

## Deaths: Preliminary Data for 2001

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### Abstract

**Objectives**—This report presents preliminary data on deaths for the year 2001 in the United States. U.S. data on deaths are shown by age, sex, race, and Hispanic origin. Death rates for 2001 are based on population estimates consistent with the April 1, 2000, census. Data on life expectancy, leading causes of death, infant mortality, and deaths resulting from September 11, 2001, terrorist attacks are also presented. For comparison, this report also presents revised final death rates for 2000, based on populations consistent with the April 1, 2000, census.

**Methods**—Data in this report are based on a large number of deaths comprising approximately 98 percent of the demographic file and 92 percent of the medical file for all deaths in the United States in 2001. The records are weighted to independent control counts of infant deaths and deaths 1 year and over received in State vital statistics offices for 2001. Unless otherwise indicated, comparisons are made with final data for 2000. For certain causes of death, preliminary data differ from final data because of the truncated nature of the preliminary file. These are, in particular, accidents, homicides, suicides, and respiratory diseases.

Populations were produced for the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS) under a collaborative arrangement with the U.S. Census Bureau. The populations reflect the results of the 2000 census. This census allowed people to report more than one race for themselves and their household members and also separated the category for Asian or Pacific Islander persons into two groups (Asian and Native Hawaiian or Other Pacific Islander). These changes reflect the Office of Management and Budget's (OMB) 1997 revisions to the standards for the classification of Federal data on race and ethnicity. Because only one race is currently reported in death certificate data, the 2000 census populations were "bridged" to the single race categories specified in OMB's 1977 guidelines for race and ethnic statistics in Federal reporting, which are still in use in the collection of vital statistics data.

**Results**—The age-adjusted death rate in 2001 for the United States decreased slightly from 869.0 deaths per 100,000 population in 2000 to 855.0 in 2001. For causes of death, declines in age-adjusted death rates occurred for Diseases of heart, Malignant neoplasms, Cerebrovascular diseases, Accidents (unintentional injuries), and

Influenza and pneumonia. Age-adjusted death rates also declined for drug-induced deaths between 2000 and 2001. Age-adjusted death rates increased between 2000 and 2001 for the following causes: Alzheimer's disease, Nephritis, nephrotic syndrome and nephrosis, Essential (primary) hypertension and hypertensive renal disease, and Assault (homicide). The increase in homicide was a direct result of the terrorist attacks of September 11, 2001.

The infant mortality rate did not change between 2000 and 2001. Life expectancy at birth rose by 0.2 years to a record high of 77.2 years.

**Keywords:** deaths • vital statistics • mortality • cause of death • life expectancy

### Introduction

This report presents preliminary mortality data based on vital records for a substantial proportion of deaths occurring in 2001. This report only includes data on deaths; reports previous to 1999 in the preliminary series included data for both births and deaths. Preliminary natality data for 2001 were published separately (1). Trends shown in preliminary reports for 1995–2000 deaths, for most measures, were confirmed by final statistics for each year (2–7).

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In order to provide the most accurate death rates for 2000 and 2001, publication of this report was delayed to enable NCHS to make use of population data for April 1, 2000, and July 1, 2001, based on the 2000 census. These populations were produced under a collaborative arrangement with the U.S. Census Bureau and feature race categories consistent with the U.S. Office of Management and Budget racial category standards issued in 1977, as described in the “Methods” section below.

## Sources and Methods

### Data sources

Preliminary data in this report are based on records of deaths that occurred during the year 2001 and were received and processed by the Centers for Disease Control and Prevention’s National Center for Health Statistics (NCHS) as of June 28, 2002. Compared with independent control counts of 2001 deaths received from State vital statistics offices, demographic information was available for an estimated 97 percent of infant deaths (under 1 year of age) and about 98 percent of deaths to persons aged 1 year and over. Medical or cause-of-death information was processed separately and was available for an estimated 91 percent of infant deaths and 92 percent of deaths to persons aged 1 year and over.

To produce the preliminary estimates shown in this report, records were weighted using the independent control counts of infant deaths and deaths 1 year and over for 2001 received in the State vital statistics offices. Two separate sets of weights were applied to the death 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 and medical tables (see section on “Nature and sources of data” in the Technical Notes). Preliminary estimates are subject to sampling variation as well as random variation.

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

The proportion of records processed by each State is shown in [table I](#) in the Technical Notes. Changes in death rates between 2000

and 2001 and differences in death rates across demographic groups for 2001 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.

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. 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 (8). The 1997 OMB guidelines called for the reporting of Asian persons separately from Native Hawaiians or other Pacific Islanders. Under the prior OMB standards (issued in 1977), data for Asian or Pacific Islander persons were collected as a single group (9). Death certificates currently collect only one race for the decedent in the same categories as specified in the 1977 OMB guidelines. The 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 currently incompatible with the population data collected in the 2000 census (the denominators for the rates). To produce death rates for 2000 and 2001, it was necessary to “bridge” the reported population data for multiple race persons back to single race categories. The 2000 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 (10). The procedures used to produce the “bridged” populations are described in separate publications (11,12). It is anticipated that “bridged” population data will be used over the next few years for computing population-based rates. Beginning with deaths occurring in 2003, some States will collect information on multiple race reporting. As States gradually begin to collect data on race according to the 1997 OMB guidelines, 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 contain some error. Smaller population groups are affected much more than larger populations by this measurement error, especially American Indians (11). Over the next several years, additional information will be incorporated in the estimation procedures, possibly resulting in further revisions of the population estimates.

## Results

### Trends in numbers and rates

The preliminary number of deaths in the United States for 2001 was 2,417,762, representing an increase of 14,411 from the 2000 total. The crude death rate decreased from 854.0 per 100,000 population in 2000 to 848.9 per 100,000 in 2001. The estimated age-adjusted death rate, which accounts for changes in the age distribution of the population, reached a record low of 855.0 per 100,000 U.S. standard population, 1.6 percent lower than the 2000

rate of 869.0 (table A) (2). 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 on "Computing rates and percents" in the Technical Notes).

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 (13,14). The final age-adjusted death rate for 2000 was 1.1 percent lower than the 1999 final rate despite a major influenza outbreak at the beginning of the year, resuming the downward trend in the age-adjusted death rate (14). The preliminary 2001 age-adjusted death rate continues this downward trend.

From 2000 to 2001, age-adjusted death rates decreased by 2.3 percent for males and by 1.2 percent for females. For non-Hispanic white males and females, the age-adjusted death rate decreased 2.0 percent and 1.0 percent, respectively. Reductions in the age-adjusted death rate also occurred for non-Hispanic black males (2.2 percent), non-Hispanic black females (1.9 percent), American Indian males (4.7 percent), Asian or Pacific Islander (API) males (5.0 percent), and Hispanic males (2.7 percent). American Indian, API, and Hispanic females experienced no statistically significant change in age-adjusted death rates between 2000 and 2001 (table 1).

Among the major race and Hispanic origin groups, the lowest mortality was reported for the API, Hispanic, and American Indian populations, whose preliminary age-adjusted death rates were, respectively, 42 percent, 22 percent, and 18 percent lower than those for the non-Hispanic white population. In contrast, the age-adjusted death rate for the non-Hispanic black population was 32 percent higher than that for the non-Hispanic white population (table 1). Mortality for races other than white and black may be seriously understated due to underreporting for some race groups and Hispanic origin on death certificates (15,16).

The general decrease in mortality between 2000 and 2001 resulted from decreases in the death rate for age groups under 1 year, 5–14 years, 55–64 years, 65–74 years, 75–84 years, and 85 years and over. The greatest increase, 3.3 percent, in the death rate occurred for the age group 25–34 years.

The preliminary estimate of life expectancy at birth for the total population in 2001 reached a record high of 77.2 years. This represents an increase of 0.2 years relative to 2000 (see tables A and 6). The gap between male and female life expectancy was 5.4 years in 2001. The difference between male and female life expectancy at birth has been generally decreasing since its peak of 7.8 years in 1979 (17). Life expectancy for males increased by 0.1 year, reaching a record 74.4 years. Female life expectancy also increased by 0.1 year, increasing from 79.7 years to 79.8 years between 2000 and 2001. Record-high life expectancies were reached for white and black males (75.0 years and 68.6 years, respectively), as well as for white and black females (80.2 years and 75.5 years, respectively).

### Causes of death

The 15 leading causes of death in 2001 were 1) Diseases of heart; 2) Malignant neoplasms; 3) Cerebrovascular diseases; 4) Chronic lower respiratory diseases; 5) Accidents (unintentional injuries); 6) Diabetes mellitus; 7) Influenza and pneumonia; 8) Alzheimer's disease; 9) Nephritis, nephrotic syndrome and nephrosis; 10) Septicemia; 11) Intentional self-harm (suicide); 12) Chronic liver disease and cirrhosis; 13) Assault (homicide); 14) Essential (primary) hypertension and hypertensive renal disease; and 15) Pneumonitis due to solids and liquids (table B). The 15 leading causes remained the same for 2000 and 2001, although homicide changed places with Essential (primary) hypertension and hypertensive renal disease, becoming the 13th leading cause of death in 2001 from 14th in 2000. The increase in rank of homicide was due to the addition of deaths that resulted from the September 11th terrorist attacks.

**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 2000 and preliminary 2001**

[Death rates are based on populations enumerated in the 2000 census as of April 1 for 2000 and estimated as of July 1 for 2001. Death rates and life expectancies for 2000 have been revised for this report and may differ from final figures previously published; see Technical Notes]

Measure and sex	All races <sup>1</sup>		White		Black	
	2001	2000	2001	2000	2001	2000
All deaths . . . . .	2,417,762	2,403,351	2,081,842	2,071,287	287,110	285,826
Age-adjusted death rate <sup>2</sup> . . . . .	855.0	869.0	837.3	849.8	1,098.8	1,121.4
Male . . . . .	1,029.5	1,053.8	1,006.9	1,029.4	1,372.4	1,403.5
Female . . . . .	722.4	731.4	707.5	715.3	910.4	927.6
Life expectancy at birth <sup>3</sup> . . . . .	77.2	77.0	77.7	77.6	72.2	71.9
Male . . . . .	74.4	74.3	75.0	74.9	68.6	68.3
Female . . . . .	79.8	79.7	80.2	80.1	75.5	75.2
All infant deaths . . . . .	27,801	28,035	18,094	18,144	8,563	8,771
Infant mortality rate <sup>4</sup> . . . . .	6.9	6.9	5.7	5.7	14.2	14.1

<sup>1</sup>Includes races other than white and black.

<sup>2</sup>Age-adjusted death rates are per 100,000 U.S. standard population, based on the year 2000 standard; see Technical Notes.

<sup>3</sup>Life expectancy at birth stated in years.

<sup>4</sup>Infant mortality rates are deaths under 1 year per 1,000 live births in specified group.

**Table B. Deaths and death rates for 2001 and age-adjusted death rates and percent changes in age-adjusted rates from 2000 to 2001 for the 15 leading causes of death: United States, final 2000 and preliminary 2001**

[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 year 2000 population; see Technical Notes. Crude rates are based on populations enumerated in the 2000 census as of April 1 for 2000 and estimated as of July 1 for 2001. Death rates for 2000 in this report have been revised and may differ from final death rates previously published. For explanation of asterisks preceding cause-of-death categories, see Technical Notes. Figures for 2001 are based on weighted data rounded to the nearest individual, so categories may not add to the totals]

Rank <sup>1</sup>	Cause of Death (Based on the <i>International Classification of Diseases, Tenth Revision, 1992</i> )	Number	Death rate	Age-adjusted death rate		
				2001	2000	Percent change
...	All causes . . . . .	2,417,798	849.0	855.0	869.0	-1.6
1	Diseases of heart . . . . . I00-I09,I11,I13,I20-I51	699,697	245.7	247.7	257.6	-3.8
2	Malignant neoplasms . . . . . C00-C97	553,251	194.3	195.8	199.6	-1.9
3	Cerebrovascular diseases . . . . . I60-I69	163,601	57.4	57.9	60.9	-4.9
4	Chronic lower respiratory diseases . . . . . J40-J47	123,974	43.5	44.0	44.2	-0.5
5	Accidents (unintentional injuries) . . . . . V01-X59,Y85-Y86	97,707	34.3	34.3	34.9	-1.7
6	Diabetes mellitus . . . . . E10-E14	71,252	25.0	25.2	25.0	0.8
7	Influenza and pneumonia . . . . . J10-J18	62,123	21.8	22.0	23.7	-7.2
8	Alzheimer's disease . . . . . G30	53,679	18.8	19.0	18.1	5.0
9	Nephritis, nephrotic syndrome, and nephrosis . . . . . N00-N07,N17-N19,N25-N27	39,661	13.9	14.0	13.5	3.7
10	Septicemia . . . . . A40-A41	32,275	11.3	11.4	11.3	0.9
11	Intentional self-harm (suicide) . . . . . U03*,X60-X84,Y87.0	29,423	10.3	10.3	10.4	-1.0
12	Chronic liver disease and cirrhosis . . . . . K70,K73-K74	26,751	9.4	9.4	9.5	-1.1
13	Assault (homicide) . . . . . U01*-U02*,X85-Y09,Y87.1	19,727	6.9	6.9	5.9	16.9
14	Essential (primary) hypertension and hypertensive renal disease . . . . . I10,I12	19,054	6.7	6.7	6.5	3.1
15	Pneumonitis due to solids and liquids . . . . . J69	17,392	6.1	6.2	6.1	1.6
...	All other causes . . . . .	408,231	143.3	...	...	...

... Category not applicable.

<sup>1</sup>Rank based on number of deaths; see Technical Notes.

The age-adjusted death rate declined for 5 of the 15 leading causes of death. From 2000 to 2001, the preliminary age-adjusted death rate for the leading cause of death, **Diseases of heart**, decreased by 3.8 percent. A total of 11,063 fewer deaths from heart disease occurred in 2001 than in 2000. The age-adjusted death rate for **Malignant neoplasms** decreased by 1.9 percent (see [tables B and 2](#)). Deaths from these two diseases combined accounted for more than 1.2 million deaths, 52 percent of all deaths in 2001. While heart disease mortality has exhibited a downward trend since 1950, cancer mortality has declined only since 1990.

The preliminary age-adjusted death rate decreased for **Cerebrovascular diseases** by an estimated 4.9 percent. **Influenza and pneumonia** exhibited the greatest decline, dropping 7.2 percent between 2000 and 2001. **Unintentional injuries** decreased by 1.7 percent between 2000 and 2001.

Increases occurred for **Alzheimer's disease** (5.0 percent), **Nephritis, nephrotic syndrome and nephrosis** (3.7 percent), **Essential (primary) hypertension and hypertensive renal disease** (3.1 percent), and **homicide** (16.9 percent). This dramatic increase in the age-adjusted rate for homicide includes 2,953 certified deaths that resulted from the September 11, 2001, terrorist attacks ([tables C and 2](#)). Excluding deaths from the terrorist attacks, the age-adjusted death rate for **homicide** would have declined by 1.7 percent, although this decline would not have been statistically significant. **Homicide** had been on a downward trend since 1991 (2-7).

An estimated 3,074 deaths resulted from the September 11, 2001, terrorist attacks in New York City, Pennsylvania, and Virginia ([table C](#)). As of October 24, 2002, a total of 2,957 death certificates have been issued. Of these, four were issued for terrorists and are classified as suicides. An estimated 2,838 deaths occurred in New York City; 189

**Table C. Deaths from terrorism on September 11, 2001**

State	Estimated total deaths	Death certificates issued (as of October 24, 2002)
All States . . . . .	3,074	2,957
New York City . . . . .	2,838	2,732
Virginia . . . . .	189	178
Pennsylvania . . . . .	44	44
Massachusetts . . . . .	1	1
Missouri . . . . .	1	1
New Jersey <sup>1</sup> . . . . .	1	1

<sup>1</sup>Death occurred in 2002.

in Virginia, and 44 in Pennsylvania. Three additional deaths occurred as sequelae to the attacks, one each in Massachusetts, Missouri, and New Jersey. The New Jersey death occurred in 2002 ([table C](#)).

The preliminary age-adjusted death rate for **Human immunodeficiency virus (HIV)** declined by 3.8 percent between 2000 to 2001 ([table 2](#)), a decline greater than that observed between 1999 and 2000. The rate for HIV decreased 28.8 percent from 1995 to 1996, 47.7 percent from 1996 to 1997, 20.6 percent from 1997 to 1998, and 1.9 percent from 1999 to 2000. In 1995 the rate for HIV disease was not significantly different from the rate for 1994. From 1987 until 1994, HIV disease mortality increased an average of 16 percent annually. For the age group 25-44 years, HIV disease is the sixth leading cause of death for all races combined ([table 7](#)).

Between 2000 and 2001, the preliminary age-adjusted death rate for **Drug-induced deaths** declined by 5.7 percent. There was no significant change in the age-adjusted death rates for **Alcohol-induced deaths, Firearm injuries** or **Injuries at work** ([table 2](#)).



## Infant mortality

The preliminary **infant mortality rate** for 2001 was 6.9 infant deaths per 1,000 live births, representing no change from the rate in 2000 (see [tables A and 4](#)). The Hispanic as well as the non-Hispanic white population experienced no change in the infant mortality rate between 2000 and 2001. The black population experienced a slight, but not statistically significant, increase of 0.7 percent between 2000 and 2001. Because of inconsistencies in reporting some race groups and Hispanic origin on birth and death certificates, infant mortality rates for these groups are likely to be underestimated (15,16). The linked birth/infant death data set provides a better source of data for infant deaths and mortality rates by race and ethnicity (18).

The leading cause of infant mortality, **Congenital malformations, deformations and chromosomal abnormalities**, accounted for 20.2 percent of all infant deaths ([tables 5 and 8](#)). **Disorders related to short gestation and low birthweight**, the second leading cause of death for all infants, accounted for 16.0 percent of all infant deaths. The rate for the third leading cause of infant mortality, **Sudden infant death syndrome (SIDS)**, dropped by an estimated 21.5 percent from 2000. However, the magnitude of this decrease may be the result of bias in the preliminary file (see [table III](#)). For 2000 the preliminary weighted count of SIDS deaths was only 85 percent of the final count. Recent declines may also reflect a change in the way SIDS is diagnosed by the medical community. Deaths due to SIDS have been declining since 1988 (4).

Other leading causes of infant death in 2001 included, in rank order, **Newborn affected by maternal complications of pregnancy** (4th), **Respiratory distress of newborn** (5th), **Newborn affected by complications of placenta, cord, and membranes** (6th), **Accidents (unintentional injuries)** (7th), **Bacterial sepsis of newborn** (8th), **Diseases of the circulatory system** (9th), and **Intrauterine hypoxia and birth asphyxia** (10th).

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**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 2000 and preliminary 2001**

[Data are based on a continuous file of records received from the States. Age-specific rates are per 100,000 population in specified group. Rates are based on populations enumerated in the 2000 census as of April 1 for 2000 and estimated as of July 1 for 2001. Death rates for 2000 have been revised for this report and may differ from final death rates previously published. Age-adjusted rates are per 100,000 U.S. standard population based on the year 2000 standard; 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. Figures for 2001 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Age, race, and sex	2001		2000	
	Number	Rate	Number	Rate
All races, both sexes				
All ages .....	2,417,762	848.9	2,403,351	854.0
Under 1 year <sup>1</sup> .....	27,801	689.2	28,035	736.7
1-4 years .....	5,125	33.4	4,979	32.4
5-14 years .....	7,100	17.3	7,413	18.0
15-24 years .....	32,157	80.5	31,307	79.9
25-34 years .....	41,474	104.7	40,451	101.4
35-44 years .....	91,457	203.2	89,798	198.9
45-54 years .....	167,836	428.3	160,341	425.6
55-64 years .....	244,002	964.1	240,846	992.2
65-74 years .....	431,306	2,355.2	441,209	2,399.1
75-84 years .....	702,657	5,588.2	700,445	5,666.5
85 years and over .....	666,456	15,133.8	658,171	15,524.4
Not stated .....	390	...	356	...
Age-adjusted rate <sup>2</sup> .....	...	855.0	...	869.0
All races, male				
All ages .....	1,183,721	846.6	1,177,578	853.0
Under 1 year <sup>1</sup> .....	15,591	755.3	15,718	806.5
1-4 years .....	2,922	37.3	2,824	35.9
5-14 years .....	4,172	19.8	4,401	20.9
15-24 years .....	23,880	116.6	23,071	114.9
25-34 years .....	28,626	143.0	27,890	138.6
35-44 years .....	58,007	258.9	57,297	255.2
45-54 years .....	104,697	544.3	100,398	542.8
55-64 years .....	144,831	1,191.6	143,321	1,230.7
65-74 years .....	241,776	2,913.9	247,408	2,979.6
75-84 years .....	341,182	6,841.8	340,219	6,972.6
85 years and over .....	217,730	16,760.0	214,742	17,501.4
Not stated .....	309	...	289	...
Age-adjusted rate <sup>2</sup> .....	...	1,029.5	...	1,053.8
All races, female				
All ages .....	1,234,041	851.2	1,225,773	855.0
Under 1 year <sup>1</sup> .....	12,211	620.0	12,317	663.4
1-4 years .....	2,203	29.4	2,155	28.7
5-14 years .....	2,928	14.6	3,012	15.0
15-24 years .....	8,277	42.5	8,236	43.1
25-34 years .....	12,849	65.6	12,561	63.5
35-44 years .....	33,451	147.9	32,501	143.2
45-54 years .....	63,139	316.5	59,943	312.5
55-64 years .....	99,171	753.9	97,525	772.2
65-74 years .....	189,530	1,892.3	193,801	1,921.2
75-84 years .....	361,476	4,764.3	360,226	4,814.7
85 years and over .....	448,727	14,453.4	443,429	14,719.2
Not stated .....	81	...	67	...
Age-adjusted rate <sup>2</sup> .....	...	722.4	...	731.4

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 2000 and preliminary 2001 - Con.**

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Age, race, and sex	2001		2000	
	Number	Rate	Number	Rate
White, total <sup>3</sup> , both sexes				
All ages .....	2,081,842	896.0	2,071,287	900.2
Under 1 year <sup>1</sup> .....	18,094	575.3	18,144	610.6
1-4 years .....	3,681	30.8	3,494	29.2
5-14 years .....	5,167	16.2	5,450	17.0
15-24 years .....	23,687	75.3	23,018	74.5
25-34 years .....	29,833	94.7	28,719	90.3
35-44 years .....	68,001	185.3	66,496	179.9
45-54 years .....	128,589	392.8	122,674	388.3
55-64 years .....	197,786	913.2	195,541	940.2
65-74 years .....	367,656	2,302.2	376,986	2,341.5
75-84 years .....	628,713	5,569.4	627,729	5,637.7
85 years and over .....	610,337	15,314.4	602,761	15,707.0
Not stated .....	298	...	275	...
Age-adjusted rate <sup>2</sup> .....	...	837.3	...	849.8
White <sup>3</sup> , male				
All ages .....	1,011,922	882.5	1,007,191	887.8
Under 1 year <sup>1</sup> .....	10,157	631.2	10,177	667.6
1-4 years .....	2,112	34.5	2,004	32.6
5-14 years .....	3,018	18.4	3,255	19.8
15-24 years .....	17,480	107.7	16,868	105.8
25-34 years .....	20,869	129.6	20,140	124.1
35-44 years .....	44,139	239.1	43,378	233.6
45-54 years .....	81,318	500.7	77,866	496.9
55-64 years .....	118,277	1,126.8	117,114	1,163.3
65-74 years .....	208,104	2,846.5	213,379	2,905.7
75-84 years .....	306,799	6,811.2	306,370	6,933.1
85 years and over .....	199,410	16,955.1	196,409	17,716.4
Not stated .....	239	...	231	...
Age-adjusted rate <sup>2</sup> .....	...	1,006.9	...	1,029.4
White <sup>3</sup> , female				
All ages .....	1,069,920	909.1	1,064,096	912.3
Under 1 year <sup>1</sup> .....	7,937	516.8	7,967	550.5
1-4 years .....	1,569	26.9	1,490	25.5
5-14 years .....	2,149	13.8	2,195	14.1
15-24 years .....	6,208	40.7	6,150	41.1
25-34 years .....	8,964	58.3	8,579	55.1
35-44 years .....	23,861	130.8	23,118	125.7
45-54 years .....	47,270	286.6	44,808	281.4
55-64 years .....	79,509	712.3	78,427	730.9
65-74 years .....	159,552	1,842.7	163,607	1,868.3
75-84 years .....	321,914	4,744.9	321,359	4,785.3
85 years and over .....	410,927	14,627.6	406,352	14,890.7
Not stated .....	59	...	44	...
Age-adjusted rate <sup>2</sup> .....	...	707.5	...	715.3

See footnotes at end of table.



**Table 1. Deaths and death rates by age, sex, and race and Hispanic origin and age-adjusted death rates, by sex and race and Hispanic origin: United States, final 2000 and preliminary 2001 - Con.**

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Age, race, and sex	2001		2000	
	Number	Rate	Number	Rate
White, non-Hispanic, both sexes				
All ages .....	1,965,750	992.6	1,959,919	993.2
Under 1 year <sup>1</sup> .....	13,391	558.8	13,513	596.5
1-4 years .....	2,784	30.3	2,641	28.5
5-14 years .....	4,163	16.3	4,397	17.1
15-24 years .....	18,741	74.1	18,261	73.6
25-34 years .....	24,146	96.3	23,191	90.1
35-44 years .....	59,495	188.1	58,231	181.0
45-54 years .....	117,106	396.0	111,964	390.5
55-64 years .....	184,189	924.4	182,348	950.2
65-74 years .....	346,972	2,329.4	356,869	2,366.2
75-84 years .....	604,276	5,614.9	604,658	5,675.4
85 years and over .....	590,374	15,400.0	583,757	15,799.7
Not stated .....	112	...	89	...
Age-adjusted rate <sup>2</sup> .....	...	844.2	...	855.5
White, non-Hispanic, male				
All ages .....	947,249	976.9	944,781	978.5
Under 1 year <sup>1</sup> .....	7,543	614.5	7,660	658.7
1-4 years .....	1,605	34.0	1,541	32.4
5-14 years .....	2,438	18.6	2,652	20.0
15-24 years .....	13,556	105.2	13,066	103.5
25-34 years .....	16,599	131.4	15,934	123.0
35-44 years .....	38,157	241.3	37,622	233.9
45-54 years .....	73,758	502.8	70,788	497.7
55-64 years .....	110,025	1,136.6	109,031	1,170.9
65-74 years .....	196,510	2,874.5	202,038	2,930.5
75-84 years .....	294,618	6,865.6	294,842	6,977.8
85 years and over .....	192,347	17,078.7	189,537	17,853.2
Not stated .....	93	...	70	...
Age-adjusted rate <sup>2</sup> .....	...	1,014.2	...	1,035.4
White, non-Hispanic, female				
All ages .....	1,018,501	1,007.7	1,015,138	1,007.3
Under 1 year <sup>1</sup> .....	5,848	500.3	5,853	530.9
1-4 years .....	1,179	26.3	1,100	24.4
5-14 years .....	1,725	13.9	1,745	13.9
15-24 years .....	5,186	41.8	5,195	42.6
25-34 years .....	7,546	60.6	7,257	56.8
35-44 years .....	21,338	135.0	20,609	128.1
45-54 years .....	43,348	290.9	41,176	285.0
55-64 years .....	74,165	724.0	73,317	742.1
65-74 years .....	150,462	1,867.0	154,831	1,891.0
75-84 years .....	309,658	4,785.5	309,816	4,819.3
85 years and over .....	398,026	14,701.7	394,220	14,971.7
Not stated .....	19	...	19	...
Age-adjusted rate <sup>2</sup> .....	...	714.6	...	721.5

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 2000 and preliminary 2001 - Con.**

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Age, race, and sex	2001		2000	
	Number	Rate	Number	Rate
<b>Black, total<sup>3</sup>, both sexes</b>				
All ages .....	287,110	771.9	285,826	781.1
Under 1 year <sup>1</sup> .....	8,563	1,314.5	8,771	1,426.1
1-4 years .....	1,181	47.5	1,248	49.9
5-14 years .....	1,590	23.3	1,643	24.2
15-24 years .....	7,122	117.3	7,049	119.4
25-34 years .....	10,004	184.6	10,239	187.8
35-44 years .....	20,622	355.4	20,557	356.9
45-54 years .....	34,437	770.1	33,289	786.9
55-64 years .....	39,884	1,573.1	39,281	1,607.8
65-74 years .....	54,244	3,249.5	55,195	3,335.6
75-84 years .....	62,091	6,570.6	61,444	6,701.3
85 years and over .....	47,291	14,521.3	47,038	14,714.3
Not stated .....	81	...	72	...
Age-adjusted rate <sup>2</sup> .....	...	1,098.8	...	1,121.4
<b>Black <sup>3</sup>, male</b>				
All ages .....	145,617	822.2	145,184	834.1
Under 1 year <sup>1</sup> .....	4,800	1,437.2	4,901	1,567.6
1-4 years .....	671	53.1	692	54.5
5-14 years .....	958	27.7	974	28.2
15-24 years .....	5,457	179.9	5,318	181.4
25-34 years .....	6,658	258.6	6,750	261.0
35-44 years .....	12,091	443.4	12,251	453.0
45-54 years .....	20,562	994.5	19,913	1,017.7
55-64 years .....	22,834	2,019.0	22,678	2,080.1
65-74 years .....	28,698	4,155.4	29,071	4,253.5
75-84 years .....	28,354	8,343.8	28,026	8,486.0
85 years and over .....	14,471	16,419.5	14,560	16,791.0
Not stated .....	63	...	50	...
Age-adjusted rate <sup>2</sup> .....	...	1,372.4	...	1,403.5
<b>Black <sup>3</sup>, female</b>				
All ages .....	141,493	726.1	140,642	733.0
Under 1 year <sup>1</sup> .....	3,763	1,185.4	3,870	1,279.8
1-4 years .....	509	41.7	556	45.3
5-14 years .....	632	18.8	669	20.0
15-24 years .....	1,665	54.8	1,731	58.3
25-34 years .....	3,346	117.6	3,489	121.8
35-44 years .....	8,531	277.3	8,306	271.9
45-54 years .....	13,875	577.0	13,376	588.3
55-64 years .....	17,050	1,214.1	16,603	1,227.2
65-74 years .....	25,546	2,610.2	26,124	2,689.6
75-84 years .....	33,737	5,574.9	33,418	5,696.5
85 years and over .....	32,820	13,817.0	32,478	13,941.3
Not stated .....	18	...	22	...
Age-adjusted rate <sup>2</sup> .....	...	910.4	...	927.6

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 2000 and preliminary 2001 - Con.**

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Age, race, and sex	2001		2000	
	Number	Rate	Number	Rate
<b>Black, non-Hispanic, both sexes</b>				
All ages .....	283,739	796.4	282,676	805.5
Under 1 year <sup>1</sup> .....	8,333	1,363.6	8,525	1,477.8
1-4 years .....	1,156	49.5	1,217	51.7
5-14 years .....	1,559	24.0	1,620	25.0
15-24 years .....	6,997	120.9	6,926	123.2
25-34 years .....	9,832	190.9	10,103	194.6
35-44 years .....	20,373	364.7	20,279	365.1
45-54 years .....	34,016	785.0	32,911	802.2
55-64 years .....	39,433	1,598.9	38,867	1,633.9
65-74 years .....	53,668	3,292.4	54,645	3,378.8
75-84 years .....	61,449	6,629.9	60,874	6,764.3
85 years and over .....	46,873	14,631.1	46,660	14,837.5
Not stated .....	51	...	49	...
Age-adjusted rate <sup>2</sup> .....	...	1,114.0	...	1,137.0
<b>Black, non-Hispanic, male</b>				
All ages .....	143,678	848.0	143,297	859.5
Under 1 year <sup>1</sup> .....	4,685	1,495.0	4,757	1,623.2
1-4 years .....	655	55.1	672	56.1
5-14 years .....	939	28.5	959	29.1
15-24 years .....	5,354	185.4	5,224	187.2
25-34 years .....	6,532	267.2	6,649	270.2
35-44 years .....	11,930	454.8	12,061	462.7
45-54 years .....	20,274	1,012.9	19,647	1,036.2
55-64 years .....	22,528	2,048.9	22,402	2,111.4
65-74 years .....	28,366	4,207.1	28,745	4,303.9
75-84 years .....	28,040	8,413.9	27,715	8,551.0
85 years and over .....	14,335	16,556.6	14,431	16,944.8
Not stated .....	41	...	35	...
Age-adjusted rate <sup>2</sup> .....	...	1,391.0	...	1,422.0
<b>Black, non-Hispanic, female</b>				
All ages .....	140,061	749.6	139,379	756.7
Under 1 year <sup>1</sup> .....	3,648	1,225.2	3,768	1,327.7
1-4 years .....	501	43.6	545	47.1
5-14 years .....	620	19.4	661	20.7
15-24 years .....	1,643	56.7	1,702	60.1
25-34 years .....	3,301	122.0	3,454	126.5
35-44 years .....	8,443	285.0	8,218	278.8
45-54 years .....	13,741	589.4	13,264	601.2
55-64 years .....	16,904	1,236.8	16,465	1,249.4
65-74 years .....	25,302	2,647.2	25,900	2,728.0
75-84 years .....	33,409	5,628.3	33,159	5,758.6
85 years and over .....	32,538	13,918.0	32,229	14,054.9
Not stated .....	10	...	14	...
Age-adjusted rate <sup>2</sup> .....	...	923.3	...	941.2

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 2000 and preliminary 2001 - Con.**

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Age, race, and sex	2001		2000	
	Number	Rate	Number	Rate
American Indian, total <sup>3, 4</sup> , both sexes				
All ages .....	12,017	393.4	11,363	380.8
Under 1 year <sup>1</sup> .....	375	653.9	323	598.4
1-4 years .....	105	49.0	91	42.4
5-14 years .....	133	22.6	113	19.0
15-24 years .....	552	101.6	519	98.8
25-34 years .....	602	133.3	596	132.9
35-44 years .....	1,137	242.2	1,081	232.5
45-54 years .....	1,567	435.0	1,354	399.3
55-64 years .....	1,768	896.2	1,698	925.5
65-74 years .....	2,210	2,076.1	2,141	2,162.2
75-84 years .....	2,156	4,237.9	2,062	4,448.6
85 years and over .....	1,405	8,916.1	1,382	9,642.1
Not stated .....	6	...	3	...
Age-adjusted rate <sup>2</sup> .....	...	688.8	...	709.3
American Indian <sup>3, 4</sup> , male				
All ages .....	6,495	426.1	6,185	415.6
Under 1 year <sup>1</sup> .....	212	723.6	193	700.2
1-4 years .....	54	49.5	49	44.9
5-14 years .....	78	26.2	61	20.2
15-24 years .....	398	142.2	369	136.2
25-34 years .....	422	182.2	410	179.1
35-44 years .....	725	312.7	675	295.2
45-54 years .....	947	540.9	858	520.0
55-64 years .....	1,009	1,058.6	964	1,090.4
65-74 years .....	1,163	2,389.4	1,113	2,478.3
75-84 years .....	989	4,804.5	989	5,351.2
85 years and over .....	494	9,797.7	501	10,725.8
Not stated .....	5	...	3	...
Age-adjusted rate <sup>2</sup> .....	...	802.3	...	841.5
American Indian <sup>3, 4</sup> , female				
All ages .....	5,522	360.9	5,178	346.1
Under 1 year <sup>1</sup> .....	163	581.0	130	492.2
1-4 years .....	51	48.5	42	39.8
5-14 years .....	55	19.0	52	17.7
15-24 years .....	154	58.5	150	58.9
25-34 years .....	180	81.8	186	84.8
35-44 years .....	412	173.4	406	171.9
45-54 years .....	620	334.9	496	284.9
55-64 years .....	760	745.4	734	772.1
65-74 years .....	1,047	1,812.1	1,028	1,899.8
75-84 years .....	1,167	3,852.9	1,073	3,850.0
85 years and over .....	911	8,501.3	881	9,118.2
Not stated .....	1	...	-	...
Age-adjusted rate <sup>2</sup> .....	...	595.3	...	604.5

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 2000 and preliminary 2001 - 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. Rates are based on populations enumerated in the 2000 census as of April 1 for 2000 and estimated as of July 1 for 2001. Death rates for 2000 have been revised for this report and may differ from final death rates previously published. Age-adjusted rates are per 100,000 U.S. standard population based on the year 2000 standard; 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. Figures for 2001 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Age, race, and sex	2001		2000	
	Number	Rate	Number	Rate
Asian or Pacific Islander, total <sup>3</sup> , both sexes				
All ages .....	36,794	301.7	34,875	296.6
Under 1 year <sup>1</sup> .....	769	427.5	797	483.0
1-4 years .....	159	23.2	146	21.6
5-14 years .....	210	12.3	207	12.3
15-24 years .....	796	42.8	721	39.0
25-34 years .....	1,035	46.1	897	41.0
35-44 years .....	1,697	83.2	1,664	84.5
45-54 years .....	3,244	199.9	3,024	199.3
55-64 years .....	4,564	497.7	4,326	509.0
65-74 years .....	7,196	1,266.9	6,887	1,283.0
75-84 years .....	9,697	3,350.4	9,210	3,495.2
85 years and over .....	7,423	9,644.6	6,990	10,270.7
Not stated .....	5	...	6	...
Age-adjusted rate <sup>2</sup> .....	...	488.5	...	506.4
Asian or Pacific Islander <sup>3</sup> , male				
All ages .....	19,687	332.6	19,018	332.9
Under 1 year <sup>1</sup> .....	421	458.4	447	529.4
1-4 years .....	85	24.7	79	23.3
5-14 years .....	118	13.5	111	12.9
15-24 years .....	545	58.1	516	55.2
25-34 years .....	676	61.2	590	55.0
35-44 years .....	1,051	106.9	993	104.9
45-54 years .....	1,870	248.1	1,761	249.7
55-64 years .....	2,712	629.2	2,565	642.4
65-74 years .....	3,812	1,541.4	3,845	1,661.0
75-84 years .....	5,040	4,131.2	4,834	4,328.2
85 years and over .....	3,355	11,248.6	3,272	12,125.3
Not stated .....	2	...	5	...
Age-adjusted rate <sup>2</sup> .....	...	593.2	...	624.2
Asian or Pacific Islander <sup>3</sup> , female				
All ages .....	17,107	272.6	15,857	262.3
Under 1 year <sup>1</sup> .....	348	395.2	350	434.3
1-4 years .....	74	21.7	67	20.0
5-14 years .....	92	11.0	96	11.7
15-24 years .....	251	27.2	205	22.4
25-34 years .....	359	31.4	307	27.6
35-44 years .....	646	61.1	671	65.6
45-54 years .....	1,374	158.1	1,263	155.5
55-64 years .....	1,851	380.9	1,761	390.9
65-74 years .....	3,385	1,055.5	3,042	996.4
75-84 years .....	4,657	2,781.5	4,376	2,882.4
85 years and over .....	4,068	8,629.8	3,718	9,052.2
Not stated .....	3	...	1	...
Age-adjusted rate <sup>2</sup> .....	...	409.0	...	416.8

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 2000 and preliminary 2001 - Con.**

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Age, race, and sex	2001		2000	
	Number	Rate	Number	Rate
Hispanic <sup>5</sup> , both sexes				
All ages .....	112,584	304.5	107,254	303.8
Under 1 year <sup>1</sup> .....	4,744	580.5	4,598	596.3
1-4 years .....	916	30.5	872	29.6
5-14 years .....	1,027	14.6	1,065	15.7
15-24 years .....	4,981	74.5	4,793	72.8
25-34 years .....	5,683	82.8	5,509	84.6
35-44 years .....	8,350	153.2	8,085	157.6
45-54 years .....	11,219	330.2	10,356	330.2
55-64 years .....	13,189	714.2	12,733	744.4
65-74 years .....	20,100	1,769.7	19,420	1,803.8
75-84 years .....	23,449	4,228.7	21,951	4,335.9
85 years and over .....	18,867	11,796.7	17,818	11,822.9
Not stated .....	59	...	54	...
Age-adjusted rate <sup>2</sup> .....	...	654.6	...	665.7
Hispanic <sup>5</sup> , male				
All ages .....	62,706	329.7	60,172	331.3
Under 1 year <sup>1</sup> .....	2,625	630.1	2,514	637.1
1-4 years .....	523	34.1	475	31.5
5-14 years .....	595	16.5	622	17.9
15-24 years .....	3,952	109.6	3,837	107.7
25-34 years .....	4,271	115.5	4,200	120.2
35-44 years .....	5,841	206.6	5,597	211.0
45-54 years .....	7,358	436.9	6,808	439.0
55-64 years .....	7,919	911.6	7,760	965.7
65-74 years .....	11,181	2,232.7	10,842	2,287.9
75-84 years .....	11,662	5,214.7	10,973	5,395.3
85 years and over .....	6,732	12,821.6	6,493	13,086.2
Not stated .....	49	...	51	...
Age-adjusted rate <sup>2</sup> .....	...	796.0	...	818.1
Hispanic <sup>5</sup> , female				
All ages .....	49,878	277.8	47,082	274.6
Under 1 year <sup>1</sup> .....	2,119	528.9	2,084	553.6
1-4 years .....	393	26.8	397	27.5
5-14 years .....	432	12.5	443	13.4
15-24 years .....	1,030	33.4	956	31.7
25-34 years .....	1,413	44.7	1,309	43.4
35-44 years .....	2,510	95.7	2,488	100.5
45-54 years .....	3,861	225.3	3,548	223.8
55-64 years .....	5,270	538.9	4,973	548.4
65-74 years .....	8,919	1,404.5	8,578	1,423.2
75-84 years .....	11,787	3,562.3	10,978	3,624.5
85 years and over .....	12,135	11,295.8	11,325	11,202.8
Not stated .....	10	...	3	...
Age-adjusted rate <sup>2</sup> .....	...	541.9	...	546.0

... Category not applicable.

- Quantity zero.

<sup>1</sup> Death rates for "Under 1 year" (based on population estimates) differ from infant mortality rates (based on live births); see Technical notes.

<sup>2</sup> For method of computation, see Technical notes.

<sup>3</sup> Race and Hispanic origin are reported separately on the death certificate. 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.

<sup>4</sup> Includes deaths among Aleuts and Eskimos.

<sup>5</sup> Includes all persons of Hispanic origin of any race; see Technical notes.

NOTE: Data are subject to sampling and/or random variation. For information on the relative standard errors of the data and further discussion, 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 2000 and preliminary 2001**

[Data are based on a continuous file of records received from the States. Rates are per 100,000 population. Rates are based on populations enumerated in the 2000 census as of April 1 for 2000 and estimated as of July 1 for 2001. Death rates for 2000 have been revised in this report and may differ from final death rates previously published. Age-adjusted rates are per 100,000 U.S. standard population based on the year 2000 standard; see Technical notes. For explanation of asterisks preceding cause-of-death categories, see Technical notes. Figures for 2001 are based on weighted data rounded to the nearest individual, so categories may not add to total or subtotals]

Cause of death (Based on the Tenth Revision, International Classification of Diseases, 1992)	2001			2000		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
All causes .....	2,417,798	849.0	855.0	2,403,351	854.0	869.0
Salmonella infections (A01-A02) .....	38	0.0	0.0	28	0.0	0.0
Shigellosis and amebiasis (A03,A06) .....	7	*	*	12	*	*
Certain other intestinal infections (A04,A07-A09) .....	1,539	0.5	0.5	1,328	0.5	0.5
Tuberculosis (A16-A19) .....	749	0.3	0.3	776	0.3	0.3
Respiratory tuberculosis (A16) .....	585	0.2	0.2	615	0.2	0.2
Other tuberculosis (A17-A19) .....	164	0.1	0.1	161	0.1	0.1
Whooping cough (A37) .....	14	*	*	12	*	*
Scarlet fever and erysipelas (A38,A46) .....	2	*	*	2	*	*
Meningococcal infection (A39) .....	204	0.1	0.1	211	0.1	0.0
Septicemia (A40-A41) .....	32,275	11.3	11.4	31,224	11.1	11.3
Syphilis (A50-A53) .....	33	0.0	0.0	41	0.0	0.0
Acute poliomyelitis (A80) .....	-	*	*	-	*	*
Arthropod-borne viral encephalitis (A83-A84,A85.2) .....	9	*	*	2	*	*
Measles (B05) .....	1	*	*	1	*	*
Viral hepatitis (B15-B19) .....	5,094	1.8	1.8	5,357	1.9	1.9
Human immunodeficiency virus (HIV) disease (B20-B24) .....	14,132	5.0	5.0	14,478	5.1	5.2
Malaria (B50-B54) .....	9	*	*	3	*	*
Other and unspecified infectious and parasitic diseases and their sequelae (A00,A05,A20-A36,A42-A44,A48-A49,A54-A79,A81-A82,A85.0-A85.1,A85.8,A86-B04, B06-B09,B25-B49,B55-B99) .....	6,266	2.2	2.2	5,532	2.0	2.0
Malignant neoplasms (C00-C97) .....	553,251	194.3	195.8	553,091	196.5	199.6
Malignant neoplasms of lip, oral cavity, and pharynx (C00-C14) .....	7,638	2.7	2.7	7,492	2.7	2.7
Malignant neoplasm of esophagus (C15) .....	12,509	4.4	4.4	12,232	4.3	4.4
Malignant neoplasm of stomach (C16) .....	12,340	4.3	4.4	12,645	4.5	4.6
Malignant neoplasms of colon, rectum and anus (C18-C21) .....	56,799	19.9	20.1	57,477	20.4	20.8
Malignant neoplasms of liver and intrahepatic bile ducts (C22) .....	13,263	4.7	4.7	12,916	4.6	4.7
Malignant neoplasm of pancreas (C25) .....	29,723	10.4	10.5	29,332	10.4	10.6
Malignant neoplasm of larynx (C32) .....	3,826	1.3	1.3	3,861	1.4	1.4
Malignant neoplasm of trachea, bronchus and lung (C33-C34) .....	156,005	54.8	55.3	155,521	55.3	56.1
Malignant melanoma of skin (C43) .....	7,543	2.6	2.7	7,420	2.6	2.7
Malignant neoplasm of breast (C50) .....	41,844	14.7	14.8	42,300	15.0	15.3
Malignant neoplasm of cervix uteri (C53) .....	4,064	1.4	1.4	4,200	1.5	1.5
Malignant neoplasms of corpus uteri and uterus, part unspecified (C54-C55) .....	6,835	2.4	2.4	6,586	2.3	2.4
Malignant neoplasm of ovary (C56) .....	14,361	5.0	5.1	14,060	5.0	5.1
Malignant neoplasm of prostate (C61) .....	30,714	10.8	10.9	31,078	11.0	11.3
Malignant neoplasms of kidney and renal pelvis (C64-C65) .....	12,084	4.2	4.3	11,736	4.2	4.2
Malignant neoplasm of bladder (C67) .....	12,115	4.3	4.3	12,002	4.3	4.3
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70-C72) ...	12,567	4.4	4.4	12,655	4.5	4.5
Malignant neoplasms of lymphoid, hematopoietic and related tissue (C81-C96) .....	56,350	19.8	20.0	56,518	20.1	20.4
Hodgkin's disease (C81) .....	1,315	0.5	0.5	1,287	0.5	0.5
Non-Hodgkin's lymphoma (C82-C85) .....	22,340	7.8	7.9	22,729	8.1	8.2
Leukemia (C91-C95) .....	21,518	7.6	7.6	21,339	7.6	7.7
Multiple myeloma and immunoproliferative neoplasms (C88,C90) .....	11,088	3.9	3.9	11,063	3.9	4.0
Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue (C96) .....	89	0.0	0.0	100	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) .....	62,669	22.0	22.2	63,060	22.4	22.8

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 2000 and preliminary 2001 - Con.**

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Cause of death (Based on the Tenth Revision, International Classification of Diseases, 1992)	2001			2000		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior						
(D00-D48) .....	13,673	4.8	4.9	13,546	4.8	4.9
Anemias (D50-D64) .....	4,611	1.6	1.6	4,494	1.6	1.6
Diabetes mellitus (E10-E14) .....	71,252	25.0	25.2	69,301	24.6	25.0
Nutritional deficiencies (E40-E64) .....	3,725	1.3	1.3	4,242	1.5	1.5
Malnutrition (E40-E46) .....	3,433	1.2	1.2	3,926	1.4	1.4
Other nutritional deficiencies (E50-E64) .....	293	0.1	0.1	316	0.1	0.1
Meningitis (G00,G03) .....	718	0.3	0.3	758	0.3	0.3
Parkinson's disease (G20-G21) .....	16,576	5.8	5.9	15,682	5.6	5.7
Alzheimer's disease (G30) .....	53,679	18.8	19.0	49,558	17.6	18.1
Major cardiovascular diseases (I00-I78) .....	921,819	323.7	326.4	936,923	332.9	339.7
Diseases of heart (I00-I09,I11,I13,I20-I51) .....	699,697	245.7	247.7	710,760	252.6	257.6
Acute rheumatic fever and chronic rheumatic heart disease (I00-I09) .....	3,475	1.2	1.2	3,582	1.3	1.3
Hypertensive heart disease (I11) .....	24,496	8.6	8.7	23,761	8.4	8.6
Hypertensive heart and renal disease (I13) .....	2,797	1.0	1.0	2,785	1.0	1.0
Ischemic heart disease (I20-I25) .....	501,691	176.2	177.6	515,204	183.1	186.8
Acute myocardial infarction (I21-I22) .....	184,697	64.9	65.4	192,898	68.5	69.9
Other acute ischemic heart diseases (I24) .....	3,356	1.2	1.2	3,363	1.2	1.2
Other forms of chronic ischemic heart disease (I20,I25) .....	313,638	110.1	111.0	318,943	113.3	115.7
Atherosclerotic cardiovascular disease, so described (I25.0) .....	67,531	23.7	23.9	69,554	24.7	25.2
All other forms of chronic ischemic heart disease (I20, I25.1-I25.9) .....	246,107	86.4	87.2	249,389	88.6	90.5
Other heart diseases (I26-I51) .....	167,237	58.7	59.2	165,428	58.8	60.0
Acute and subacute endocarditis (I33) .....	1,175	0.4	0.4	1,172	0.4	0.4
Diseases of pericardium and acute myocarditis (I30-I31,I40) .....	832	0.3	0.3	767	0.3	0.3
Heart failure (I50) .....	57,345	20.1	20.3	55,704	19.8	20.3
All other forms of heart disease (I26-I28,I34-I38,I42-I49,I51) .....	107,885	37.9	38.2	107,785	38.3	39.0
Essential (primary) hypertension and hypertensive renal disease (I10,I12) .....	19,054	6.7	6.7	18,073	6.4	6.5
Cerebrovascular diseases (I60-I69) .....	163,601	57.4	57.9	167,661	59.6	60.9
Atherosclerosis (I70) .....	14,111	5.0	5.0	14,393	5.1	5.2
Other diseases of circulatory system (I71-I78) .....	25,356	8.9	9.0	26,036	9.3	9.4
Aortic aneurysm and dissection (I71) .....	15,218	5.3	5.4	15,810	5.6	5.7
Other diseases of arteries, arterioles and capillaries (I72-I78) .....	10,137	3.6	3.6	10,226	3.6	3.7
Other disorders of circulatory system (I80-I99) .....	4,632	1.6	1.6	4,603	1.6	1.7
Influenza and pneumonia (J10-J18) .....	62,123	21.8	22.0	65,313	23.2	23.7
Influenza (J10-J11) .....	267	0.1	0.1	1,765	0.6	0.6
Pneumonia (J12-J18) .....	61,856	21.7	21.9	63,548	22.6	23.1
Other acute lower respiratory infections (J20-J22) .....	359	0.1	0.1	425	0.2	0.1
Acute bronchitis and bronchiolitis (J20-J21) .....	269	0.1	0.1	290	0.1	0.1
Unspecified acute lower respiratory infection (J22) .....	91	0.0	0.0	135	0.0	0.0
Chronic lower respiratory diseases (J40-J47) .....	123,974	43.5	44.0	122,009	43.4	44.2
Bronchitis, chronic and unspecified (J40-J42) .....	980	0.3	0.3	1,167	0.4	0.4
Emphysema (J43) .....	16,407	5.8	5.8	16,700	5.9	6.0
Asthma (J45-J46) .....	4,222	1.5	1.5	4,487	1.6	1.6
Other chronic lower respiratory diseases (J44,J47) .....	102,365	35.9	36.4	99,655	35.4	36.1
Pneumoconioses and chemical effects (J60-J66,J68) .....	1,155	0.4	0.4	1,161	0.4	0.4
Pneumonitis due to solids and liquids (J69) .....	17,392	6.1	6.2	16,636	5.9	6.1
Other diseases of respiratory system (J00-J06,J30-J39,J67,J70-J98) .....	26,225	9.2	9.3	25,535	9.1	9.2
Peptic ulcer (K25-K28) .....	4,462	1.6	1.6	4,558	1.6	1.6
Diseases of appendix (K35-K38) .....	425	0.1	0.1	435	0.2	0.1
Hernia (K40-K46) .....	1,529	0.5	0.5	1,522	0.5	0.5

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 2000 and preliminary 2001 - Con.**

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Cause of death (Based on the Tenth Revision, International Classification of Diseases, 1992)	2001			2000		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Chronic liver disease and cirrhosis (K70,K73-K74) .....	26,751	9.4	9.4	26,552	9.4	9.5
Alcoholic liver disease (K70) .....	12,000	4.2	4.2	12,109	4.3	4.3
Other chronic liver disease and cirrhosis (K73-K74) .....	14,751	5.2	5.2	14,443	5.1	5.2
Cholelithiasis and other disorders of gallbladder (K80-K82) .....	2,960	1.0	1.0	2,810	1.0	1.0
Nephritis, nephrotic syndrome and nephrosis (N00-N07,N17-N19,N25-N27) .....	39,661	13.9	14.0	37,251	13.2	13.5
Acute and rapidly progressive nephritic and nephrotic syndrome (N00-N01,N04) .....	165	0.1	0.1	177	0.1	0.1
Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified (N02-N03,N05-N07,N26) .....	512	0.2	0.2	556	0.2	0.2
Renal failure (N17-N19) .....	38,957	13.7	13.8	36,471	13.0	13.2
Other disorders of kidney (N25,N27) .....	28	0.0	0.0	47	0.0	0.0
Infections of kidney (N10-N12,N13.6,N15.1) .....	750	0.3	0.3	813	0.3	0.3
Hyperplasia of prostate (N40) .....	426	0.1	0.1	433	0.2	0.2
Inflammatory diseases of female pelvic organs (N70-N76) .....	128	0.0	0.0	120	0.0	0.0
Pregnancy, childbirth and the puerperium (O00-O99) .....	401	0.1	0.1	404	0.1	0.1
Pregnancy with abortive outcome (O00-O07) .....	38	0.0	0.0	37	0.0	0.0
Other complications of pregnancy, childbirth and the puerperium (O10-O99) .....	363	0.1	0.1	367	0.1	0.1
Certain conditions originating in the perinatal period (P00-P96) .....	13,925	4.9	4.8	14,069	5.0	5.1
Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99) .....	10,490	3.7	3.6	10,578	3.8	3.8
Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99) .....	39,689	13.9	13.9	31,876	11.3	11.4
All other diseases (Residual) .....	186,446	65.5	65.9	178,378	63.4	64.6
Accidents (unintentional injuries) (V01-X59,Y85-Y86) .....	97,707	34.3	34.3	97,900	34.8	34.9
Transport accidents (V01-V99,Y85) .....	45,911	16.1	16.1	46,749	16.6	16.6
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) .....	41,967	14.7	14.7	43,354	15.4	15.4
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) .....	1,885	0.7	0.7	1,492	0.5	0.5
Water, air and space, and other and unspecified transport accidents and their sequelae (V90-V99,Y85) .....	2,059	0.7	0.7	1,903	0.7	0.7
Nontransport accidents (W00-X59,Y86) .....	51,796	18.2	18.2	51,151	18.2	18.4
Falls (W00-W19) .....	14,543	5.1	5.1	13,322	4.7	4.8
Accidental discharge of firearms (W32-W34) .....	924	0.3	0.3	776	0.3	0.3
Accidental drowning and submersion (W65-W74) .....	3,247	1.1	1.1	3,482	1.2	1.2
Accidental exposure to smoke, fire and flames (X00-X09) .....	3,223	1.1	1.1	3,377	1.2	1.2
Accidental poisoning and exposure to noxious substances (X40-X49) .....	12,030	4.2	4.2	12,757	4.5	4.5
Other and unspecified nontransport accidents and their sequelae (W20-W31,W35-W64,W75-W99,X10-X39,X50-X59,Y86) .....	17,829	6.3	6.3	17,437	6.2	6.3
Intentional self-harm (suicide) (*U03, X60-X84,Y87.0) .....	29,423	10.3	10.3	29,350	10.4	10.4
Intentional self-harm (suicide) by discharge of firearms (X72-X74) .....	16,455	5.8	5.8	16,586	5.9	5.9
Intentional self-harm (suicide) by other and unspecified means and their sequelae (*U03, X60-X71,X75-X84,Y87.0) .....	12,968	4.6	4.5	12,764	4.5	4.5
Assault (homicide) (*U01-*U02,X85-Y09,Y87.1) .....	19,727	6.9	6.9	16,765	6.0	5.9
Assault (homicide) by discharge of firearms (*U01.4,X93-X95) .....	11,001	3.9	3.8	10,801	3.8	3.8
Assault (homicide) by other and unspecified means and their sequelae (*U01.0-*U01.3,*U01.5 *U01.9,*U02, X85-X92,X96-Y09,Y87.1) .....	8,726	3.1	3.0	5,964	2.1	2.1

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 2000 and preliminary 2001 - Con.**

[Data are based on a continuous file of records received from the States. Rates are per 100,000 population. Rates are based on populations enumerated in the 2000 census as of April 1 for 2000 and estimated as of July 1 for 2001. Death rates for 2000 have been revised in this report and may differ from final death rates previously published. Age-adjusted rates are per 100,000 U.S. standard population based on the year 2000 standard; see Technical notes. For explanation of asterisks preceding cause-of-death categories, see Technical notes. Figures for 2001 are based on weighted data rounded to the nearest individual, so categories may not add to total or subtotals]

Cause of death (Based on the Tenth Revision, International Classification of Diseases, 1992)	2001			2000		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Legal intervention (Y35,Y89.0) .....	387	0.1	0.1	359	0.1	0.1
Events of undetermined intent (Y10-Y34,Y87.2,Y89.9) .....	3,868	1.4	1.4	3,819	1.4	1.3
Discharge of firearms, undetermined intent (Y22-Y24) .....	222	0.1	0.1	230	0.1	0.1
Other and unspecified events of undetermined intent and their sequelae (Y10-Y21,Y25-Y34,Y87.2,Y89.9) .....	3,646	1.3	1.3	3,589	1.3	1.3
Operations of war and their sequelae (Y36,Y89.1) .....	17	*	*	16	*	*
Complications of medical and surgical care (Y40-Y84,Y88) .....	3,089	1.1	1.1	3,059	1.1	1.1
Injury by firearms <sup>1</sup> (W32-W34,X72-X74,X93-X95,Y22-Y24,Y35.0) .....	28,913	10.2	10.1	28,663	10.2	10.2
Drug-induced deaths <sup>1</sup> (F11.0-F11.5,F11.7-F11.9,F12.0-F12.5,F12.7-F12.9,F13.0-F13.5,F13.7-F13.9,F14.0-F14.5, F14.7-F14.9,F15.0-F15.5,F15.7-F15.9,F16.0-F16.5,F16.7-F16.9,F17.0,F17.3-F17.5, F17.7-F17.9,F18.0-F18.5,F18.7-F18.9,F19.0-F19.5,F19.7-F19.9,X40-X44,X60-X64,X85, Y10-Y14) .....	18,962	6.7	6.6	19,698	7.0	7.0
Alcohol-induced deaths <sup>1</sup> (F10,G31.2,G62.1,I42.6,K29.2,K70,R78.0,X45,X65,Y15) .....	19,423	6.8	6.8	19,358	6.9	6.9
Injury at work <sup>2</sup> .....	5,431	2.4	2.4	5,430	2.5	2.5

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

- Quantity zero.

<sup>1</sup> Included in selected categories.

<sup>2</sup> Injury at work described in Technical notes.

NOTE: Data are subject to sampling and/or random variation. For information on the relative standard errors of the data and further discussion, see Technical notes.



**Table 3. Deaths, death rates, and age-adjusted death rates: United States, and each State and territory, final 2000 and preliminary 2001**

[By place of residence. Data are based on a continuous file of records received from the States. Rates are per 100,000 population. Rates for 2000 are based on populations enumerated in the 2000 census as of April 1, 2000. Death rates for year 2000 have been revised for this report and may differ from final death rates previously published. See Technical notes. Age-adjusted rates per 100,000 U.S. standard population are based on the 2000 standard; see Technical notes. Figures for 2001 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Area	2001			2000		
	Number	Rate <sup>1</sup>	Age-adjusted rate <sup>1</sup>	Number	Rate <sup>1</sup>	Age-adjusted rate <sup>1</sup>
United States <sup>2</sup>	2,417,762	848.9	855.0	2,403,351	854.0	869.0
Alabama	45,347	---	---	45,062	1,013.3	1,004.8
Alaska	2,980	---	---	2,914	464.8	869.1
Arizona	41,056	---	---	40,500	789.4	810.4
Arkansas	27,786	---	---	28,217	1,055.5	977.1
California	233,413	---	---	229,551	677.7	787.9
Colorado	28,343	---	---	27,288	634.4	792.1
Connecticut	29,876	---	---	30,129	884.7	793.0
Delaware	7,112	---	---	6,875	877.4	897.0
District of Columbia	5,922	---	---	6,001	1,049.0	1,061.2
Florida	167,371	---	---	164,395	1,028.6	807.8
Georgia	64,614	---	---	63,870	780.2	981.0
Hawaii	8,397	---	---	8,290	684.3	675.9
Idaho	9,756	---	---	9,563	739.1	809.4
Illinois	105,467	---	---	106,634	858.6	883.0
Indiana	55,313	---	---	55,469	912.2	929.6
Iowa	27,811	---	---	28,060	958.9	794.7
Kansas	24,648	---	---	24,717	919.4	850.5
Kentucky	39,932	---	---	39,504	977.4	998.6
Louisiana	41,808	---	---	41,138	920.5	1,006.3
Maine	12,434	---	---	12,354	969.0	859.4
Maryland	43,858	---	---	43,753	826.1	908.9
Massachusetts	56,765	---	---	56,681	892.7	817.9
Michigan	86,469	---	---	86,953	874.9	904.2
Minnesota	37,762	---	---	37,690	766.1	760.7
Mississippi	28,279	---	---	28,654	1,007.3	1,051.9
Missouri	55,006	---	---	54,865	980.6	920.8
Montana	8,265	---	---	8,096	897.4	843.3
Nebraska	15,174	---	---	14,992	876.1	794.6
Nevada	16,266	---	---	15,261	763.7	918.7
New Hampshire	9,822	---	---	9,697	784.7	815.5
New Jersey	74,699	---	---	74,800	889.0	852.6
New Mexico	14,294	---	---	13,425	738.0	808.6
New York	159,243	---	---	158,203	833.7	813.6
North Carolina	71,030	---	---	71,935	893.7	952.7
North Dakota	6,048	---	---	5,856	911.9	761.8
Ohio	108,078	---	---	108,125	952.4	923.5
Oklahoma	34,733	---	---	35,079	1,016.6	983.0
Oregon	30,177	---	---	29,552	863.7	830.9
Pennsylvania	129,760	---	---	130,813	1,065.2	891.9
Rhode Island	10,021	---	---	10,027	956.5	823.7
South Carolina	36,623	---	---	36,948	920.9	980.2
South Dakota	6,926	---	---	7,021	930.1	805.7
Tennessee	55,223	---	---	55,246	971.1	996.9
Texas	153,309	---	---	149,939	719.1	891.0
Utah	12,670	---	---	12,364	553.7	788.6
Vermont	5,207	---	---	5,127	842.1	821.8
Virginia	56,343	---	---	56,282	795.1	890.4
Washington	44,642	---	---	43,941	745.5	804.6
West Virginia	20,964	---	---	21,114	1,167.6	1,011.1
Wisconsin	46,690	---	---	46,461	866.2	820.1
Wyoming	4,033	---	---	3,920	793.9	851.8
Puerto Rico	28,639	---	---	28,365	---	---
Virgin Islands	604	---	---	641	---	---
Guam	663	---	---	648	---	---
American Samoa	252	---	---	219	---	---
Northern Marianas	155	---	---	136	---	---

--- Data not available.

<sup>1</sup> Rates by State and territory for 2001 are not shown since population estimates for these areas for 2001 were not available when this report was produced.

<sup>2</sup> Rates by territory for 2000 are not shown since populations for these areas for 2000 were not available when this report was produced.

<sup>2</sup> Excludes data for U.S. territories.

NOTE: Data are subject to sampling and/or random variation. For information on the relative standard errors of the data and further discussion, see Technical notes.

**Table 4. Infant deaths and infant mortality rates, by age and race and Hispanic origin: United States, final 2000 and preliminary 2001**

[Data are based on a continuous file of records received from the States. Rates per 1,000 live births. Figures for 2001 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 inconsistencies between reporting Hispanic origin on birth and death certificates; see Technical notes]

Age and race/Hispanic origin	2001		2000	
	Number	Rate	Number	Rate
All races <sup>1</sup>				
Under 1 year .....	27,801	6.9	28,035	6.9
Under 28 days .....	18,491	4.6	18,776	4.6
28 days-11 months .....	9,310	2.3	9,259	2.3
White, total <sup>2</sup>				
Under 1 year .....	18,094	5.7	18,144	5.7
Under 28 days .....	12,157	3.8	12,201	3.8
28 days-11 months .....	5,936	1.9	5,943	1.9
White, non-Hispanic				
Under 1 year .....	13,391	5.7	13,513	5.7
Under 28 days .....	8,975	3.8	9,078	3.8
28 days-11 months .....	4,415	1.9	4,435	1.9
Black, total <sup>2</sup>				
Under 1 year .....	8,563	14.2	8,771	14.1
Under 28 days .....	5,647	9.3	5,843	9.4
28 days-11 months .....	2,916	4.8	2,928	4.7
Hispanic <sup>3</sup>				
Under 1 year .....	4,744	5.6	4,598	5.6
Under 28 days .....	3,171	3.7	3,048	3.7
28 days-11 months .....	1,573	1.9	1,550	1.9

<sup>1</sup> Includes races other than white and black.

<sup>2</sup> Race and Hispanic origin are reported separately on both the birth and death certificates. 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.

<sup>3</sup> Includes all persons of Hispanic origin of any race; see Technical notes.

NOTE: Data are subject to sampling and/or random variation. For information on the relative standard errors of the data and further discussion, see Technical notes.

**Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2000 and preliminary 2001**

[Data are based on a continuous file of records received from the States. Rates per 100,000 live births. For explanation of asterisks preceding cause-of-death categories, see Technical notes. Figures for 2001 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 Tenth Revision, International Classification of Diseases, 1992)	2001		2000	
	Number	Rate	Number	Rate
All causes .....	27,798	688.0	28,035	690.7
Certain infectious and parasitic diseases (A00-B99) .....	576	14.3	510	12.6
Certain intestinal infectious diseases (A00-A08) .....	10	*	16	*
Diarrhea and gastroenteritis of infectious origin (A09) .....	1	*	1	*
Tuberculosis (A16-A19) .....	1	*	1	*
Tetanus (A33,A35) .....	-	*	-	*
Diphtheria (A36) .....	-	*	-	*
Whooping cough (A37) .....	13	*	12	*
Meningococcal infection (A39) .....	18	*	22	0.5
Septicemia (A40-A41) .....	334	8.3	274	6.8
Congenital syphilis (A50) .....	1	*	1	*
Gonococcal infection (A54) .....	-	*	-	*
Viral diseases (A80-B34) .....	114	2.8	111	2.7
Acute poliomyelitis (A80) .....	-	*	-	*
Varicella (chickenpox) (B01) .....	1	*	1	*
Measles (B05) .....	-	*	1	*
Human immunodeficiency virus (HIV) disease (B20-B24) .....	8	*	10	*
Mumps (B26) .....	-	*	-	*
Other and unspecified viral diseases (A81-B00,B02-B04,B06-B19,B25,B27-B34) .....	104	2.6	99	2.4
Candidiasis (B37) .....	21	0.5	24	0.6
Malaria (B50-B54) .....	-	*	-	*
Pneumocystosis (B59) .....	2	*	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) .....	61	1.5	45	1.1
Neoplasms (C00-D48) .....	122	3.0	152	3.7
Malignant neoplasms (C00-C97) .....	69	1.7	92	2.3
Hodgkin's disease and non-Hodgkin's lymphomas (C81-C85) .....	1	*	1	*
Leukemia (C91-C95) .....	26	0.6	38	0.9
Other and unspecified malignant neoplasms (C00-C80,C88,C90,C96-C97) .....	42	1.0	53	1.3
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00-D48) .....	53	1.3	60	1.5
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50-D89) .....	106	2.6	70	1.7
Anemias (D50-D64) .....	16	*	10	*
Hemorrhagic conditions and other diseases of blood and blood-forming organs (D65-D76) .....	61	1.5	41	1.0
Certain disorders involving the immune mechanism (D80-D89) .....	29	0.7	19	*
Endocrine, nutritional and metabolic diseases (E00-E88) .....	284	7.0	260	6.4
Short stature, not elsewhere classified (E34.3) .....	30	0.7	23	0.6
Nutritional deficiencies (E40-E64) .....	3	*	14	*
Cystic fibrosis (E84) .....	6	*	4	*
Volume depletion, disorders of fluid, electrolyte and acid-base balance (E86-E87) .....	81	2.0	73	1.8
All other endocrine, nutritional and metabolic diseases (E00-E32,E34.0-E34.2,E34.4-E34.9,E65-E83,E85,E88) .....	164	4.1	146	3.6
Diseases of the nervous system (G00-G98) .....	356	8.8	389	9.6
Meningitis (G00,G03) .....	72	1.8	91	2.2
Infantile spinal muscular atrophy, type I (Werdnig-Hoffman) (G12.0) .....	19	*	33	0.8
Infantile cerebral palsy (G80) .....	19	*	10	*
Anoxic brain damage, not elsewhere classified (G93.1) .....	27	0.7	34	0.8
Other diseases of nervous system (G04,G06-G11,G12.1-G12.9,G20-G72,G81-G92,G93.0,G93.2-G93.9,G95-G98) .....	219	5.4	221	5.4
Diseases of the ear and mastoid process (H60-H93) .....	1	*	6	*
Diseases of the circulatory system (I00-I99) .....	637	15.8	663	16.3
Pulmonary heart disease and diseases of pulmonary circulation (I26-I28) .....	173	4.3	185	4.6

See footnotes at end of table.

**Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2000 and preliminary 2001 - Con.**

[Data are based on a continuous file of records received from the States. Rates per 100,000 live births. For explanation of asterisks preceding cause-of-death categories, see Technical notes. Figures for 2001 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 Tenth Revision, International Classification of Diseases, 1992)	2001		2000	
	Number	Rate	Number	Rate
Pericarditis, endocarditis and myocarditis (I30,I33,I40) .....	23	0.6	15	*
Cardiomyopathy (I42) .....	128	3.2	118	2.9
Cardiac arrest (I46) .....	27	0.7	29	0.7
Cerebrovascular diseases (I60-I69) .....	121	3.0	124	3.1
All other diseases of circulatory system (I00-I25,I31,I34-I38,I44-I45,I47-I51,I70-I99) .....	165	4.1	192	4.7
Diseases of the respiratory system (J00-J98) .....	692	17.1	651	16.0
Acute upper respiratory infections (J00-J06) .....	8	*	6	*
Influenza and pneumonia (J10-J18) .....	290	7.2	289	7.1
Influenza (J10-J11) .....	9	*	9	*
Pneumonia (J12-J18) .....	281	7.0	280	6.9
Acute bronchitis and acute bronchiolitis (J20-J21) .....	54	1.3	42	1.0
Bronchitis, chronic and unspecified (J40-J42) .....	27	0.7	18	*
Asthma (J45-J46) .....	9	*	8	*
Pneumonitis due to solids and liquids (J69) .....	11	*	10	*
Other and unspecified diseases of respiratory system (J22,J30-J39,J43-J44,J47-J68,J70-J98) .....	292	7.2	278	6.8
Diseases of the digestive system (K00-K92) .....	488	12.1	499	12.3
Gastritis, duodenitis, and noninfective enteritis and colitis (K29,K50-K55) .....	250	6.2	239	5.9
Hernia of abdominal cavity and intestinal obstruction without hernia (K40-K46,K56) .....	63	1.6	72	1.8
All other and unspecified diseases of digestive system (K00-K28,K30-K38,K57-K92) .....	175	4.3	188	4.6
Diseases of the genitourinary system (N00-N95) .....	166	4.1	191	4.7
Renal failure and other disorders of kidney (N17-N19,N25,N27) .....	132	3.3	153	3.8
Other and unspecified diseases of genitourinary system (N00-N15,N20-N23,N26,N28-N95) .....	34	0.8	38	0.9
Certain conditions originating in the perinatal period (P00-P96) .....	13,748	340.3	13,918	342.9
Newborn affected by maternal factors and by complications of pregnancy,labor and delivery (P00-P04) .....	2,768	68.5	2,768	68.2
Newborn affected by maternal hypertensive disorders (P00.0) .....	61	1.5	59	1.5
Newborn affected by other maternal conditions which may be unrelated to present pregnancy (P00.1-P00.9) .....	61	1.5	73	1.8
Newborn affected by maternal complications of pregnancy (P01) .....	1,451	35.9	1,404	34.6
Newborn affected by incompetent cervix (P01.0) .....	396	9.8	406	10.0
Newborn affected by premature rupture of membranes (P01.1) .....	642	15.9	606	14.9
Newborn affected by multiple pregnancy (P01.5) .....	256	6.3	228	5.6
Newborn affected by other maternal complications of pregnancy (P01.2-P01.4,P01.6-P01.9) .....	156	3.9	164	4.0
Newborn affected by complications of placenta, cord and membranes (P02) .....	1,012	25.0	1,062	26.2
Newborn affected by complications involving placenta (P02.0-P02.3) .....	525	13.0	549	13.5
Newborn affected by complications involving cord (P02.4-P02.6) .....	53	1.3	55	1.4
Newborn affected by chorioamnionitis (P02.7) .....	434	10.7	455	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) .....	148	3.7	130	3.2
Newborn affected by noxious influences transmitted via placenta or breast milk (P04) .....	37	0.9	40	1.0
Disorders related to length of gestation and fetal malnutrition (P05-P08) .....	4,496	111.3	4,471	110.2
Slow fetal growth and fetal malnutrition (P05) .....	62	1.5	72	1.8
Disorders related to short gestation and low birth weight, not elsewhere classified (P07) .....	4,434	109.7	4,397	108.3
Extremely low birth weight or extreme immaturity (P07.0,P07.2) .....	3,331	82.4	3,281	80.8
Other low birth weight or preterm (P07.1,P07.3) .....	1,103	27.3	1,116	27.5
Disorders related to long gestation and high birth weight (P08) .....	-	*	2	*
Birth trauma (P10-P15) 1/.....	138	3.4	31	0.8
Intrauterine hypoxia and birth asphyxia (P20-P21) .....	548	13.6	630	15.5
Intrauterine hypoxia (P20) .....	124	3.1	109	2.7
Birth asphyxia (P21) .....	424	10.5	521	12.8
Respiratory distress of newborn (P22) .....	1,016	25.1	999	24.6
Other respiratory conditions originating in the perinatal period (P23-P28) .....	1,523	37.7	1,529	37.7

See footnotes at end of table.

**Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2000 and preliminary 2001 - Con.**

[Data are based on a continuous file of records received from the States. Rates per 100,000 live births. For explanation of asterisks preceding cause-of-death categories, see Technical notes. Figures for 2001 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 Tenth Revision, International Classification of Diseases, 1992)	2001		2000	
	Number	Rate	Number	Rate
Congenital pneumonia (P23) .....	73	1.8	90	2.2
Neonatal aspiration syndromes (P24) .....	72	1.8	63	1.6
Interstitial emphysema and related conditions originating in the perinatal period (P25) .....	210	5.2	229	5.6
Pulmonary hemorrhage originating in the perinatal period (P26) .....	277	6.9	284	7.0
Chronic respiratory disease originating in the perinatal period (P27) .....	332	8.2	294	7.2
Atelectasis (P28.0-P28.1) .....	495	12.3	496	12.2
All other respiratory conditions originating in the perinatal period (P28.2-P28.9) .....	64	1.6	73	1.8
Infections specific to the perinatal period (P35-P39) .....	865	21.4	927	22.8
Bacterial sepsis of newborn (P36) .....	694	17.2	768	18.9
Omphalitis of newborn with or without mild hemorrhage (P38) .....	3	*	3	*
All other infections specific to the perinatal period (P35,P37,P39) .....	168	4.2	156	3.8
Hemorrhagic and hematological disorders of newborn (P50-P61) .....	603	14.9	704	17.3
Neonatal hemorrhage (P50-P52,P54) .....	455	11.3	578	14.2
Hemorrhagic disease of newborn (P53) .....	-	*	1	*
Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice (P55-P59) .....	14	*	18	*
Hematological disorders (P60-P61) .....	134	3.3	107	2.6
Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (P70.0-P70.2) .....	7	*	9	*
Necrotizing enterocolitis of newborn (P77) .....	389	9.6	368	9.1
Hydrops fetalis not due to hemolytic disease (P83.2) .....	165	4.1	161	4.0
Other perinatal conditions (P29,P70.3-P70.9,P71-P76,P78-P81,P83.0-P83.1,P83.3-P83.9,P90-P96) .....	1,230	30.4	1,321	32.5
Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99) .....	5,608	138.8	5,743	141.5
Anencephaly and similar malformations (Q00) .....	269	6.7	324	8.0
Congenital hydrocephalus (Q03) .....	106	2.6	95	2.3
Spina bifida (Q05) .....	20	0.5	26	0.6
Other congenital malformations of nervous system (Q01-Q02,Q04,Q06-Q07) .....	292	7.2	313	7.7
Congenital malformations of heart (Q20-Q24) .....	1,570	38.9	1,634	40.3
Other congenital malformations of circulatory system (Q25-Q28) .....	188	4.7	208	5.1
Congenital malformations of respiratory system (Q30-Q34) .....	602	14.9	685	16.9
Congenital malformations of digestive system (Q35-Q45) .....	106	2.6	85	2.1
Congenital malformations of genitourinary system (Q50-Q64) .....	363	9.0	329	8.1
Congenital malformations and deformations of musculoskeletal system, limbs and integument (Q65-Q85) .....	488	12.1	446	11.0
Down's syndrome (Q90) .....	126	3.1	93	2.3
Edward's syndrome (Q91.0-Q91.3) .....	460	11.4	478	11.8
Patau's syndrome (Q91.4-Q91.7) .....	284	7.0	290	7.1
Other congenital malformations and deformations (Q10-Q18,Q86-Q89) .....	540	13.4	583	14.4
Other chromosomal abnormalities, not elsewhere classified (Q92-Q99) .....	192	4.8	154	3.8
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99) .....	3,675	91.0	3,639	89.7
Sudden infant death syndrome (R95) .....	1,972	48.8	2,523	62.2
Other symptoms, signs and abnormal clinical and laboratory findings,not elsewhere classified (R00-R53,R55-R94,R96-R99) .....	1,703	42.2	1,116	27.5
All other diseases (Residual) .....	20	0.5	30	0.7
External causes of mortality (*U01,V01-Y84) .....	1,320	32.7	1,314	32.4
Accidents (unintentional injuries)(V01-X59) .....	912	22.6	881	21.7
Transport accidents (V01-V99) .....	142	3.5	174	4.3
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) .....	134	3.3	168	4.1
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) .....	7	*	6	*

See footnotes at end of table.



**Table 5. Infant deaths and infant mortality rates for 130 selected causes: United States, final 2000 and preliminary 2001 - Con.**

[Data are based on a continuous file of records received from the States. Rates per 100,000 live births. For explanation of asterisks preceding cause-of-death categories, see Technical notes. Figures for 2001 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 Tenth Revision, International Classification of Diseases, 1992)	2001		2000	
	Number	Rate	Number	Rate
Falls (W00-W19) .....	23	0.6	8	*
Accidental discharge of firearms (W32-W34) .....	-	*	1	*
Accidental drowning and submersion (W65-W74) .....	69	1.7	75	1.8
Accidental suffocation and strangulation in bed (W75) .....	347	8.6	266	6.6
Other accidental suffocation and strangulation (W76-W77,W81-W84) .....	151	3.7	183	4.5
Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract (W78-W80) .....	56	1.4	77	1.9
Accidents caused by exposure to smoke, fire and flames (X00-X09) .....	52	1.3	37	0.9
Accidental poisoning and exposure to noxious substances (X40-X49) .....	15	*	14	*
Other and unspecified accidents (W20-W31,W35-W64,W85-W99,X10-X39,X50-X59) .....	59	1.5	46	1.1
Assault (homicide) (*U01,X85-Y09) .....	310	7.7	349	8.6
Assault (homicide) by hanging, strangulation and suffocation (X91) .....	30	0.7	26	0.6
Assault (homicide) by discharge of firearms (*U01.4,X93-X95) .....	11	*	12	*
Neglect, abandonment and other maltreatment syndromes (Y06-Y07) .....	115	2.8	129	3.2
Assault (homicide) by other and unspecified means (*U01.0-*U01.3,*U01.5-*U01.9,X85-X90,X92,X96-X99,Y00-Y05,Y08-Y09) ..	154	3.8	182	4.5
Complications of medical and surgical care (Y40-Y84) .....	24	0.6	19	*
Other external causes (X60-X84,Y10-Y36) .....	74	1.8	65	1.6

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

- Quantity zero.

1/ See Technical notes section on Infant mortality.

NOTE: Data are subject to sampling and/or random variation For information on the relative standard errors of the data and further discussion see Technical notes

**Table 6. Expectation of life by age, race, and sex: United States, final 2000 and preliminary 2001**

[Data are based on a continuous file of records received from the States. Calculations of life expectancy employ populations enumerated in the 2000 census as of April 1 for 2000 and estimated as of July 1 for 2001; see Technical notes]

Age (Years) and race	Both sexes		Male		Female	
	2001	2000	2001	2000	2001	2000
<b>All races <sup>1</sup></b>						
0 .....	77.2	77.0	74.4	74.3	79.8	79.7
1 .....	76.7	76.6	74.0	73.8	79.3	79.2
5 .....	72.8	72.7	70.1	69.9	75.4	75.3
10 .....	67.9	67.7	65.2	65.0	70.4	70.3
15 .....	62.9	62.8	60.2	60.1	65.5	65.4
20 .....	58.1	58.0	55.5	55.3	60.6	60.5
25 .....	53.4	53.2	50.9	50.7	55.7	55.6
30 .....	48.6	48.5	46.2	46.0	50.9	50.8
35 .....	43.9	43.7	41.5	41.3	46.0	46.0
40 .....	39.2	39.1	37.0	36.7	41.3	41.2
45 .....	34.7	34.5	32.5	32.3	36.6	36.5
50 .....	30.2	30.1	28.2	27.9	32.1	32.0
55 .....	26.0	25.8	24.0	23.8	27.7	27.5
60 .....	21.9	21.7	20.1	19.9	23.4	23.3
65 .....	18.1	18.0	16.4	16.2	19.4	19.3
70 .....	14.6	14.5	13.1	13.0	15.7	15.7
75 .....	11.5	11.4	10.2	10.1	12.3	12.3
80 .....	8.8	8.7	7.7	7.6	9.3	9.3
85 .....	6.5	6.4	5.7	5.6	6.9	6.8
90 .....	4.8	4.7	4.2	4.1	5.0	5.0
95 .....	3.6	3.5	3.2	3.1	3.7	3.7
100 .....	2.7	2.7	2.5	2.4	2.8	2.8
<b>White</b>						
0 .....	77.7	77.6	75.0	74.9	80.2	80.1
1 .....	77.1	77.0	74.5	74.3	79.6	79.6
5 .....	73.2	73.1	70.6	70.4	75.7	75.6
10 .....	68.3	68.1	65.7	65.5	70.8	70.7
15 .....	63.3	63.2	60.7	60.6	65.8	65.7
20 .....	58.5	58.4	56.0	55.8	60.9	60.9
25 .....	53.8	53.6	51.3	51.2	56.0	56.0
30 .....	49.0	48.9	46.6	46.4	51.2	51.1
35 .....	44.2	44.1	41.9	41.7	46.3	46.3
40 .....	39.5	39.4	37.3	37.1	41.6	41.5
45 .....	34.9	34.8	32.8	32.6	36.9	36.8
50 .....	30.5	30.3	28.4	28.2	32.3	32.2
55 .....	26.1	26.0	24.2	24.0	27.8	27.7
60 .....	22.0	21.8	20.2	20.0	23.5	23.4
65 .....	18.1	18.0	16.5	16.3	19.5	19.4
70 .....	14.6	14.5	13.2	13.0	15.7	15.7
75 .....	11.4	11.4	10.2	10.1	12.3	12.3
80 .....	8.7	8.6	7.7	7.5	9.3	9.2
85 .....	6.4	6.3	5.6	5.5	6.7	6.7
90 .....	4.6	4.6	4.1	4.0	4.8	4.8
95 .....	3.4	3.3	3.0	2.9	3.4	3.4
100 .....	2.4	2.4	2.2	2.2	2.5	2.5
<b>Black</b>						
0 .....	72.2	71.9	68.6	68.3	75.5	75.2
1 .....	72.2	71.9	68.7	68.4	75.5	75.2
5 .....	68.4	68.1	64.8	64.5	71.6	71.3
10 .....	63.4	63.1	59.9	59.6	66.6	66.4
15 .....	58.5	58.2	55.0	54.7	61.7	61.4
20 .....	53.7	53.5	50.3	50.0	56.8	56.6
25 .....	49.1	48.9	45.9	45.6	52.0	51.8
30 .....	44.5	44.2	41.4	41.1	47.3	47.0
35 .....	40.0	39.7	37.0	36.7	42.6	42.3
40 .....	35.5	35.2	32.6	32.3	38.0	37.8
45 .....	31.2	30.9	28.4	28.1	33.6	33.4
50 .....	27.1	26.9	24.5	24.2	29.4	29.1
55 .....	23.3	23.1	20.8	20.6	25.3	25.1
60 .....	19.7	19.5	17.5	17.3	21.5	21.2
65 .....	16.4	16.2	14.4	14.2	17.9	17.7
70 .....	13.5	13.3	11.7	11.5	14.7	14.5
75 .....	10.8	10.7	9.3	9.2	11.8	11.6
80 .....	8.6	8.5	7.4	7.3	9.2	9.1
85 .....	6.7	6.6	5.8	5.7	7.0	6.9
90 .....	5.1	5.0	4.5	4.4	5.3	5.2
95 .....	3.9	3.9	3.6	3.5	4.0	3.9
100 .....	3.0	3.0	2.9	2.8	3.0	3.0

<sup>1</sup> Includes races other than white and black.

NOTE: Data are subject to sampling and/or random variation.

**Table 7. Deaths and death rates for the 10 leading causes of death in specified age groups: United States, preliminary 2001**

[Data are based on a continuous file of records received from the States. Rates are per 100,000 population in specified group. Rates are computed using population estimates based on the 2000 census for July 1, 2001. For explanation of asterisks preceding cause-of-death categories, see Technical notes. Figures are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Rank <sup>1</sup>	Cause of death and age (Based on the Tenth Revision, International Classification of Diseases, 1992)	Number	Rate
All ages <sup>2</sup>			
...	All causes .....	2,417,798	849.0
1	Diseases of heart (I00-I09,I11,I13,I20-I51) .....	699,697	245.7
2	Malignant neoplasms (C00-C97) .....	553,251	194.3
3	Cerebrovascular diseases (I60-I69) .....	163,601	57.4
4	Chronic lower respiratory diseases (J40-J47) .....	123,974	43.5
5	Accidents (unintentional injuries) (V01-X59, Y85-Y86) .....	97,707	34.3
...	Motor vehicle accidents (V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2) .....	41,967	14.7
...	All other 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, W00-X59, Y85, Y86) .....	55,739	19.6
6	Diabetes mellitus (E10-E14) .....	71,252	25.0
7	Influenza and pneumonia (J10-J18) .....	62,123	21.8
8	Alzheimer's disease (G30) .....	53,679	18.8
9	Nephritis, nephrotic syndrome and nephrosis (N00-N07, N17-N19, N25-N27) .....	39,661	13.9
10	Septicemia (A40-A41) .....	32,275	11.3
...	All other causes (Residual) .....	520,569	182.8
1-4 years			
...	All causes .....	5,129	33.4
1	Accidents (unintentional injuries) (V01-X59, Y85-Y86) .....	1,701	11.1
...	Motor vehicle accidents (V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2) .....	605	3.9
...	All other 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, W00-X59, Y85, Y86) .....	1,096	7.1
2	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99) .....	552	3.6
3	Malignant neoplasms (C00-C97) .....	413	2.7
4	Assault (homicide) (*U01-*U02, X85-Y09, Y87.1) .....	394	2.6
5	Diseases of heart (I00-I09, I11, I13, I20-I51) .....	218	1.4
6	Influenza and pneumonia (J10-J18) .....	111	0.7
7	Septicemia (A40-A41) .....	107	0.7
8	Certain conditions originating in the perinatal period (P00-P96) .....	71	0.5
9	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00-D48) .....	60	0.4
10	Cerebrovascular diseases (I60-I69) .....	51	0.3
...	All other causes (Residual) .....	1,451	9.5
5-14 years			
...	All causes .....	7,120	17.3
1	Accidents (unintentional injuries) (V01-X59, Y85-Y86) .....	2,802	6.8
...	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) .....	1,635	4.0
...	All other 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, W00-X59, Y85, Y86) .....	1,168	2.8
2	Malignant neoplasms (C00-C97) .....	1,002	2.4
3	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99) .....	366	0.9
4	Assault (homicide) (*U01-*U02, X85-Y09, Y87.1) .....	322	0.8
5	Intentional self-harm (suicide) (*U03, X60-X84, Y87.0) .....	272	0.7
6	Diseases of heart (I00-I09, I11, I13, I20-I51) .....	263	0.6
7	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00-D48) .....	104	0.3
8	Chronic lower respiratory diseases (J40-J47) .....	97	0.2
9	Influenza and pneumonia (J10-J18) .....	96	0.2
10	Cerebrovascular diseases (I60-I69) .....	78	0.2
...	All other causes (Residual) .....	1,718	4.2
15-24 years			
...	All causes .....	31,982	80.1
1	Accidents (unintentional injuries) (V01-X59, Y85-Y86) .....	13,871	34.7
...	Motor vehicle accidents (V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2) .....	10,259	25.7
...	All other 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, W00-X59, Y85, Y86) .....	3,613	9.0
2	Assault (homicide) (*U01-*U02, X85-Y09, Y87.1) .....	5,126	12.8
3	Intentional self-harm (suicide) (*U03, X60-X84, Y87.0) .....	3,854	9.6
4	Malignant neoplasms (C00-C97) .....	1,701	4.3
5	Diseases of heart (I00-I09, I11, I13, I20-I51) .....	915	2.3
6	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99) .....	488	1.2
7	Human immunodeficiency virus (HIV) disease (B20-B24) .....	227	0.6
8	Cerebrovascular diseases (I60-I69) .....	196	0.5
9	Influenza and pneumonia (J10-J18) .....	184	0.5
10	Chronic lower respiratory diseases (J40-J47) .....	164	0.4
...	All other causes (Residual) .....	5,256	13.2

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 2001 - Con.**

[Data are based on a continuous file of records received from the States. Rates are per 100,000 population in specified group. Rates are computed using population estimates based on the 2000 census for July 1, 2001. For explanation of asterisks preceding cause-of-death categories, see Technical notes. Figures are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Rank <sup>1</sup>	Cause of death and age (Based on the Tenth Revision, International Classification of Diseases, 1992)	Number	Rate
25-44 years			
...	All causes .....	132,553	156.6
1	Accidents (unintentional injuries) (V01-X59, Y85-Y86) .....	26,138	30.9
...	Motor vehicle accidents (V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2) .....	13,471	15.9
...	All other 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, W00-X59, Y85, Y86) .....	12,667	15.0
2	Malignant neoplasms (C00-C97) .....	20,493	24.2
3	Diseases of heart (I00-I09, I11, I13, I20-I51) .....	15,942	18.8
4	Intentional self-harm (suicide) (X60-X84, Y87.0) .....	11,217	13.3
5	Assault (homicide) (*U01-*U02, X85-Y09, Y87.1) .....	9,229	10.9
6	Human immunodeficiency virus (HIV) disease (B20-B24) .....	7,956	9.4
7	Chronic liver disease and cirrhosis (K70, K73-K74) .....	3,626	4.3
8	Cerebrovascular diseases (I60-I69) .....	3,099	3.7
9	Diabetes mellitus (E10-E14) .....	2,511	3.0
10	Influenza and pneumonia (J10-J18) .....	1,299	1.5
...	All other causes (Residual) .....	31,043	36.7
45-64 years			
...	All causes .....	411,545	638.1
1	Malignant neoplasms (C00-C97) .....	139,908	216.9
2	Diseases of heart (I00-I09, I11, I13, I20-I51) .....	98,048	152.0
3	Accidents (unintentional injuries) (V01-X59, Y85-Y86) .....	19,965	31.0
...	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) .....	8,663	13.4
...	All other 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, W00-X59, Y85, Y86) .....	11,302	17.5
4	Cerebrovascular diseases (I60-I69) .....	15,426	23.9
5	Diabetes mellitus (E10-E14) .....	14,815	23.0
6	Chronic lower respiratory diseases (J40-J47) .....	14,619	22.7
7	Chronic liver disease and cirrhosis (K70, K73-K74) .....	12,813	19.9
8	Intentional self-harm (suicide) (*U03, X60-X84, Y87.0) .....	8,823	13.7
9	Human immunodeficiency virus (HIV) disease (B20-B24) .....	5,408	8.4
10	Nephritis, nephrotic syndrome and nephrosis (N00-N07, N17-N19, N25-N27) .....	5,141	8.0
...	All other causes (Residual) .....	76,579	118.7
65 years and over			
...	All causes .....	1,801,303	5,104.2
1	Diseases of heart (I00-I09, I11, I13, I20-I51) .....	583,773	1,654.2
2	Malignant neoplasms (C00-C97) .....	389,657	1,104.1
3	Cerebrovascular diseases (I60-I69) .....	144,626	409.8
4	Chronic lower respiratory diseases (J40-J47) .....	107,787	305.4
5	Influenza and pneumonia (J10-J18) .....	55,668	157.7
6	Diabetes mellitus (E10-E14) .....	53,743	152.3
7	Alzheimer's disease (G30) .....	53,078	150.4
8	Nephritis, nephrotic syndrome and nephrosis (N00-N07, N17-N19, N25-N27) .....	33,260	94.2
9	Accidents (unintentional injuries) (V01-X59, Y85-Y86) .....	32,214	91.3
...	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) .....	7,166	20.3
...	All other 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, W00-X59, Y85, Y86) .....	25,048	71.0
10	Septicemia (A40-A41) .....	25,420	72.0
...	All other causes (Residual) .....	322,077	912.6

... Category not applicable.

<sup>1</sup> Rank based on number of deaths; see Technical notes.

<sup>2</sup> Includes deaths under 1 year of age.

NOTE: Data are subject to sampling and/or random variation. For information on the relative standard errors of the data and further discussion, 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 2001**

[Data are based on a continuous file of records received from the States. Rates per 100,000 live births. Figures 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 inconsistencies between reporting Hispanic origin on birth and death certificates; see Technical notes]

Rank <sup>1</sup>	Cause of death and race (Based on the Tenth Revision, International Classification of Diseases, 1992)	Number	Rate
All races <sup>2</sup>			
...	All causes .....	27,798	688.0
1	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99) .....	5,608	138.8
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07) .....	4,434	109.7
3	Sudden infant death syndrome (R95) .....	1,972	48.8
4	Newborn affected by maternal complications of pregnancy (P01) .....	1,451	35.9
5	Respiratory distress of newborn (P22) .....	1,016	25.1
6	Newborn affected by complications of placenta, cord and membranes (P02) .....	1,012	25.0
7	Accidents (unintentional injuries) (V01-X59).....	912	22.6
8	Bacterial sepsis of newborn (P36) .....	694	17.2
9	Diseases of the circulatory system (I00-I99) .....	637	15.8
10	Intrauterine hypoxia and birth asphyxia (P20-P21) .....	548	13.6
...	All other causes (Residual) .....	9,515	235.5
White, total <sup>3</sup>			
...	All causes .....	18,181	569.4
1	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99) .....	4,330	135.6
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07) .....	2,491	78.0
3	Sudden infant death syndrome (R95) .....	1,242	38.9
4	Newborn affected by maternal complications of pregnancy (P01) .....	900	28.2
5	Newborn affected by complications of placenta, cord and membranes (P02) .....	679	21.3
6	Respiratory distress of newborn (P22) .....	646	20.2
7	Accidents (unintentional injuries) (V01-X59).....	608	19.0
8	Bacterial sepsis of newborn (P36) .....	450	14.1
9	Diseases of the circulatory system (I00-I99) .....	409	12.8
10	Intrauterine hypoxia and birth asphyxia (P20-P21) .....	399	12.5
...	All other causes (Residual) .....	6,028	188.8
White, non-Hispanic			
...	All causes .....	13,496	577.7
1	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99) .....	3,108	133.0
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07) .....	1,811	77.5
3	Sudden infant death syndrome (R95) .....	1,036	44.4
4	Newborn affected by maternal complications of pregnancy (P01) .....	722	30.9
5	Newborn affected by complications of placenta, cord and membranes (P02) .....	504	21.6
6	Accidents (unintentional injuries) (V01-X59).....	465	19.9
7	Respiratory distress of newborn (P22) .....	462	19.8
8	Bacterial sepsis of newborn (P36) .....	319	13.6
9	Diseases of the circulatory system (I00-I99) .....	311	13.3
10	Intrauterine hypoxia and birth asphyxia (P20-P21) .....	305	13.1
...	All other causes (Residual) .....	4,453	190.6
Black, total <sup>3</sup>			
...	All causes .....	8,475	1,401.2
1	Disorders related to short gestation and low birth weight, not elsewhere classified (P07) .....	1,814	299.8
2	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99) .....	1,031	170.4
3	Sudden infant death syndrome (R95) .....	654	108.1
4	Newborn affected by maternal complications of pregnancy (P01) .....	506	83.6
5	Respiratory distress of newborn (P22) .....	341	56.4
6	Newborn affected by complications of placenta, cord and membranes (P02) .....	298	49.2
7	Accidents (unintentional injuries) (V01-X59).....	254	42.0
8	Bacterial sepsis of newborn (P36) .....	222	36.6
9	Diseases of the circulatory system (I00-I99) .....	199	32.9
10	Atelectasis (P28.0-P28.1) .....	145	24.0
...	All other causes (Residual) .....	3,013	498.2

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 2001 - Con.**

[Data are based on a continuous file of records received from the States. Rates per 100,000 live births. Figures 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 inconsistencies between reporting Hispanic origin on birth and death certificates; see Technical notes]

Rank <sup>1</sup>	Cause of death and race (Based on the Tenth Revision, International Classification of Diseases, 1992)	Number	Rate
	Hispanic <sup>4</sup>		
...	All causes .....	4,731	556.7
1	Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99) .....	1,227	144.4
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07) .....	675	79.4
3	Sudden infant death syndrome (R95) .....	224	26.4
4	Respiratory distress of newborn (P22) .....	191	22.5
5	Newborn affected by maternal complications of pregnancy (P01) .....	177	20.8
6	Newborn affected by complications of placenta, cord and membranes (P02) .....	173	20.4
7	Accidents (unintentional injuries) (V01-X59).....	147	17.3
8	Bacterial sepsis of newborn (P36) .....	129	15.2
9	Diseases of the circulatory system (I00-I99) .....	104	12.2
10	Intrauterine hypoxia and birth asphyxia (P20-P21) .....	95	11.1
...	All other causes (Residual) .....	1,589	186.9

... Category not applicable.

<sup>1</sup> Rank based on number of deaths; see Technical notes.

<sup>2</sup> Includes races other than white and black.

<sup>3</sup> Race and Hispanic origin are reported separately on both the birth and death certificate. 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.

<sup>4</sup> Includes all persons of Hispanic origin of any race; see Technical notes.

NOTE: Data are subject to sampling and/or random variation. For information on the relative standard errors of the data and further discussion, see Technical notes.



## Technical Notes

### Nature and sources of data

Preliminary mortality data for 2001 are based on a substantial proportion of death records for that year. The data for 2001 are based on a continuous receipt and processing of statistical records through June 28, 2002, 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 2001 individual records of infant deaths (deaths under 1 year of age) and deaths of persons 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. [Table I](#) shows the percent completeness of the preliminary file by place of occurrence. The percent 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 files, unknown or not-stated values are imputed. The percent not stated was less than 1 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, 1995* (19).

### 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 (ICD), and Related Health Problems*. 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. Effective with deaths occurring in 1999, the United States began use of the Tenth Revision of this classification, (ICD-10) (20). During the period 1979-98 causes were coded and classified according to the Ninth Revision (ICD-9) (21).

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 described in the Technical Notes of the preliminary report for 1999 (22) under the section "Comparability between ICD-9 and ICD-10 for mortality." 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* (23).

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 can be found at [http://www.cdc.gov/nchs/about/otheract/icd9/terrorism\\_code.htm](http://www.cdc.gov/nchs/about/otheract/icd9/terrorism_code.htm)

### Bias estimation

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

Further, for some deaths, especially those subject to medico-legal 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 these biases can be made by comparing final data and preliminary data for the same year. A comparison for the selected causes of death for the total U.S. population during 1999 and 2000, coded and classified under ICD-10, indicates that preliminary estimates for influenza and pneumonia are sometimes underestimated and sometimes overestimated in the preliminary file (see [table II](#)). Thus, for 1999 the preliminary data underestimated the number of deaths for pneumonia and influenza by just 0.07 percent, but in contrast for 2000, when there was a major influenza outbreak, the preliminary data overestimated the number of deaths for this cause by 2.6 percent. Similar bias occurred in chronic lower respiratory diseases with an underestimate of just 0.02 percent for 1999

**Table I. Total count of records and percent completeness of preliminary files of infant deaths and deaths 1 year and over: United States, each State and territory, preliminary 2001**

[By place of occurrence]

Area	Infant deaths (under 1 year)			Deaths 1 year and over		
	Count of records	Percent completeness		Count of records	Percent completeness	
		Demographic file	Medical file		Demographic file	Medical file
United States <sup>1</sup>	27,863	97.0	90.7	2,393,462	98.0	92.3
Alabama	565	100.0	100.0	44,213	100.0	100.0
Alaska	78	97.4	76.9	2,875	100.0	84.0
Arizona	604	100.0	99.7	41,465	100.0	100.0
Arkansas	289	100.0	99.7	26,854	100.0	100.0
California	2,949	73.7	73.7	231,148	79.6	79.6
Colorado	412	100.0	100.0	28,399	100.0	100.0
Connecticut	236	100.0	100.0	29,698	99.9	99.9
Delaware	144	100.0	96.5	6,971	100.0	99.9
District of Columbia	177	100.0	71.8	6,900	99.9	81.4
Florida	1,555	100.0	98.7	167,167	100.0	99.9
Georgia	1,127	100.0	100.0	64,115	100.0	100.0
Hawaii	108	100.0	100.0	8,502	100.0	100.0
Idaho	95	100.0	100.0	9,422	100.0	100.0
Illinois	1,365	100.0	86.7	101,286	100.0	86.9
Indiana	633	100.0	75.5	55,172	100.0	64.1
Iowa	196	100.0	98.5	27,321	100.0	99.9
Kansas	255	100.0	99.6	23,927	100.0	99.9
Kentucky	299	92.0	71.6	39,247	99.2	76.6
Louisiana	688	100.0	86.3	41,489	100.0	97.4
Maine	83	100.0	100.0	12,279	99.9	99.9
Maryland	487	100.0	99.4	43,140	100.0	100.0
Massachusetts	409	100.0	99.5	56,922	100.0	100.0
Michigan	1,089	100.0	99.7	84,157	100.0	100.0
Minnesota	395	100.0	99.0	37,568	100.0	99.4
Mississippi	392	100.0	97.4	27,128	100.0	99.8
Missouri	662	100.0	98.9	55,709	100.0	99.1
Montana	65	100.0	98.5	8,196	100.0	98.6
Nebraska	177	100.0	100.0	15,086	100.0	100.0
Nevada	171	96.5	91.2	16,630	97.1	94.2
New Hampshire	50	100.0	100.0	9,759	100.0	99.9
New Jersey	659	100.0	69.2	71,537	100.0	70.7
New Mexico	167	100.0	95.8	13,991	100.0	99.1
New York	1,537	100.0	95.8	157,751	100.0	98.2
New York excluding New York City ...	776	100.0	100.0	95,568	100.0	100.0
New York City	761	100.0	91.5	62,183	100.0	95.3
North Carolina	1,026	100.0	98.5	70,615	100.0	99.8
North Dakota	57	100.0	100.0	6,350	100.0	100.0
Ohio	1,192	100.0	42.2	106,645	100.0	47.4
Oklahoma	359	100.0	100.0	33,460	100.0	99.9
Oregon	268	100.0	100.0	29,946	100.0	100.0
Pennsylvania	1,081	100.0	96.1	129,677	100.0	99.1
Rhode Island	113	100.0	100.0	10,007	100.0	100.0
South Carolina	464	99.6	98.7	35,361	100.0	99.9
South Dakota	79	100.0	100.0	7,030	100.0	100.0
Tennessee	783	100.0	99.4	57,571	100.0	100.0
Texas	2,200	98.5	97.3	153,040	99.5	99.1
Utah	258	100.0	100.0	12,780	100.0	100.0
Vermont	29	100.0	100.0	5,186	100.0	99.9
Virginia	718	100.0	99.9	55,019	100.0	99.7
Washington	449	100.0	100.0	44,174	100.0	100.0
West Virginia	164	100.0	68.3	20,680	100.0	72.0
Wisconsin	486	100.0	99.2	46,061	100.0	99.9
Wyoming	19	100.0	100.0	3,836	100.0	100.0
Puerto Rico	514	100.0	83.5	28,281	100.0	81.2
Virgin Islands	6	83.3	0.0	606	99.5	0.0
Guam	35	100.0	100.0	656	100.0	100.0
American Samoa	13	100.0	100.0	239	94.6	94.6
Northern Marianas	10	100.0	40.0	147	93.2	38.8

- - - Data not available.

<sup>1</sup> Excludes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas.NOTE: Percent completeness =  $\frac{\text{Number of records in preliminary file} \times 100}{\text{Count of records}}$

and an overestimate of 1.26 percent for 2000. In contrast, suicide deaths may be underrepresented as much as 3 percent; homicide by up to 4 percent, unintentional injuries by 1–4 percent and SIDS by as much as 15 percent. The comparisons upon which these estimates of nonsampling bias are made are shown in [tables II and III](#).

### Tabulation lists and cause-of-death ranking

Tabulation lists for ICD–10 were developed to maximize continuity with ICD–9 lists to facilitate trend analysis, and to separately identify causes of death of public health importance. The lists are published in the NCHS Instruction Manual, Part 9, ICD–10 Cause-of-Death Lists for Tabulating Mortality Statistics, Effective 1999 (24). For this report two tabulation lists are used, namely, the List of 113 Selected Causes of Death used for deaths of all ages, and 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. 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.

### Race and Hispanic origin

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, American Indian, and Asian or Pacific Islander (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, American Indian, 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 American Indians, API, and Hispanic decedents; and undercounts of these groups in the censuses (15,16).

### Infant mortality

Infant mortality rates are the most commonly used index for measuring the risk of dying during the first year of life. The rates presented in this report are calculated by dividing the number of infant deaths that occurred in a 12-month period by the preliminary 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 2001” (1). 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 the 12-month period by the estimated population of persons under 1 year of age on July 1, 2001, 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, since 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 (18).

For 2001 data, a correction was implemented in the process for selecting Birth trauma (P10–P15) as an underlying cause of infant death. This correction has created a discontinuity between the 2000 and 2001 data for this cause ([table 5](#)); however, we believe the correction creates a better indicator of the true number of deaths for this cause. The correction is based on continuing research on the comparability of cause of death between ICD–9 and ICD–10 (25). Additional changes to selected causes may occur in the future in order to improve the overall quality of the underlying cause-of-death data.

### 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 are shown in [table 2](#). Crude, age-specific, and age-adjusted death rates presented in this report for injury at work are based on estimates of the general population based on year 2000 standard for ages 15 years of age and over. If the estimated employed population aged 15 years and over were used instead as a denominator, higher rates would result, especially for population groups with lower employment rates. See section on “Computing rates and percents.”

### Life tables

The life table provides a comprehensive measure of the effect of mortality on life expectancy. It is composed of sets of values showing

**Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 1999–2000**

Cause of death ( <i>Tenth Revision, International Classification of Diseases, 1992</i> )	Preliminary number of deaths 1999	Final number of deaths 1999	Ratio of preliminary to final 1999	Preliminary number of deaths 2000	Final number of deaths 2000	Ratio of preliminary to final 2000
All causes . . . . .	2,391,630	2,391,399	1.0001	2,404,624	2,403,351	1.0005
Salmonella infections . . . . . (A01–A02)	37	38	0.9737	26	28	0.9286
Shigellosis and amebiasis . . . . . (A03,A06)	10	10	1.0000	11	12	0.9167
Certain other intestinal infections . . . . . (A04,A07–A09)	1,108	1,108	1.0000	1,352	1,328	1.0181
Tuberculosis . . . . . (A16–A19)	856	930	0.9204	751	776	0.9678
Respiratory tuberculosis . . . . . (A16)	692	764	0.9058	595	615	0.9675
Other tuberculosis . . . . . (A17–A19)	164	166	0.9880	156	161	0.9689
Whooping cough . . . . . (A37)	7	7	1.0000	12	12	1.0000
Scarlet fever and erysipelas . . . . . (A38,A46)	5	5	1.0000	–	2	–
Meningococcal infection . . . . . (A39)	225	227	0.9912	200	211	0.9479
Septicemia . . . . . (A40–A41)	30,670	30,680	0.9997	31,613	31,224	1.0125
Syphilis . . . . . (A50–A53)	33	33	1.0000	41	41	1.0000
Acute poliomyelitis . . . . . (A80)	–	–	–	–	–	–
Arthropod-borne viral encephalitis . . . . . (A83–A84,A85.2)	3	3	1.0000	2	2	1.0000
Measles . . . . . (B05)	2	2	1.0000	3	1	3.0000
Viral hepatitis . . . . . (B15–B19)	3,228	4,853	0.6652	4,544	5,357	0.8482
Human immunodeficiency virus (HIV) disease . . . . . (B20–B24)	14,681	14,802	0.9918	14,370	14,478	0.9925
Malaria . . . . . (B50–B54)	7	7	1.0000	3	3	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)	9,088	7,279	1.2485	6,266	5,532	1.1327
Malignant neoplasms . . . . . (C00–C97)	549,787	549,838	0.9999	551,833	553,091	0.9977
Malignant neoplasms of lip, oral cavity, and pharynx . . . . . (C00–C14)	7,485	7,486	0.9999	7,436	7,492	0.9925
Malignant neoplasm of esophagus . . . . . (C15)	11,913	11,918	0.9996	12,212	12,232	0.9984
Malignant neoplasm of stomach . . . . . (C16)	12,708	12,711	0.9998	12,620	12,645	0.9980
Malignant neoplasms of colon, rectum, and anus . . . . . (C18–C21)	57,152	57,155	0.9999	57,344	57,477	0.9977
Malignant neoplasms of liver and intrahepatic bile ducts . . . . . (C22)	12,382	12,382	1.0000	12,736	12,916	0.9861
Malignant neoplasm of pancreas . . . . . (C25)	29,083	29,082	1.0000	29,139	29,332	0.9934
Malignant neoplasm of larynx . . . . . (C32)	3,816	3,815	1.0003	3,785	3,861	0.9803
Malignant neoplasms of trachea, bronchus, and lung . . . . . (C33–C34)	152,176	152,156	1.0001	154,981	155,521	0.9965
Malignant melanoma of skin . . . . . (C43)	7,214	7,215	0.9999	7,432	7,420	1.0016
Malignant neoplasm of breast . . . . . (C50)	41,524	41,528	0.9999	42,290	42,300	0.9998
Malignant neoplasm of cervix uteri . . . . . (C53)	4,204	4,205	0.9998	4,142	4,200	0.9862
Malignant neoplasms of corpus uteri and uterus, part unspecified . . . . . (C54–C55)	6,461	6,468	0.9989	6,499	6,586	0.9868
Malignant neoplasm of ovary . . . . . (C56)	13,618	13,627	0.9993	14,044	14,060	0.9989
Malignant neoplasm of prostate . . . . . (C61)	31,696	31,729	0.9990	31,225	31,078	1.0047
Malignant neoplasms of kidney and renal pelvis . . . . . (C64–C65)	11,115	11,116	0.9999	11,751	11,736	1.0013
Malignant neoplasm of bladder . . . . . (C67)	11,912	11,911	1.0001	11,965	12,002	0.9969
Malignant neoplasms of meninges, brain, and other parts of central nervous system . . . . . (C70–C72)	12,767	12,765	1.0002	12,574	12,655	0.9936
Malignant neoplasms of lymphoid, hematopoietic, and related tissue . . . . . (C81–C96)	56,312	56,318	0.9999	56,262	56,518	0.9955
Hodgkin's disease . . . . . (C81)	1,402	1,403	0.9993	1,254	1,287	0.9744
Non-Hodgkin's lymphoma . . . . . (C82–C85)	22,799	22,802	0.9999	22,548	22,729	0.9920
Leukemia . . . . . (C91–C95)	21,014	21,014	1.0000	21,298	21,339	0.9981
Multiple myeloma and immunoproliferative neoplasms . . . . . (C88,C90)	11,014	11,016	0.9998	11,053	11,063	0.9991
Other and unspecified malignant neoplasms of lymphoid, hematopoietic, and related tissue . . . . . (C96)	83	83	1.0000	108	100	1.0800

See footnotes at end of table.



**Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 1999–2000—Con.**

Cause of death ( <i>Tenth Revision, International Classification of Diseases, 1992</i> )	Preliminary number of deaths 1999	Final number of deaths 1999	Ratio of preliminary to final 1999	Preliminary number of deaths 2000	Final number of deaths 2000	Ratio of preliminary to final 2000
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)	66,246	66,251	0.9999	63,397	63,060	1.0053
In situ neoplasms, benign neoplasms, and neoplasms of uncertain or unknown behavior. . . (D00–D48)	13,221	13,227	0.9995	13,657	13,546	1.0082
Anemias . . . . . (D50–D64)	4,496	4,503	0.9984	4,450	4,494	0.9902
Diabetes mellitus . . . . . (E10–E14)	68,379	68,399	0.9997	68,662	69,301	0.9908
Nutritional deficiencies . . . . . (E40–E64)	4,608	4,289	1.0744	4,342	4,242	1.0236
Malnutrition . . . . . (E40–E46)	3,773	3,985	0.9468	3,922	3,926	0.9990
Other nutritional deficiencies . . . . . (E50–E64)	835	304	2.7467	421	316	1.3323
Meningitis. . . . . (G00,G03)	850	850	1.0000	770	758	1.0158
Parkinson's disease. . . . . (G20–G21)	14,591	14,593	0.9999	15,690	15,682	1.0005
Alzheimer's disease. . . . . (G30)	44,507	44,536	0.9993	49,044	49,558	0.9896
Major cardiovascular diseases. . . . . (I00–I78)	949,998	950,314	0.9997	934,110	936,923	0.9970
Diseases of heart. . . . . (I00–I09,I11,I13,I20–I51)	724,915	725,192	0.9996	709,894	710,760	0.9988
Acute rheumatic fever and chronic rheumatic heart disease . . . . . (I00–I09)	3,676	3,676	1.0000	3,585	3,582	1.0008
Hypertensive heart disease . . . . . (I11)	22,675	22,702	0.9988	23,330	23,761	0.9819
Hypertensive heart and renal disease . . . . . (I13)	3,324	3,327	0.9991	2,707	2,785	0.9720
Ischemic heart diseases . . . . . (I20–I25)	529,544	529,659	0.9998	513,758	515,204	0.9972
Acute myocardial infarction . . . . . (I21–I22)	199,440	199,454	0.9999	192,811	192,898	0.9995
Other acute ischemic heart diseases . . . . . (I24)	3,229	3,232	0.9991	3,390	3,363	1.0080
Other forms of chronic ischemic heart disease. . . . . (I20,I25)	326,875	326,973	0.9997	317,558	318,943	0.9957
Atherosclerotic cardiovascular disease, so described. . . . . (I25.0)	71,846	71,926	0.9989	68,652	69,554	0.9870
All other forms of chronic ischemic heart disease. . . . . (I20,I25.1–I25.9)	255,029	255,047	0.9999	248,906	249,389	0.9981
Other heart diseases . . . . . (I26–I51)	165,696	165,828	0.9992	166,515	165,428	1.0066
Acute and subacute endocarditis. . . . . (I33)	1,116	1,116	1.0000	1,162	1,172	0.9915
Diseases of pericardium and acute myocarditis . . . . . (I30–I31,I40)	883	890	0.9921	698	767	0.9100
Heart failure . . . . . (I50)	54,920	54,913	1.0001	56,863	55,704	1.0208
All other forms of heart disease . . . . . (I26–I28,I34–I38,I42–I49,I51)	108,777	108,909	0.9988	107,792	107,785	1.0001
Essential (primary) hypertension and hypertensive renal disease. . . . . (I10,I12)	16,964	16,968	0.9998	17,964	18,073	0.9940
Cerebrovascular diseases. . . . . (I60–I69)	167,340	167,366	0.9998	166,028	167,661	0.9903
Atherosclerosis . . . . . (I70)	14,977	14,979	0.9999	14,413	14,393	1.0014
Other diseases of circulatory system . . . . . (I71–I78)	25,801	25,809	0.9997	25,812	26,036	0.9914
Aortic aneurysm and dissection . . . . . (I71)	15,806	15,807	0.9999	15,659	15,810	0.9904
Other diseases of arteries, arterioles, and capillaries . . . . . (I72–I78)	9,994	10,002	0.9992	10,153	10,226	0.9929
Other disorders of circulatory system . . . . . (I80–I99)	4,022	4,025	0.9993	4,564	4,603	0.9915
Influenza and pneumonia . . . . . (J10–J18)	63,686	63,730	0.9993	67,024	65,313	1.0262
Influenza . . . . . (J10–J11)	1,663	1,665	0.9988	2,175	1,765	1.2323
Pneumonia . . . . . (J12–J18)	62,023	62,065	0.9993	64,849	63,548	1.0205
Other acute lower respiratory infections . . . . . (J20–J22)	538	540	0.9963	453	425	1.0659
Acute bronchitis and bronchiolitis . . . . . (J20–J21)	386	388	0.9948	318	290	1.0966
Unspecified acute lower respiratory infection. . . . . (J22)	152	152	1.0000	136	135	1.0074
Chronic lower respiratory diseases . . . . . (J40–J47)	124,153	124,181	0.9998	123,550	122,009	1.0126
Bronchitis, chronic and unspecified . . . . . (J40–J42)	1,171	1,172	0.9991	1,188	1,167	1.0180
Emphysema . . . . . (J43)	17,776	17,787	0.9994	16,936	16,700	1.0141
Asthma. . . . . (J45–J46)	4,650	4,657	0.9985	4,426	4,487	0.9864
Other chronic lower respiratory diseases . . . . . (J44,J47)	100,556	100,565	0.9999	100,999	99,655	1.0135
Pneumoconioses and chemical effects. . . . . (J60–J66,J68)	1,111	1,113	0.9982	1,143	1,161	0.9845
Pneumonitis due to solids and liquids . . . . . (J69)	15,265	15,268	0.9998	16,659	16,636	1.0014
Other diseases of respiratory system . . . . . (J00–J06,J30–J39,J67,J70–J98)	25,011	25,031	0.9992	25,608	25,535	1.0029

See footnotes at end of table.

**Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 1999–2000—Con.**

Cause of death ( <i>Tenth Revision, International Classification of Diseases, 1992</i> )	Preliminary number of deaths 1999	Final number of deaths 1999	Ratio of preliminary to final 1999	Preliminary number of deaths 2000	Final number of deaths 2000	Ratio of preliminary to final 2000
Peptic ulcer . . . . . (K25–K28)	4,602	4,604	0.9996	4,507	4,558	0.9888
Diseases of appendix . . . . . (K35–K38)	390	390	1.0000	422	435	0.9701
Hernia . . . . . (K40–K46)	1,463	1,464	0.9993	1,510	1,522	0.9921
Chronic liver disease and cirrhosis . . . . . (K70,K73–K74)	26,225	26,259	0.9987	26,219	26,552	0.9875
Alcoholic liver disease . . . . . (K70)	11,941	11,958	0.9986	11,755	12,109	0.9708
Other chronic liver disease and cirrhosis . . . . . (K73–K74)	14,283	14,301	0.9987	14,464	14,443	1.0015
Cholelithiasis and other disorders of gallbladder . . . . . (K80–K82)	2,829	2,830	0.9996	2,769	2,810	0.9854
Nephritis, nephrotic syndrome, and nephrosis . . . . . (N00–N07,N17–N19,N25–N27)	35,524	35,525	1.0000	37,672	37,251	1.0113
Acute and rapidly progressive nephritic and nephrotic syndrome . . . . . (N00–N01,N04)	182	182	1.0000	176	177	0.9944
Chronic glomerulonephritis, nephritis, and nephropathy not specified as acute or chronic, and renal sclerosis unspecified . . . . . (N02–N03,N05–N07,N26)	588	589	0.9983	546	556	0.9820
Renal failure . . . . . (N17–N19)	34,719	34,719	1.0000	36,904	36,471	1.0119
Other disorders of kidney . . . . . (N25,N27)	35	35	1.0000	47	47	1.0000
Infections of kidney . . . . . (N10–N12,N13.6,N15.1)	844	846	0.9976	781	813	0.9606
Hyperplasia of prostate . . . . . (N40)	429	430	0.9977	441	433	1.0185
Inflammatory diseases of female pelvic organs . . . . . (N70–N76)	108	108	1.0000	113	120	0.9417
Pregnancy, childbirth, and the puerperium . . . . . (O00–O99)	399	406	0.9828	370	404	0.9158
Pregnancy with abortive outcome . . . . . (O00–O07)	30	31	0.9677	37	37	1.0000
Other complications of pregnancy, childbirth, and the puerperium . . . . . (O10–O99)	369	375	0.9840	333	367	0.9074
Certain conditions originating in the perinatal period . . . . . (P00–P96)	14,275	14,259	1.0011	13,831	14,069	0.9831
Congenital malformations, deformations, and chromosomal abnormalities . . . . . (Q00–Q99)	10,362	10,393	0.9970	10,472	10,578	0.9900
Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified . . . . . (R00–R99)	28,445	26,672	1.0665	42,049	31,876	1.3191
All other diseases . . . . . (Residual)	171,382	171,683	0.9982	177,980	178,378	0.9978
Accidents (unintentional injuries) . . . . . (V01–X59,Y85–Y86)	97,298	97,860	0.9943	93,592	97,900	0.9560
Transport accidents . . . . . (V01–V99,Y85)	46,378	46,423	0.9990	45,103	46,749	0.9648
Motor vehicle accidents . . . . . (V02–V04,V09.0,V09.2,V12–V14,V19.0–V19.2,V19.4–V19.6,V20–V79,V80.3–V80.5,V81.0–V81.1,V82.0–V82.1,V83–V86,V87.0–V87.8,V88.0–V88.8,V89.0,V89.2)	42,437	42,401	1.0008	41,804	43,354	0.9642
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)	2,042	2,118	0.9641	1,513	1,492	1.0141
Water, air, and space, and other and unspecified transport accidents and their sequelae . . . . . (V90–V99,Y85)	1,899	1,904	0.9974	1,786	1,903	0.9385
Nontransport accidents . . . . . (W00–X59,Y86)	50,921	51,437	0.9900	48,489	51,151	0.9480
Falls . . . . . (W00–W19)	13,125	13,162	0.9972	12,604	13,322	0.9461
Accidental discharge of firearms . . . . . (W32–W34)	832	824	1.0097	808	776	1.0412
Accidental drowning and submersion . . . . . (W65–W74)	3,513	3,529	0.9955	3,343	3,482	0.9601
Accidental exposure to smoke, fire, and flames . . . . . (X00–X09)	3,338	3,348	0.9970	3,265	3,377	0.9668
Accidental poisoning and exposure to noxious substances . . . . . (X40–X49)	11,758	12,186	0.9649	9,893	12,757	0.7755
Other and unspecified nontransport accidents and their sequelae . . . . . (W20–W31,W35–W64,W75–W99,X10–X39,X50–X59,Y86)	18,354	18,388	0.9982	18,575	17,437	1.0653
Intentional self-harm (suicide) . . . . . (*U03,X60–X71,X75–X84,Y87.0)	29,041	29,199	0.9946	28,332	29,350	0.9653
Intentional self-harm (suicide) by discharge of firearms . . . . . (X72–X74)	16,573	16,599	0.9984	16,418	16,586	0.9899
Intentional self-harm (suicide) by other and unspecified means and their sequelae . . . . . (*U03,X60–X71,X75–X84,Y87.0)	12,468	12,600	0.9895	11,914	12,764	0.9334
Assault (homicide) . . . . . (*U01–*U02,X85–Y09,Y87.1)	16,831	16,889	0.9966	16,137	16,765	0.9625
Assault (homicide) by discharge of firearms . . . . . (*U01.4,X93–X95)	10,818	10,828	0.9991	10,417	10,801	0.9644
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)	6,013	6,061	0.9921	5,719	5,964	0.9589

See footnotes at end of table.



**Table II. Ratios of preliminary to final reported numbers of deaths from 113 selected causes: United States, 1999–2000—Con.**

Cause of death ( <i>Tenth Revision, International Classification of Diseases, 1992</i> )	Preliminary number of deaths 1999	Final number of deaths 1999	Ratio of preliminary to final 1999	Preliminary number of deaths 2000	Final number of deaths 2000	Ratio of preliminary to final 2000
Legal intervention . . . . . (Y35,Y89.0)	394	398	0.9899	345	359	0.9610
Events of undetermined intent. . . . . (Y10–Y34,Y87.2,Y89.9)	3,764	3,917	0.9609	3,422	3,819	0.8960
Discharge of firearms, undetermined intent . . . . . (Y22–Y24)	320	324	0.9877	214	230	0.9304
Other and unspecified events of undetermined intent and their sequelae . . . . . (Y10–Y21,Y25–Y34,Y87.2,Y89.9)	3,444	3,593	0.9585	3,208	3,589	0.8938
Operations of war and their sequelae . . . . . (Y36,Y89.1)	23	23	1.0000	17	16	1.0625
Complications of medical and surgical care . . . . . (Y40–Y84,Y88)	2,813	2,823	0.9965	2,886	3,059	0.9434

– Quantity zero.

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 infant deaths from 130 selected causes: United States, 1999–2000**

Cause of death ( <i>Tenth Revision, International Classification of Diseases, 1992</i> )	Preliminary number of deaths 1999	Final number of deaths 1999	Ratio of preliminary to final 1999	Preliminary number of deaths 2000	Final number of deaths 2000	Ratio of preliminary to final 2000
All causes . . . . .	27,953	27,937	1.0006	27,983	28,035	0.9981
Certain infectious and parasitic diseases . . . . . (A00–B99)	558	562	0.9929	528	510	1.0353
Certain intestinal infectious diseases . . . . . (A00–A08)	20	21	0.9524	8	16	0.5000
Diarrhea and gastroenteritis of infectious origin . . . . . (A09)	–	–	–	1	1	1.0000
Tuberculosis . . . . . (A16–A19)	2	2	1.0000	1	1	1.0000
Tetanus . . . . . (A33,A35)	–	–	–	–	–	–
Diphtheria . . . . . (A36)	–	–	–	–	–	–
Whooping cough . . . . . (A37)	7	7	1.0000	12	12	1.0000
Meningococcal infection . . . . . (A39)	32	32	1.0000	20	22	0.9091
Septicemia . . . . . (A40–A41)	281	283	0.9929	289	274	1.0547
Congenital syphilis . . . . . (A50)	2	2	1.0000	1	1	1.0000
Gonococcal infection . . . . . (A54)	–	–	–	–	–	–
Viral diseases . . . . . (A80–B34)	134	134	1.0000	108	111	0.9730
Acute poliomyelitis . . . . . (A80)	–	–	–	–	–	–
Varicella (chickenpox) . . . . . (B01)	3	3	1.0000	1	1	1.0000
Measles . . . . . (B05)	1	1	1.0000	1	1	1.0000
Human immunodeficiency virus (HIV) disease . . . . . (B20–B24)	14	14	1.0000	8	10	0.8000
Mumps . . . . . (B26)	–	–	–	–	–	–
Other and unspecified viral diseases . . . . . (A81–B00,B02–B04,B06–B19,B25,B27–B34)	116	116	1.0000	98	99	0.9899
Candidiasis . . . . . (B37)	27	27	1.0000	32	24	1.3333
Malaria . . . . . (B50–B54)	1	1	1.0000	–	–	–
Pneumocystosis . . . . . (B59)	4	4	1.0000	3	3	1.0000
All other and unspecified infectious and parasitic diseases . . . . . (A20–A32,A38,A42–A49,A51–A53,A55–A79,B35–B36,B38–B49,B55–B58,B60–B99)	47	49	0.9592	53	45	1.1778
Neoplasms . . . . . (C00–D48)	125	126	0.9921	156	152	1.0263
Malignant neoplasms . . . . . (C00–C97)	67	68	0.9853	98	92	1.0652
Hodgkin's disease and non-Hodgkin's lymphomas . . . . . (C81–C85)	2	2	1.0000	1	1	1.0000
Leukemia . . . . . (C91–C95)	27	27	1.0000	46	38	1.2105
Other and unspecified malignant neoplasms . . . . . (C00–C80,C88,C90,C96–C97)	38	39	0.9744	51	53	0.9623
In situ neoplasms, benign neoplasms, and neoplasms of uncertain or unknown behavior . . . . . (D00–D48)	58	58	1.0000	58	60	0.9667
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism . . . . . (D50–D89)	93	94	0.9894	71	70	1.0143
Anemias . . . . . (D50–D64)	12	12	1.0000	11	10	1.1000
Hemorrhagic conditions and other diseases of blood and blood-forming organs . . . . . (D65–D76)	63	64	0.9844	41	41	1.0000
Certain disorders involving the immune mechanism . . . . . (D80–D89)	18	18	1.0000	18	19	0.9474
Endocrine, nutritional, and metabolic diseases . . . . . (E00–E88)	241	261	0.9234	268	260	1.0308
Short stature, not elsewhere classified . . . . . (E34.3)	24	24	1.0000	23	23	1.0000
Nutritional deficiencies . . . . . (E40–E64)	9	9	1.0000	11	14	0.7857
Cystic fibrosis . . . . . (E84)	12	12	1.0000	4	4	1.0000
Volume depletion, disorders of fluid, electrolyte, and acid-base balance . . . . . (E86–E87)	53	73	0.7260	81	73	1.1096
All other endocrine, nutritional, and metabolic diseases . . . . . (E00–E32,E34.0–E34.2,E34.4–E34.9,E65–E83,E85,E88)	143	143	1.0000	149	146	1.0205
Diseases of the nervous system . . . . . (G00–G98)	439	441	0.9955	393	389	1.0103
Meningitis . . . . . (G00,G03)	116	116	1.0000	96	91	1.0549
Infantile spinal muscular atrophy, type I (Werdnig-Hoffman) . . . . . (G12.0)	41	42	0.9762	36	33	1.0909
Infantile cerebral palsy . . . . . (G80)	13	13	1.0000	6	10	0.6000
Anoxic brain damage, not elsewhere classified . . . . . (G93.1)	35	39	0.8974	38	34	1.1176
Other diseases of nervous system . . . . . (G04,G06–G11,G12.1–G12.9,G20–G72,G81–G92,G93.0,G93.2–G93.9,G95–G98)	234	231	1.0130	218	221	0.9864

See footnotes at end of table.

**Table III. Ratios of preliminary to final reported numbers of infant deaths from 130 selected causes: United States, 1999–2000—Con.**

Cause of death ( <i>Tenth Revision, International Classification of Diseases, 1992</i> )	Preliminary number of deaths 1999	Final number of deaths 1999	Ratio of preliminary to final 1999	Preliminary number of deaths 2000	Final number of deaths 2000	Ratio of preliminary to final 2000
Diseases of the ear and mastoid process . . . . . (H60–H93)	4	4	1.0000	4	6	0.6667
Diseases of the circulatory system . . . . . (I00–I99)	667	667	1.0000	632	663	0.9532
Pulmonary heart disease and diseases of pulmonary circulation . . . . . (I26–I28)	219	218	1.0046	182	185	0.9838
Pericarditis, endocarditis, and myocarditis . . . . . (I30,I33,I40)	20	20	1.0000	13	15	0.8667
Cardiomyopathy . . . . . (I42)	131	132	0.9924	96	118	0.8136
Cardiac arrest . . . . . (I46)	27	27	1.0000	31	29	1.0690
Cerebrovascular diseases . . . . . (I60–I69)	104	103	1.0097	125	124	1.0081
All other diseases of circulatory system . . . . . (I00–I25,I31,I34–I38,I44–I45,I47–I51,I70–I99)	165	167	0.9880	185	192	0.9635
Diseases of the respiratory system . . . . . (J00–J98)	673	687	0.9796	613	651	0.9416
Acute upper respiratory infections . . . . . (J00–J06)	10	10	1.0000	6	6	1.0000
Influenza and pneumonia . . . . . (J10–J18)	312	320	0.9750	261	289	0.9031
Influenza . . . . . (J10–J11)	13	13	1.0000	10	9	1.1111
Pneumonia . . . . . (J12–J18)	299	307	0.9739	252	280	0.9000
Acute bronchitis and acute bronchiolitis . . . . . (J20–J21)	62	62	1.0000	51	42	1.2143
Bronchitis, chronic and unspecified . . . . . (J40–J42)	19	20	0.9500	14	18	0.7778
Asthma . . . . . (J45–J46)	5	5	1.0000	8	8	1.0000
Pneumonitis due to solids and liquids . . . . . (J69)	15	16	0.9375	7	10	0.7000
Other and unspecified diseases of respiratory system . . . . . (J22,J30–J39,J43–J44,J47–J68,J70–J98)	249	254	0.9803	265	278	0.9532
Diseases of the digestive system . . . . . (K00–K92)	499	500	0.9980	503	499	1.0080
Gastritis, duodenitis, and noninfective enteritis and colitis . . . . . (K29,K50–K55)	242	242	1.0000	244	239	1.0209
Hernia of abdominal cavity and intestinal obstruction without hernia . . . . . (K40–K46,K56)	65	66	0.9848	80	72	1.1111
All other and unspecified diseases of digestive system . . . . . (K00–K28,K30–K38,K57–K92)	191	192	0.9948	179	188	0.9521
Diseases of the genitourinary system . . . . . (N00–N95)	191	192	0.9948	199	191	1.0419
Renal failure and other disorders of kidney . . . . . (N17–N19,N25,N27)	163	163	1.0000	152	153	0.9935
Other and unspecified diseases of genitourinary system . . . . . (N00–N15,N20–N23,N26,N28–N98)	28	29	0.9655	47	38	1.2368
Certain conditions originating in the perinatal period . . . . . (P00–P96)	14,097	14,084	1.0009	13,602	13,918	0.9773
Newborn affected by maternal factors and by complications of pregnancy, labor, and delivery . . . . . (P00–P04)	2,741	2,738	1.0011	2,688	2,768	0.9711
Newborn affected by maternal hypertensive disorders . . . . . (P00.0)	71	71	1.0000	58	59	0.9831
Newborn affected by other maternal conditions which may be unrelated to present pregnancy . . . . . (P00.1–P00.9)	68	68	1.0000	70	73	0.9589
Newborn affected by maternal complications of pregnancy . . . . . (P01)	1,402	1,399	1.0021	1,372	1,404	0.9772
Newborn affected by incompetent cervix . . . . . (P01.0)	385	384	1.0026	402	406	0.9901
Newborn affected by premature rupture of membranes . . . . . (P01.1)	648	647	1.0015	588	606	0.9703
Newborn affected by multiple pregnancy . . . . . (P01.5)	225	225	1.0000	215	228	0.9430
Newborn affected by other maternal complications of pregnancy . . . . . (P01.2–P01.4,P01.6–P01.9)	143	143	1.0000	167	164	1.0183
Newborn affected by complications of placenta, cord, and membranes . . . . . (P02)	1,025	1,025	1.0000	1,028	1,062	0.9680
Newborn affected by complications involving placenta . . . . . (P02.0–P02.3)	532	530	1.0038	550	549	1.0018
Newborn affected by complications involving cord . . . . . (P02.4–P02.6)	64	64	1.0000	56	55	1.0182
Newborn affected by chorioamnionitis . . . . . (P02.7)	429	430	0.9977	420	455	0.9231
Newborn affected by other and unspecified abnormalities of membranes . . . . . (P02.8–P02.9)	1	1	1.0000	2	3	0.6667
Newborn affected by other complications of labor and delivery . . . . . (P03)	145	145	1.0000	131	130	1.0077
Newborn affected by noxious influences transmitted via placenta or breast milk . . . . . (P04)	29	30	0.9667	29	40	0.7250
Disorders related to length of gestation and fetal malnutrition . . . . . (P05–P08)	4,459	4,454	1.0011	4,369	4,471	0.9772
Slow fetal growth and fetal malnutrition . . . . . (P05)	62	62	1.0000	67	72	0.9306
Disorders related to short gestation and low birth weight, not elsewhere classified . . . . . (P07)	4,397	4,392	1.0011	4,299	4,397	0.9777
Extremely low birth weight or extreme immaturity . . . . . (P07.0,P07.2)	3,327	3,324	1.0009	3,221	3,281	0.9817
Other low birth weight or preterm . . . . . (P07.1,P07.3)	1,069	1,068	1.0009	1,078	1,116	0.9659
Disorders related to long gestation and high birth weight . . . . . (P08)	–	–	–	2	2	1.0000

See footnotes at end of table.

**Table III. Ratios of preliminary to final reported numbers of infant deaths from 130 selected causes: United States, 1999–2000—Con.**

Cause of death ( <i>Tenth Revision, International Classification of Diseases, 1992</i> )	Preliminary number of deaths 1999	Final number of deaths 1999	Ratio of preliminary to final 1999	Preliminary number of deaths 2000	Final number of deaths 2000	Ratio of preliminary to final 2000
Birth trauma . . . . . (P10–P15)	20	20	1.0000	32	31	1.0323
Intrauterine hypoxia and birth asphyxia . . . . . (P20–P21)	613	613	1.0000	642	630	1.0190
Intrauterine hypoxia . . . . . (P20)	113	114	0.9912	117	109	1.0734
Birth asphyxia . . . . . (P21)	500	499	1.0020	524	521	1.0058
Respiratory distress of newborn . . . . . (P22)	1,111	1,110	1.0009	1,018	999	1.0190
Other respiratory conditions originating in the perinatal period . . . . . (P23–P28)	1,722	1,718	1.0023	1,485	1,529	0.9712
Congenital pneumonia . . . . . (P23)	82	82	1.0000	87	90	0.9667
Neonatal aspiration syndromes . . . . . (P24)	84	84	1.0000	58	63	0.9206
Interstitial emphysema and related conditions originating in the perinatal period . . . . . (P25)	230	230	1.0000	235	229	1.0262
Pulmonary hemorrhage originating in the perinatal period . . . . . (P26)	269	269	1.0000	269	284	0.9472
Chronic respiratory disease originating in the perinatal period . . . . . (P27)	336	336	1.0000	304	294	1.0340
Atelectasis . . . . . (P28.0–P28.1)	649	647	1.0031	465	496	0.9375
All other respiratory conditions originating in the perinatal period . . . . . (P28.2–P28.9)	70	70	1.0000	66	73	0.9041
Infections specific to the perinatal period . . . . . (P35–P39)	869	871	0.9977	876	927	0.9450
Bacterial sepsis of newborn . . . . . (P36)	689	691	0.9971	723	768	0.9414
Omphalitis of newborn with or without mild hemorrhage . . . . . (P38)	–	–	–	1	3	0.3333
All other infections specific to the perinatal period . . . . . (P35,P37,P39)	180	180	1.0000	152	156	0.9744
Hemorrhagic and hematological disorders of newborn . . . . . (P50–P61)	620	619	1.0016	694	704	0.9858
Neonatal hemorrhage . . . . . (P50–P52,P54)	508	506	1.0040	574	578	0.9931
Hemorrhagic disease of newborn . . . . . (P53)	1	1	1.0000	–	1	–
Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice . . . . . (P55–P59)	16	16	1.0000	20	18	1.1111
Hematological disorders . . . . . (P60–P61)	95	96	0.9896	101	107	0.9439
Syndrome of infant of a diabetic mother and neonatal diabetes mellitus . . . . . (P70.0–P70.2)	8	8	1.0000	8	9	0.8889
Necrotizing enterocolitis of newborn . . . . . (P77)	405	404	1.0025	366	368	0.9946
Hydrops fetalis not due to hemolytic disease . . . . . (P83.2)	189	189	1.0000	159	161	0.9876
Other perinatal conditions . (P29,P70.3–P70.9,P71–P76,P78–P81,P83.0–P83.1,P83.3–P83.9,P90–P96)	1,342	1,340	1.0015	1,265	1,321	0.9576
Congenital malformations, deformations, and chromosomal abnormalities . . . . . (Q00–Q99)	5,471	5,473	0.9996	5,779	5,743	1.0063
Anencephaly and similar malformations . . . . . (Q00)	311	311	1.0000	328	324	1.0123
Congenital hydrocephalus . . . . . (Q03)	93	93	1.0000	97	95	1.0211
Spina bifida . . . . . (Q05)	22	22	1.0000	28	26	1.0769
Other congenital malformations of nervous system . . . . . (Q01–Q02,Q04,Q06–Q07)	263	264	0.9962	314	313	1.0032
Congenital malformations of heart . . . . . (Q20–Q24)	1,593	1,598	0.9969	1,660	1,634	1.0159
Other congenital malformations of circulatory system . . . . . (Q25–Q28)	220	220	1.0000	187	208	0.8990
Congenital malformations of respiratory system . . . . . (Q30–Q34)	564	564	1.0000	681	685	0.9942
Congenital malformations of digestive system . . . . . (Q35–Q45)	93	93	1.0000	82	85	0.9647
Congenital malformations of genitourinary system . . . . . (Q50–Q64)	366	366	1.0000	326	329	0.9909
Congenital malformations and deformations of musculoskeletal system, limbs, and integument . . . . . (Q65–Q85)	487	486	1.0021	437	446	0.9798
Down's syndrome . . . . . (Q90)	94	94	1.0000	88	93	0.9462
Edward's syndrome . . . . . (Q91.0–Q91.3)	440	439	1.0023	523	478	1.0941
Patau's syndrome . . . . . (Q91.4–Q91.7)	250	250	1.0000	301	290	1.0379
Other congenital malformations and deformations . . . . . (Q10–Q18,Q86–Q89)	508	507	1.0020	568	583	0.9743
Other chromosomal abnormalities, not elsewhere classified . . . . . (Q92–Q99)	166	166	1.0000	159	154	1.0325
Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified . . . . . (R00–R99)	3,612	3,538	1.0209	3,997	3,639	1.0984
Sudden infant death syndrome . . . . . (R95)	2,583	2,648	0.9755	2,151	2,523	0.8526
Other symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified . . . . . (R00–R53,R55–R94,R96–R99)	1,029	890	1.1562	1,846	1,116	1.6541
All other diseases . . . . . (Residual)	23	23	1.0000	32	30	1.0667
External causes of mortality . . . . . (*U01,V01–Y84)	1,259	1,285	0.9798	1,205	1,314	0.9170

See footnotes at end of table.

**Table III. Ratios of preliminary to final reported numbers of infant deaths from 130 selected causes: United States, 1999–2000—Con.**

Cause of death ( <i>Tenth Revision, International Classification of Diseases, 1992</i> )	Preliminary number of deaths 1999	Final number of deaths 1999	Ratio of preliminary to final 1999	Preliminary number of deaths 2000	Final number of deaths 2000	Ratio of preliminary to final 2000
Accidents (unintentional injuries) . . . . . (V01–X59)	833	845	0.9858	826	881	0.9376
Transport accidents . . . . . (V01–V99)	188	189	0.9947	171	174	0.9828
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)	183	184	0.9946	167	168	0.9940
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)	5	5	1.0000	4	6	0.6667
Falls . . . . . (W00–W19)	12	12	1.0000	7	8	0.8750
Accidental discharge of firearms . . . . . (W32–W34)	–	–	–	–	1	–
Accidental drowning and submersion . . . . . (W65–W74)	67	68	0.9853	77	75	1.0267
Accidental suffocation and strangulation in bed . . . . . (W75)	246	255	0.9647	235	266	0.8835
Other accidental suffocation and strangulation . . . . . (W76–W77,W81–W84)	153	154	0.9935	167	183	0.9126
Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract . . . . . (W78–W80)	62	63	0.9841	66	77	0.8571
Accidents caused by exposure to smoke, fire, and flames . . . . . (X00–X09)	40	41	0.9756	36	37	0.9730
Accidental poisoning and exposure to noxious substances . . . . . (X40–X49)	12	12	1.0000	10	14	0.7143
Other and unspecified accidents . . . . . (W20–W31,W35–W64,W85–W99,X10–X39,X50–X59)	52	51	1.0196	57	46	1.2391
Assault (homicide) . . . . . (*U01,X85–Y09)	323	331	0.9758	304	349	0.8711
Assault (homicide) by hanging, strangulation, and suffocation . . . . . (X91)	33	34	0.9706	21	26	0.8077
Assault (homicide) by discharge of firearms . . . . . (*U01.4,X93–X95)	8	8	1.0000	13	12	1.0833
Neglect, abandonment, and other maltreatment syndromes . . . . . (Y06–Y07)	122	125	0.9760	105	129	0.8140
Assault (homicide) by other and unspecified means . . . . . (*U01.0–*U01.3,*U01.5–*U01.9,X85–X90,X92,X96–X99,Y00–Y05,Y08–Y09)	160	164	0.9756	165	182	0.9066
Complications of medical and surgical care . . . . . (Y40–Y84)	52	54	0.9630	24	19	1.2632
Other external causes . . . . . (X60–X84,Y10–Y36)	50	55	0.9091	51	65	0.7846

– Quantity zero.

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

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 (26). 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 (27) using a methodology similar to that of the decennial life tables (28). 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 (27). 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 (29).

The life tables presented in this report use a slight modification of the new life table method introduced in 1997 as a result of a change in the age detail of populations received from the U.S. Census Bureau. Populations for 2000 and 2001 were provided by single year of age up to age 84, followed by "85 years 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 (27). Accordingly, Medicare data were used to estimate the probability of dying by single year of age for ages up to "100 years and over."

## Population denominators

The rates in this report are based on populations from the 2000 census as of April 1, and projected from the 2000 census for 2001, estimated as of July 1 (30,31). The population estimates have been produced under a collaborative arrangement with the U.S. Census Bureau (30,31) and are based on the 2000 census counts by age, race, and sex, which were modified to be consistent with Office of Management and Budget racial categories as of 1977. The modification procedures are described in detail elsewhere (10–12).

## Computing rates and percents

Except for infant mortality rates, death rates are on an annual basis per 1,000 or per 100,000 population residing in the specified area. Populations furnished by the U.S. Census Bureau (30,31) are based on the year 2000 decennial census and are enumerated as of April 1 for 2000 and estimated as of July 1 for 2001. Rates by State for 2000 are computed on the basis of the enumerated population as of April 1, 2000 (32). State population estimates for 2001 based on the 2000 census counts were not available when this report was prepared, so State death rates for 2001 are shown as not available

(table 3). All the death rates for year 2000 in this report have been revised and may differ from rates that were previously published based on 1990 population estimates. Infant mortality rates are per 1,000 or per 100,000 live births.

Age-adjusted death rates 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 to the U.S. standard population (relative age distribution of year 2000 projected population of the United States) using the following age groups:

Age	Number	Weights ( $w_i$ )
All ages . . . . .	1,000,000	1.000000
Under 1 year . . . . .	13,818	0.013818
1–4 years . . . . .	55,317	0.055317
5–14 years . . . . .	145,565	0.145565
15–24 years . . . . .	138,646	0.138646
25–34 years . . . . .	135,573	0.135573
35–44 years . . . . .	162,613	0.162613
45–54 years . . . . .	134,834	0.134834
55–64 years . . . . .	87,247	0.087247
65–74 years . . . . .	66,037	0.066037
75–84 years . . . . .	44,842	0.044842
85 years and over . . . . .	15,508	0.015508

Age-adjusted death rates for Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Northern Marianas were computed using the following age groups:

Age	Number	Weights ( $w_i$ )
All ages . . . . .	1,000,000	1.000000
Under 1 year . . . . .	13,818	0.013818
1–4 years . . . . .	55,317	0.055317
5–14 years . . . . .	145,565	0.145565
15–24 years . . . . .	138,646	0.138646
25–34 years . . . . .	135,573	0.135573
35–44 years . . . . .	162,613	0.162613
45–54 years . . . . .	134,834	0.134834
55–64 years . . . . .	87,247	0.087247
65–74 years . . . . .	66,037	0.066037
75 years and over . . . . .	60,350	0.060350

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 Health and Human Services in August 1998 (33). 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" (33).

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. 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 390, 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 number of records provided by each State yields a proportion of the total records that is large enough to provide reliable estimates. For example, 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](#)).

- 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 percent 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 20–31 deaths) may have RSEs of 23 percent or more but are still shown instead of asterisks. As a result, caution should be exercised in analyzing rates based on 20–31 events. Additional information on random variation in numbers of events, rates, ratios, and percents 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 error due to bias.

The estimated RSEs in [table IV](#) were computed using this formula:

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

where

$f$  = the sampling fraction or the percent of file completeness/100 from [table I](#). For mortality data based on deaths under 1 year of age, use 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 percent ( $P$ ) and to compute statistical tests concerning the equality of two rates ( $R_1$  and  $R_2$ ) or two percents ( $P_1$  and  $P_2$ ).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[Relative standard errors are expressed as a percent 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

where

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

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<sub>i</sub>* = age-specific rate for the *i*<sup>th</sup> age group.

*w<sub>i</sub>* = *i*<sup>th</sup> age-specific U.S. standard population such that  $\sum w_i = 1.000000$  (see “Computing rates and percents”).

*X<sub>i</sub>* = the estimated number of deaths for the *i*<sup>th</sup> age group.

*N<sub>i</sub>* = the total count of deaths from table I for each *i*<sup>th</sup> 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<sub>i</sub>* = percent of file completeness/100 from table I (for infant deaths, use the percent completeness for the demographic or medical file as appropriate for deaths under age 1 year; for all age groups 1–4 through 85 years and over, use the percent completeness for the demographic or medical file as appropriate for deaths 1 year and over).

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

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

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<sub>1</sub>* is the same as the above example for the current 12-month period and that *R<sub>2</sub>*, 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<sub>2</sub>*). 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 percents 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:

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

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:

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

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

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

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

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

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

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

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