 | Final number of deaths 2002 | Ratio of preliminary to final 2002 | Preliminary number of deaths 2001 | Final number of deaths 2001 | Ratio of preliminary to final 2001 |
|---|---|---|---|---|---|---|---|---|---|
| All causes | 28,422 | 28,025 | 1.0142 | 27,974 | 28,034 | 0.9979 | 27,798 | 27,568 | 1.0083 |
| Certain infectious and parasitic diseases (A00–B99) | 495 | 494 | 1.0020 | 573 | 582 | 0.9845 | 576 | 563 | 1.0231 |
| Certain intestinal infectious diseases (A00–A08) | 9 | 13 | 0.6923 | 10 | 13 | 0.7692 | 10 | 12 | 0.8333 |
| Diarrhea and gastroenteritis of infectious origin (A09) | 1 | 1 | 1.0000 | 3 | 3 | 1.0000 | 1 | 2 | 0.5000 |
| Tuberculosis (A16–A19) | – | – | . . . | 1 | 1 | 1.0000 | 1 | 2 | 0.5000 |
| Tetanus (A33,A35) | – | – | . . . | – | – | . . . | – | – | . . . |
| Diphtheria (A36) | – | – | . . . | – | – | . . . | – | – | . . . |
| Whooping cough (A37) | 9 | 10 | 0.9000 | 17 | 18 | 0.9444 | 13 | 16 | 0.8125 |
| Meningococcal infection (A39) | 10 | 12 | 0.8333 | 16 | 17 | 0.9412 | 18 | 16 | 1.1250 |
| Septicemia (A40–A41) | 279 | 278 | 1.0036 | 295 | 296 | 0.9966 | 334 | 312 | 1.0705 |
| Congenital syphilis (A50) | – | – | . . . | 1 | 1 | 1.0000 | 1 | 1 | 1.0000 |
| Gonococcal infection (A54) | – | – | . . . | 1 | 1 | 1.0000 | – | – | . . . |
| Viral diseases (A80–B34) | 117 | 116 | 1.0086 | 159 | 164 | 0.9695 | 114 | 121 | 0.9421 |
| Acute poliomyelitis (A80) | – | – | . . . | – | – | . . . | – | – | . . . |
| Varicella (chickenpox) (B01) | 1 | 1 | 1.0000 | 1 | 1 | 1.0000 | 1 | 1 | 1.0000 |
| Measles (B05) | – | – | . . . | – | – | . . . | – | – | . . . |
| Human immunodeficiency virus (HIV) disease (B20–B24) | 5 | 5 | 1.0000 | 8 | 7 | 1.1429 | 8 | 10 | 0.8000 |
| Mumps (B26) | – | – | . . . | – | – | . . . | – | – | . . . |
| Other and unspecified viral diseases (A81–B00,B02–B04,B06–B19,B25,B27–B34) | 110 | 110 | 1.0000 | 149 | 156 | 0.9551 | 104 | 110 | 0.9455 |
| Candidiasis (B37) | 23 | 22 | 1.0455 | 21 | 19 | 1.1053 | 21 | 21 | 1.0000 |
| Malaria (B50–B54) | – | – | . . . | – | – | . . . | – | – | . . . |
| Pneumocystosis (B59) | 3 | 3 | 1.0000 | 2 | 2 | 1.0000 | 2 | 2 | 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) | 43 | 39 | 1.1026 | 47 | 47 | 1.0000 | 61 | 58 | 1.0517 |
| Neoplasms (C00–D48) | 152 | 137 | 1.1095 | 150 | 143 | 1.0490 | 122 | 117 | 1.0427 |
| Malignant neoplasms (C00–C97) | 83 | 75 | 1.1067 | 81 | 74 | 1.0946 | 69 | 66 | 1.0455 |
| Hodgkin's disease and non-Hodgkin's lymphomas (C81–C85) | – | – | . . . | 2 | 2 | 1.0000 | 1 | 1 | 1.0000 |
| Leukemia (C91–C95) | 33 | 30 | 1.1000 | 20 | 21 | 0.9524 | 26 | 25 | 1.0400 |
| Other and unspecified malignant neoplasms (C00–C80,C88–C90,C96–C97) | 50 | 45 | 1.1111 | 58 | 51 | 1.1373 | 42 | 40 | 1.0500 |
| In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48) | 70 | 62 | 1.1290 | 69 | 69 | 1.0000 | 53 | 51 | 1.0392 |
| Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89) | 105 | 105 | 1.0000 | 86 | 82 | 1.0488 | 106 | 106 | 1.0000 |
| Anemias (D50–D64) | 21 | 22 | 0.9545 | 18 | 18 | 1.0000 | 16 | 16 | 1.0000 |
| Hemorrhagic conditions and other diseases of blood and blood-forming organs (D65–D76) | 66 | 63 | 1.0476 | 45 | 43 | 1.0465 | 61 | 59 | 1.0339 |
| Certain disorders involving the immune mechanism (D80–D89) | 17 | 20 | 0.8500 | 22 | 21 | 1.0476 | 29 | 31 | 0.9355 |
| Endocrine, nutritional and metabolic diseases (E00–E88) | 264 | 248 | 1.0645 | 255 | 266 | 0.9586 | 284 | 292 | 0.9726 |
| Short stature, not elsewhere classified (E34.3) | 10 | 12 | 0.8333 | 26 | 26 | 1.0000 | 30 | 26 | 1.1538 |
| Nutritional deficiencies (E40–E64) | 10 | 10 | 1.0000 | 4 | 4 | 1.0000 | 3 | 4 | 0.7500 |
| Cystic fibrosis (E84) | 5 | 5 | 1.0000 | 9 | 10 | 0.9000 | 6 | 6 | 1.0000 |
| Volume depletion, disorders of fluid, electrolyte and acid-base balance (E86–E87) | 86 | 78 | 1.1026 | 74 | 74 | 1.0000 | 81 | 90 | 0.9000 |
| All other endocrine, nutritional and metabolic diseases (E00–E32,E34.0–E34.2, E34.4–E34.9,E65–E83,E85,E88) | 152 | 143 | 1.0629 | 142 | 152 | 0.9342 | 164 | 166 | 0.9880 |
| Diseases of the nervous system (G00–G98) | 424 | 400 | 1.0600 | 376 | 382 | 0.9843 | 356 | 360 | 0.9889 |

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, 2001–03—Con.

[For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes"]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Preliminary number of deaths 2003 | Final number of deaths 2003 | Ratio of preliminary to final 2003 | Preliminary number of deaths 2002 | Final number of deaths 2002 | Ratio of preliminary to final 2002 | Preliminary number of deaths 2001 | Final number of deaths 2001 | Ratio of preliminary to final 2001 |
|---|---|---|---|---|---|---|---|---|---|
| Meningitis (G00,G03) | 69 | 77 | 0.8961 | 71 | 74 | 0.9595 | 72 | 78 | 0.9231 |
| Infantile spinal muscular atrophy, type I (Werdnig-Hoffman) (G12.0) | 21 | 18 | 1.1667 | 24 | 25 | 0.9600 | 19 | 21 | 0.9048 |
| Infantile cerebral palsy (G80) | 14 | 11 | 1.2727 | 9 | 9 | 1.0000 | 19 | 19 | 1.0000 |
| Anoxic brain damage, not elsewhere classified (G93.1) | 51 | 50 | 1.0200 | 41 | 39 | 1.0513 | 27 | 26 | 1.0385 |
| Other diseases of nervous system (G04,G06–G11,G12.1–G12.9,G20–G72, G81–G92,G93.0,G93.2–G93.9,G95–G98) | 268 | 244 | 1.0984 | 231 | 235 | 0.9830 | 219 | 216 | 1.0139 |
| Diseases of the ear and mastoid process (H60–H93) | 5 | 8 | 0.6250 | 4 | 6 | 0.6667 | 1 | 3 | 0.3333 |
| Diseases of the circulatory system (I00–I99) | 834 | 591 | 1.4112 | 649 | 667 | 0.9730 | 637 | 622 | 1.0241 |
| Pulmonary heart disease and diseases of pulmonary circulation (I26–I28) | 361 | 132 | 2.7348 | 177 | 186 | 0.9516 | 173 | 170 | 1.0176 |
| Pericarditis, endocarditis and myocarditis (I30,I33,I40) | 22 | 26 | 0.8462 | 19 | 22 | 0.8636 | 23 | 21 | 1.0952 |
| Cardiomyopathy (I42) | 129 | 126 | 1.0238 | 115 | 118 | 0.9746 | 128 | 137 | 0.9343 |
| Cardiac arrest (I46) | 21 | 20 | 1.0500 | 36 | 34 | 1.0588 | 27 | 24 | 1.1250 |
| Cerebrovascular diseases (I60–I69) | 111 | 101 | 1.0990 | 121 | 117 | 1.0342 | 121 | 108 | 1.1204 |
| All other diseases of circulatory system (I00–I25,I31,I34–I38,I44–I45,I47–I51,I70–I99) | 189 | 186 | 1.0161 | 181 | 190 | 0.9526 | 165 | 162 | 1.0185 |
| Diseases of the respiratory system (J00–J98) | 671 | 699 | 0.9599 | 586 | 636 | 0.9214 | 692 | 696 | 0.9943 |
| Acute upper respiratory infections (J00–J06) | 8 | 14 | 0.5714 | 8 | 9 | 0.8889 | 8 | 9 | 0.8889 |
| Influenza and pneumonia (J10–J18) | 314 | 322 | 0.9752 | 232 | 263 | 0.8821 | 290 | 299 | 0.9699 |
| Influenza (J10–J11) | 30 | 31 | 0.9677 | 7 | 7 | 1.0000 | 9 | 7 | 1.2857 |
| Pneumonia (J12–J18) | 284 | 291 | 0.9759 | 226 | 256 | 0.8828 | 281 | 292 | 0.9623 |
| Acute bronchitis and acute bronchiolitis (J20–J21) | 51 | 53 | 0.9623 | 45 | 49 | 0.9184 | 54 | 49 | 1.1020 |
| Bronchitis, chronic and unspecified (J40–J42) | 19 | 20 | 0.9500 | 20 | 24 | 0.8333 | 27 | 21 | 1.2857 |
| Asthma (J45–J46) | 6 | 7 | 0.8571 | 2 | 4 | 0.5000 | 9 | 10 | 0.9000 |
| Pneumonitis due to solids and liquids (J69) | 12 | 13 | 0.9231 | 2 | 2 | 1.0000 | 11 | 12 | 0.9167 |
| Other and unspecified diseases of respiratory system (J22,J30–J39, J43–J44,J47–J68,J70–J98) | 260 | 270 | 0.9630 | 276 | 285 | 0.9684 | 292 | 296 | 0.9865 |
| Diseases of the digestive system (K00–K92) | 567 | 551 | 1.0290 | 482 | 509 | 0.9470 | 488 | 478 | 1.0209 |
| Gastritis, duodenitis, and noninfective enteritis and colitis (K29,K50–K55) | 317 | 310 | 1.0226 | 251 | 268 | 0.9366 | 250 | 246 | 1.0163 |
| Hernia of abdominal cavity and intestinal obstruction without hernia (K40–K46,K56) | 68 | 65 | 1.0462 | 46 | 50 | 0.9200 | 63 | 62 | 1.0161 |
| All other and unspecified diseases of digestive system (K00–K28,K30–K38,K57–K92) | 182 | 176 | 1.0341 | 185 | 191 | 0.9686 | 175 | 170 | 1.0294 |
| Diseases of the genitourinary system (N00–N98) | 185 | 206 | 0.8981 | 183 | 187 | 0.9786 | 166 | 157 | 1.0573 |
| Renal failure and other disorders of kidney (N17–N19,N25,N27) | 151 | 170 | 0.8882 | 162 | 165 | 0.9818 | 132 | 125 | 1.0560 |
| Other and unspecified diseases of genitourinary system (N00–N15,N20–N23, N26,N28–N98) | 34 | 36 | 0.9444 | 21 | 22 | 0.9545 | 34 | 32 | 1.0625 |
| Certain conditions originating in the perinatal period (P00–P96) | 14,173 | 14,254 | 0.9943 | 13,987 | 14,106 | 0.9916 | 13,748 | 13,734 | 1.0010 |
| Newborn affected by maternal factors and by complications of pregnancy, labor and delivery (P00–P04) | 3,186 | 3,166 | 1.0063 | 3,058 | 3,063 | 0.9984 | 2,768 | 2,832 | 0.9774 |
| Newborn affected by maternal hypertensive disorders (P00.0) | 69 | 69 | 1.0000 | 68 | 71 | 0.9577 | 61 | 60 | 1.0167 |
| Newborn affected by other maternal conditions which may be unrelated to present pregnancy (P00.1–P00.9) | 80 | 83 | 0.9639 | 68 | 76 | 0.8947 | 61 | 70 | 0.8714 |
| Newborn affected by maternal complications of pregnancy (P01) | 1,734 | 1,710 | 1.0140 | 1,723 | 1,708 | 1.0088 | 1,451 | 1,499 | 0.9680 |
| Newborn affected by incompetent cervix (P01.0) | 437 | 444 | 0.9842 | 486 | 475 | 1.0232 | 396 | 403 | 0.9826 |
| Newborn affected by premature rupture of membranes (P01.1) | 744 | 731 | 1.0178 | 764 | 764 | 1.0000 | 642 | 663 | 0.9683 |
| Newborn affected by multiple pregnancy (P01.5) | 319 | 305 | 1.0459 | 254 | 252 | 1.0079 | 256 | 270 | 0.9481 |
| Newborn affected by other maternal complications of pregnancy (P01.2–P01.4,P01.6–P01.9) | 233 | 230 | 1.0130 | 219 | 217 | 1.0092 | 156 | 163 | 0.9571 |

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, 2001–03—Con.**

[For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes"]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Preliminary number of deaths 2003 | Final number of deaths 2003 | Ratio of preliminary to final 2003 | Preliminary number of deaths 2002 | Final number of deaths 2002 | Ratio of preliminary to final 2002 | Preliminary number of deaths 2001 | Final number of deaths 2001 | Ratio of preliminary to final 2001 |
|---|---|---|---|---|---|---|---|---|---|
| Newborn affected by complications of placenta, cord and membranes (P02) | 1,112 | 1,099 | 1.0118 | 1,017 | 1,028 | 0.9893 | 1,012 | 1,018 | 0.9941 |
| Newborn affected by complications involving placenta (P02.0–P02.3) | 610 | 597 | 1.0218 | 508 | 512 | 0.9922 | 525 | 520 | 1.0096 |
| Newborn affected by complications involving cord (P02.4–P02.6) | 42 | 41 | 1.0244 | 54 | 55 | 0.9818 | 53 | 51 | 1.0392 |
| Newborn affected by chorioamnionitis (P02.7) | 457 | 458 | 0.9978 | 453 | 460 | 0.9848 | 434 | 447 | 0.9709 |
| Newborn affected by other and unspecified abnormalities of membranes (P02.8–P02.9) | 3 | 3 | 1.0000 | 1 | 1 | 1.0000 | – | – | . . . |
| Newborn affected by other complications of labor and delivery (P03) | 161 | 163 | 0.9877 | 151 | 144 | 1.0486 | 148 | 148 | 1.0000 |
| Newborn affected by noxious influences transmitted via placenta or breast milk (P04) | 31 | 42 | 0.7381 | 31 | 36 | 0.8611 | 37 | 37 | 1.0000 |
| Disorders related to length of gestation and fetal malnutrition (P05–P08) | 4,905 | 4,912 | 0.9986 | 4,673 | 4,714 | 0.9913 | 4,496 | 4,473 | 1.0051 |
| Slow fetal growth and fetal malnutrition (P05) | 60 | 63 | 0.9524 | 75 | 77 | 0.9740 | 62 | 63 | 0.9841 |
| Disorders related to short gestation and low birth weight, not elsewhere classified (P07) | 4,844 | 4,849 | 0.9990 | 4,598 | 4,637 | 0.9916 | 4,434 | 4,410 | 1.0054 |
| Extremely low birth weight or extreme immaturity (P07.0,P07.2) | 3,668 | 3,683 | 0.9959 | 3,531 | 3,543 | 0.9966 | 3,331 | 3,316 | 1.0045 |
| Other low birth weight or preterm (P07.1,P07.3) | 1,177 | 1,166 | 1.0094 | 1,067 | 1,094 | 0.9753 | 1,103 | 1,094 | 1.0082 |
| Disorders related to long gestation and high birth weight (P08) | – | – | . . . | – | – | . . . | – | – | . . . |
| Birth trauma (P10–P15) | 28 | 26 | 1.0769 | 348 | 345 | 1.0087 | 138 | 145 | 0.9517 |
| Intrauterine hypoxia and birth asphyxia (P20–P21) | 567 | 558 | 1.0161 | 578 | 583 | 0.9914 | 548 | 534 | 1.0262 |
| Intrauterine hypoxia (P20) | 113 | 109 | 1.0367 | 106 | 110 | 0.9636 | 124 | 120 | 1.0333 |
| Birth asphyxia (P21) | 454 | 449 | 1.0111 | 472 | 473 | 0.9979 | 424 | 414 | 1.0242 |
| Respiratory distress of newborn (P22) | 819 | 831 | 0.9856 | 958 | 943 | 1.0159 | 1,016 | 1,011 | 1.0049 |
| Other respiratory conditions originating in the perinatal period (P23–P28) | 1,221 | 1,217 | 1.0033 | 1,205 | 1,245 | 0.9679 | 1,523 | 1,503 | 1.0133 |
| Congenital pneumonia (P23) | 76 | 78 | 0.9744 | 71 | 78 | 0.9103 | 73 | 72 | 1.0139 |
| Neonatal aspiration syndromes (P24) | 54 | 56 | 0.9643 | 50 | 54 | 0.9259 | 72 | 71 | 1.0141 |
| Interstitial emphysema and related conditions originating in the perinatal period (P25) | 160 | 151 | 1.0596 | 157 | 164 | 0.9573 | 210 | 204 | 1.0294 |
| Pulmonary hemorrhage originating in the perinatal period (P26) | 168 | 163 | 1.0307 | 189 | 191 | 0.9895 | 277 | 279 | 0.9928 |
| Chronic respiratory disease originating in the perinatal period (P27) | 252 | 262 | 0.9618 | 311 | 314 | 0.9904 | 332 | 310 | 1.0710 |
| Atelectasis (P28.0–P28.1) | 450 | 441 | 1.0204 | 387 | 400 | 0.9675 | 495 | 501 | 0.9880 |
| All other respiratory conditions originating in the perinatal period (P28.2–P28.9) | 62 | 66 | 0.9394 | 40 | 44 | 0.9091 | 64 | 66 | 0.9697 |
| Infections specific to the perinatal period (P35–P39) | 958 | 967 | 0.9907 | 927 | 948 | 0.9778 | 865 | 869 | 0.9954 |
| Bacterial sepsis of newborn (P36) | 766 | 772 | 0.9922 | 734 | 749 | 0.9800 | 694 | 696 | 0.9971 |
| Omphalitis of newborn with or without mild hemorrhage (P38) | 4 | 4 | 1.0000 | 1 | 1 | 1.0000 | 3 | 3 | 1.0000 |
| All other infections specific to the perinatal period (P35,P37,P39) | 188 | 191 | 0.9843 | 192 | 198 | 0.9697 | 168 | 170 | 0.9882 |
| Hemorrhagic and hematological disorders of newborn (P50–P61) | 745 | 746 | 0.9987 | 492 | 509 | 0.9666 | 603 | 600 | 1.0050 |
| Neonatal hemorrhage (P50–P52,P54) | 648 | 649 | 0.9985 | 374 | 387 | 0.9664 | 455 | 453 | 1.0044 |
| Hemorrhagic disease of newborn (P53) | – | – | . . . | – | 1 | – | – | – | . . . |
| Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice (P55–P59) | 10 | 10 | 1.0000 | 18 | 19 | 0.9474 | 14 | 14 | 1.0000 |
| Hematological disorders (P60–P61) | 87 | 87 | 1.0000 | 100 | 102 | 0.9804 | 134 | 133 | 1.0075 |
| Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (P70.0–P70.2) | 5 | 7 | 0.7143 | 8 | 10 | 0.8000 | 7 | 7 | 1.0000 |
| Necrotizing enterocolitis of newborn (P77) | 397 | 405 | 0.9802 | 348 | 352 | 0.9886 | 389 | 380 | 1.0237 |
| Hydrops fetalis not due to hemolytic disease (P83.2) | 190 | 188 | 1.0106 | 187 | 192 | 0.9740 | 165 | 166 | 0.9940 |
| Other perinatal conditions (P29,P70.3–P76,P78–P81,P83.0–P83.1,P83.3–P96) | 1,153 | 1,231 | 0.9366 | 1,205 | 1,202 | 1.0025 | 1,230 | 1,214 | 1.0132 |
| Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99) | 5,714 | 5,621 | 1.0165 | 5,655 | 5,623 | 1.0057 | 5,608 | 5,513 | 1.0172 |
| Anencephaly and similar malformations (Q00) | 330 | 334 | 0.9880 | 304 | 297 | 1.0236 | 269 | 263 | 1.0228 |

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, 2001–03—Con.

[For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes"]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Preliminary number of deaths 2003 | Final number of deaths 2003 | Ratio of preliminary to final 2003 | Preliminary number of deaths 2002 | Final number of deaths 2002 | Ratio of preliminary to final 2002 | Preliminary number of deaths 2001 | Final number of deaths 2001 | Ratio of preliminary to final 2001 |
|---|---|---|---|---|---|---|---|---|---|
| Congenital hydrocephalus (Q03) | 97 | 101 | 0.9604 | 90 | 90 | 1.0000 | 106 | 105 | 1.0095 |
| Spina bifida (Q05) | 10 | 11 | 0.9091 | 20 | 20 | 1.0000 | 20 | 19 | 1.0526 |
| Other congenital malformations of nervous system (Q01–Q02,Q04,Q06–Q07) | 334 | 319 | 1.0470 | 293 | 286 | 1.0245 | 292 | 286 | 1.0210 |
| Congenital malformations of heart (Q20–Q24) | 1,507 | 1,445 | 1.0429 | 1,508 | 1,510 | 0.9987 | 1,570 | 1,556 | 1.0090 |
| Other congenital malformations of circulatory system (Q25–Q28) | 239 | 237 | 1.0084 | 217 | 223 | 0.9731 | 188 | 192 | 0.9792 |
| Congenital malformations of respiratory system (Q30–Q34) | 641 | 619 | 1.0355 | 639 | 638 | 1.0016 | 602 | 594 | 1.0135 |
| Congenital malformations of digestive system (Q35–Q45) | 92 | 94 | 0.9787 | 99 | 103 | 0.9612 | 106 | 106 | 1.0000 |
| Congenital malformations of genitourinary system (Q50–Q64) | 338 | 332 | 1.0181 | 354 | 351 | 1.0085 | 363 | 356 | 1.0197 |
| Congenital malformations and deformations of musculoskeletal system, limbs and integument (Q65–Q85) | 509 | 548 | 0.9288 | 472 | 460 | 1.0261 | 488 | 477 | 1.0231 |
| Down's syndrome (Q90) | 115 | 116 | 0.9914 | 119 | 118 | 1.0085 | 126 | 119 | 1.0588 |
| Edward's syndrome (Q91.0–Q91.3) | 474 | 469 | 1.0107 | 505 | 494 | 1.0223 | 460 | 446 | 1.0314 |
| Patau's syndrome (Q91.4–Q91.7) | 284 | 274 | 1.0365 | 306 | 295 | 1.0373 | 284 | 276 | 1.0290 |
| Other congenital malformations and deformations (Q10–Q18,Q86–Q89) | 547 | 526 | 1.0399 | 542 | 548 | 0.9891 | 540 | 526 | 1.0266 |
| Other chromosomal abnormalities, not elsewhere classified (Q92–Q99) | 197 | 196 | 1.0051 | 189 | 190 | 0.9947 | 192 | 192 | 1.0000 |
| Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99) | 3,477 | 3,318 | 1.0479 | 3,702 | 3,456 | 1.0712 | 3,675 | 3,491 | 1.0527 |
| Sudden infant death syndrome (R95) | 1,994 | 2,162 | 0.9223 | 2,035 | 2,295 | 0.8867 | 1,972 | 2,234 | 0.8827 |
| Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R53,R55–R94,R96–R99) | 1,483 | 1,156 | 1.2829 | 1,667 | 1,161 | 1.4358 | 1,703 | 1257 | 1.3548 |
| All other diseases (Residual) | 32 | 17 | 1.8824 | 26 | 24 | 1.0833 | 20 | 19 | 1.0526 |
| External causes of mortality (*U01,V01–Y84) | 1,324 | 1,376 | 0.9622 | 1,261 | 1,365 | 0.9238 | 1,320 | 1,417 | 0.9315 |
| Accidents (unintentional injuries) (V01–X59) | 928 | 945 | 0.9820 | 893 | 946 | 0.9440 | 912 | 976 | 0.9344 |
| Transport accidents (V01–V99) | 150 | 148 | 1.0135 | 129 | 127 | 1.0157 | 142 | 151 | 0.9404 |
| 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) | 147 | 145 | 1.0138 | 124 | 123 | 1.0081 | 134 | 142 | 0.9437 |
| 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) | 3 | 3 | 1.0000 | 5 | 4 | 1.2500 | 7 | 9 | 0.7778 |
| Falls (W00–W19) | 13 | 14 | 0.9286 | 24 | 16 | 1.5000 | 23 | 23 | 1.0000 |
| Accidental discharge of firearms (W32–W34) | – | – | . . . | 1 | 1 | 1.0000 | – | – | . . . |
| Accidental drowning and submersion (W65–W74) | 57 | 58 | 0.9828 | 61 | 63 | 0.9683 | 69 | 68 | 1.0147 |
| Accidental suffocation and strangulation in bed (W75) | 409 | 418 | 0.9785 | 380 | 425 | 0.8941 | 347 | 390 | 0.8897 |
| Other accidental suffocation and strangulation (W76–W77,W81–W84) | 138 | 140 | 0.9857 | 147 | 150 | 0.9800 | 151 | 162 | 0.9321 |
| Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract (W78–W80) | 56 | 61 | 0.9180 | 51 | 61 | 0.8361 | 56 | 62 | 0.9032 |
| Accidents caused by exposure to smoke, fire and flames (X00–X09) | 32 | 30 | 1.0667 | 35 | 36 | 0.9722 | 52 | 50 | 1.0400 |
| Accidental poisoning and exposure to noxious substances (X40–X49) | 16 | 20 | 0.8000 | 27 | 26 | 1.0385 | 15 | 15 | 1.0000 |
| Other and unspecified accidents (W20–W31,W35–W64,W85–W99, X10–X39,X50–X59) | 56 | 56 | 1.0000 | 38 | 41 | 0.9268 | 59 | 55 | 1.0727 |

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, 2001–03—Con.**

[For explanation of asterisks (*) preceding cause-of-death codes, see "Technical Notes"]

| Cause of death (Based on the *International Classification of Diseases, Tenth Revision*, 1992) | Preliminary number of deaths 2003 | Final number of deaths 2003 | Ratio of preliminary to final 2003 | Preliminary number of deaths 2002 | Final number of deaths 2002 | Ratio of preliminary to final 2002 | Preliminary number of deaths 2001 | Final number of deaths 2001 | Ratio of preliminary to final 2001 |
|---|---|---|---|---|---|---|---|---|---|
| Assault (homicide) (*U01,X85–Y09) | 318 | 341 | 0.9326 | 274 | 303 | 0.9043 | 310 | 332 | 0.9337 |
| Assault (homicide) by hanging, strangulation and suffocation (X91) | 41 | 39 | 1.0513 | 28 | 32 | 0.8750 | 30 | 40 | 0.7500 |
| Assault (homicide) by discharge of firearms (*U01.4,X93–X95) | 7 | 8 | 0.8750 | 9 | 9 | 1.0000 | 11 | 11 | 1.0000 |
| Neglect, abandonment and other maltreatment syndromes (Y06–Y07) | 94 | 100 | 0.9400 | 85 | 98 | 0.8673 | 115 | 116 | 0.9914 |
| Assault (homicide) by other and unspecified means (*U01.0–*U01.3, *U01.5–*U01.9,X85–X90,X92,X96–X99,Y00–Y05,Y08–Y09) | 176 | 194 | 0.9072 | 152 | 164 | 0.9268 | 154 | 165 | 0.9333 |
| Complications of medical and surgical care (Y40–Y84) | 12 | 15 | 0.8000 | 14 | 15 | 0.9333 | 24 | 26 | 0.9231 |
| Other external causes and their sequelae (X60–X84,Y10–Y36) | 65 | 75 | 0.8667 | 80 | 101 | 0.7921 | 74 | 83 | 0.8916 |

– Quantity zero.

. . . Category not applicable.

SOURCE: Preliminary and final data from the National Vital Statistics System, National Center for Health Statistics.

deformations, and chromosomal abnormalities were overestimated by 1.7 percent in 2001, 0.6 percent in 2002, and 1.7 percent in 2003. Unintentional injuries and SIDS were underestimated in the preliminary data for each of the 3 years with unintentional injuries being underestimated between 1.9 percent and 6.6 percent and SIDS between 7.8 percent and 11.7 percent (Table III).

## Tabulation lists and cause-of-death ranking

Tabulation lists for ICD–10 are published in the *NCHS Instruction Manual, Part 9*, ICD–10 Cause-of-Death Lists for Tabulating Mortality Statistics, Updated October 2002 (33). For this report two tabulation lists are used, namely, 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. These lists are also used to rank leading causes of death for the two population groups (34). 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 in 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 2004 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 2004" (35). In contrast to infant mortality rates based on live births, infant death rates are based on the estimated population under 1 year of age (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 2004 by the estimated population of persons under 1 year of age on July 1, 2004, and are presented as rates per 100,000 population in this age group. Because of differences in the denominators, infant death rates may differ from infant mortality rates. Information on infant deaths can also be obtained from a file where the infant's death certificate is linked to the birth certificate. The linked birth/infant death data set (linked file) is a better source of data for infant deaths and mortality rates by race and ethnicity because the race of the mother as reported by the mother from the birth certificate is used in both the numerator and denominator of the infant mortality rate. In contrast, for the vital statistics mortality rate—the more "traditional" source of infant mortality data—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 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 on the birth certificate, the race of each parent is usually reported by the mother at the time of delivery, whereas on the death certificate, race of the deceased infant is reported by the funeral director based on information provided by an informant or on 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 (36,25).

## Life tables

The period life table provides a measure of the effect of current mortality on life expectancy. It is composed of sets of values showing the mortality experience of a hypothetical group of infants born at the same time and subject throughout their lifetime to the age-specific death rates of a particular time period, usually a given year. Beginning with final data reported for 1997, the life table methodology was changed from previous annual reports. Previously, U.S. life tables were abridged and constructed by reference to a standard table (37). In addition, the age range for these life tables was limited to 5 year age groups ending with the age group 85 years and over.

Beginning with 1997 mortality data, a revised life table methodology was used to construct complete life tables by single years of age that extend to age 100 (38) using a methodology similar to that of the decennial life tables (39). The advantages of the new methodology over the previous methodology are its comparability with decennial life table methodology, greater accuracy, and greater age detail. A comparison of the two methods shows small differences in resulting values for life expectancy (38). Although the new method produces complete life tables, that is, life tables by single years of age, life table data shown in this report are summarized in 5 year age groupings. Life expectancy by age is shown in Table 6. To calculate the probability of dying at each age, the revised methodology uses vital statistics death rates for ages under 85 years and mortality data from the Medicare program for ages over 85 years. Medicare data were used to model the probability of dying at ages 85 years and over because the data are shown to be significantly more reliable than vital statistics data at the oldest ages (40).

The life tables presented in this report are based on a slight modification of the new life table method introduced in 1997. This modification was necessitated by a change in the age detail of populations received from the U.S. Census Bureau. Populations for 2003 and 2004 were provided by single years of age up to age 84, followed by "85 and over," and as a result it was not possible to apply the same smoothing technique that has been used when population figures in single years of age up to ages "100 years and over" were available (38). Accordingly, Medicare data were used to estimate the probability of dying by single years of age for ages up to "100 years and over."

## Population denominators

The rates in this report use population estimates based on the 2000 census and estimated as of July 1, 2003, and July 1, 2004. National rates for 2004 and state rates for 2003 and 2004 are based on population estimates published in 2004, which incorporate infor-

mation not included in the earlier (2001 and 2002) estimates. These population estimates are available on the NCHS home page (41,42).

The population estimates have been produced under a collaborative arrangement with the U.S. Census Bureau and are based on the 2000 census counts. Reflecting the new guidelines issued in 1997 by the Office of Management and Budget (OMB), the 2000 census included an option for individuals to report more than one race as appropriate for themselves and household members (16). In addition, the 1997 OMB guidelines called for reporting of Asian persons separately from Native Hawaiians or Other Pacific Islanders. In the 1977 OMB guidelines, data for Asian or Pacific Islander persons were collected as a single group (12). Death certificates for 35 states and the District of Columbia currently collect only one race in the same categories as specified in the 1977 OMB guidelines (see section "2003 revision of the U.S. Standard Certificate of Death" in the "Technical Notes"). In addition, those death certificate data do not report Asians separately from Native Hawaiians or Other Pacific Islanders. The death certificate data by race (the numerators for death rates) are thus incompatible for most states with the population data collected in the 2000 census (the denominators for the rates).

In order to produce national death rates for 2003 and 2004, it was necessary to "bridge" the reported population data for multiple-race persons back to single-race categories. In addition, the census counts were modified to be consistent with the 1977 OMB race categories; that is, to report the data for Asian persons and Native Hawaiians or Other Pacific Islanders as a combined category, Asian or Pacific Islanders, and to reflect age as of the census reference date. The procedures used to produce the "bridged" populations are described in separate publications (14,15). It is anticipated that "bridged" data will be used over the next few years for computing population-based rates. As more states collect data on race according to the 1997 OMB guidelines (16), it is expected that use of the "bridged" populations can be discontinued.

## Computing rates and percentages

Except for infant mortality rates, death rates are on an annual basis per 1,000 or 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 formula for age-adjusted death rate, and table of U.S. standard population below:

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

where

$P_{si}$ = standard population for age group $i$

$P_s$ = total U.S. standard population (all ages combined—see next column)

### United States 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 |

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 years and over. The year 2000 standard population used for computing age-adjusted rates and standard errors for injury at work is shown below:

### United States 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 |

Age-adjusted rates for Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas were computed by applying the age-specific death rates to the U.S. standard population. Age groups for 75 years and over were combined because population counts were unavailable by single year of age for ages over 79 years. The year 2000 standard population used for computing age-adjusted rates and standard errors for the territories is shown below:

### United States standard population for the territories

| 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 years and over | 16,573,966 |

Effective with 1999 data, the standard population was changed from 1940 to the year 2000 population in accordance with new statistical policy promulgated by the Secretary of the U.S. Department of Health and Human Services in August 1998 (43). 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. For detailed discussion see "Age Standardization of Death Rates: Implementation of the Year 2000 Standard" (43). 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.

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 was 426, or less than 0.02 percent of all deaths.

An asterisk (*) indicates that the figure does not meet standards of reliability or precision. In this report three sets of criteria determine whether a figure meets these standards:

- The state-specific sample is complete enough to provide reliable estimates. For this report, a criterion of at least 75 percent of a state's records (demographic file) for the 12-month period is used as a basis for providing state-specific estimates (see Table I). For 2004, the demographic mortality files contained less than 34.8 percent of their records for Illinois, 45.3 percent for California, and 62.1 percent for New Jersey (see Table I). Data for Illinois, California, and New Jersey are included in U.S. totals, but are not shown separately (Table 3).
- 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 based on 20 to 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 to 31 events. Additional information on random variation in numbers of events, rates, ratios, and percentages may be found in the following section on "Reliability of estimates."

## Reliability of estimates

Because the preliminary estimates of deaths in this report are based on files that may not be complete, they are subject to sampling variability. This notion 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 we treat the variability associated with this error (sampling variability) 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 IV 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 IV 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 IV were computed using this formula:

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

where

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

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

RSEs may be used to compute 95-percent confidence intervals for the number of events ($X$), for a rate ($R$), or for a percentage ($P$) and to compute statistical tests concerning the equality of two rates ($R_1$ and $R_2$) or two percentages ($P_1$ and $P_2$).

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

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

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

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

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

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

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

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

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

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 follows:

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

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

As a hypothetical example, assume the death rate, $R_1$, is 20.0, which is based on 70 deaths from a file with 80-percent completeness. Then

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

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

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 follows:

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

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

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.

$R_i$ = age-specific rate for the $i^{\text{th}}$ age group.

$w_i$ = $i^{\text{th}}$ age-specific U.S. standard population such that $\Sigma w_i = 1.000000$ (see "Computing rates and percentages").

$X_i$ = the estimated number of deaths for the $i^{th}$ age group.

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

$f_i$ = percentage of file completeness/100 from Table I (for infant deaths, use the percentage 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 percentage completeness for the demographic or medical file as appropriate for deaths 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:

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

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 follows:

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

Because $|z| < 1.96$, there is not a 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 follows:

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

where

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

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

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

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

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

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

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

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

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

This means 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 both the numerator and denominator, the above-mentioned $z$-test may be used.

Contents

Abstract . . . . . 1
Introduction . . . . . 1
Sources and Methods . . . . . 1
Data sources . . . . . 1
Results . . . . . 2
Trends in numbers and rates . . . . . 2
Causes of death . . . . . 3
Infant mortality . . . . . 5
References . . . . . 5
List of Detailed Tables . . . . . 6
Technical Notes . . . . . 33

**Copyright information**

All material appearing in this report is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

**Suggested citation**

Miniño AM, Heron MP, Smith BL. Deaths: Preliminary Data for 2004. National vital statistics reports; vol 54 no 19. Hyattsville, MD: National Center for Health Statistics. 2006.

**National Center for Health Statistics**

Director
Edward J. Sondik, Ph.D.

Acting Co-Deputy Directors
Jennifer H. Madans, Ph.D.
Michael H. Sadagursky

**Division of Vital Statistics**

Director, Charles J. Rothwell

U.S. DEPARTMENT OF
HEALTH & HUMAN SERVICES

Centers for Disease Control and Prevention
National Center for Health Statistics
3311 Toledo Road
Hyattsville, MD 20782

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

To receive this publication regularly, contact the National Center for Health Statistics by calling 1-866-441-NCHS (6247)
E-mail: nchsquery@cdc.gov
Internet: www.cdc.gov/nchs

06-0130 (6/2006)
CS104417
T25521
DHHS Publication No. (PHS) 2006–1120

MEDIA MAIL
POSTAGE & FEES PAID
CDC/NCHS
PERMIT NO. G-284