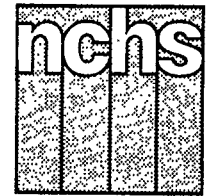


# Monthly Vital Statistics Report



Provisional Data From the National Center for Health Statistics

## Births, Marriages, Divorces, and Deaths for October 1991

### Mortality Surveillance System

pages 5-7

#### Suicide:

25-44 years of age by sex  
45-74 years of age by sex

### Births

According to provisional reports, an estimated 355,000 births occurred in the United States during October 1991. This was a decrease of 2 percent from the provisional number of births reported for October 1990 (361,000). The birth rate, 16.4 live births per 1,000 population, was 3 percent lower than the rate for October 1990 (16.9). The fertility rate, 70.8 live births per 1,000 women 15-44 years, and the seasonally adjusted fertility rate (71.0) were both 2 percent lower than the comparable rates for October 1990 (72.2 and 72.1, respectively).

During the first 10 months of 1991, an estimated 3,444,000 births occurred, a decline of 1 percent from the 3,496,000 reported for the first 10 months of 1990. The January-October birth rate declined by 3 percent from 16.8 in 1990 to 16.3 in 1991. The fertility rate for this period (70.1) also was 2 percent lower than the comparable rate for January-October 1990 (71.5).

An estimated 4,127,000 live births occurred in the 12-month period ending with October 1991. This was a decrease of 1 percent compared with the 4,159,000 births reported for the

### Provisional Vital Statistics for the United States

[Rates for infant deaths are infant mortality rates per 1,000 live births; all other rates per 1,000 population. Data are subject to monthly reporting variation; see Technical notes]

Item	October				January-October				12 months ending with October					
	Number		Rate		Number		Rate		Number		Rate			
	1991	1990	1991	1990	1991	1990	1991	1990	1991	1990	1989	1988		
Live births . . . . .	355,000	361,000	16.4	16.9	3,444,000	3,496,000	16.3	16.8	4,127,000	4,159,000	16.3	16.6	16.1	15.9
Deaths . . . . .	180,000	178,000	8.3	8.3	1,797,000	1,808,000	8.5	8.7	2,153,000	2,174,000	8.5	8.7	8.6	8.9
Natural increase . . . . .	175,000	183,000	8.1	8.6	1,647,000	1,688,000	7.8	8.1	1,974,000	1,985,000	7.8	7.9	7.5	7.0
Marriages . . . . .	220,000	219,000	10.2	10.3	2,008,000	2,066,000	9.5	9.9	2,390,000	2,462,000	9.4	9.8	9.6	9.7
Divorces . . . . .	98,000	92,000	4.6	4.3	995,000	981,000	4.7	4.7	1,189,000	1,185,000	4.7	4.7	4.7	4.8
Infant deaths . . . . .	3,000	3,100	8.3	8.6	30,600	31,900	8.9	9.2	36,800	38,400	8.9	9.2	9.8	10.0

NOTE: Figures include all revisions received from the States. Cumulative figures for the current year reflect revisions received for previous months, and figures for earlier years may differ from those previously published.



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Centers for Disease Control

National Center for Health Statistics

Manning Feinleib, M.D., Dr. P.H., Director



12 months ending with October 1990. The birth rate of 16.3 was 2 percent lower than the rate of 16.6 for the preceding 12-month period. The fertility rate for the most recent 12-month period was 70.0, a decline of 1 percent from the rate for the comparable period a year earlier (70.9). The 12-month rates, which had been increasing since mid-1987, have been generally decreasing since early 1991.

### Natural increase

As a result of natural increase, the excess of births over deaths, an estimated 175,000 people, or 8.1 people per 1,000 population, were added to the population during October 1991.

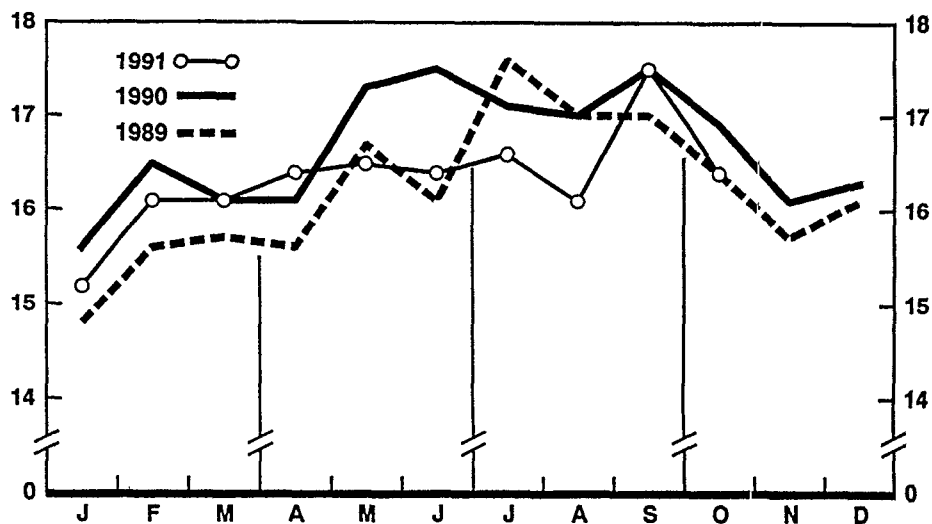
For the 12-month period ending with October 1991, 1,974,000 persons were added to the population. This represents a rate of natural increase of 7.8, 1 percent lower than the rate of 7.9 for the preceding 12-month period. Although both the 12-month birth and death rates declined by 2 percent, the decrease in the rate of natural increase is due to a larger absolute decrease in the birth rate than in the death rate.

### Marriages

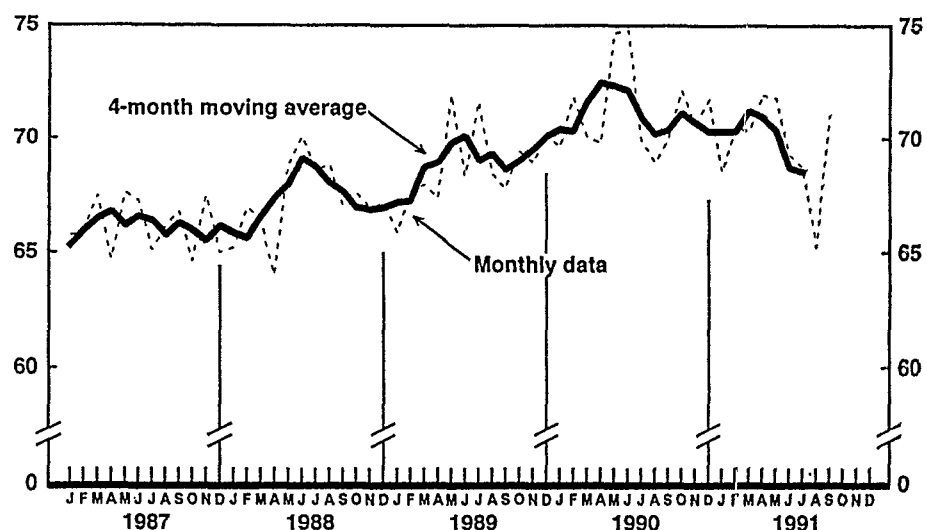
Marriages performed in October 1991 numbered 220,000, a slight increase over the number for October of the previous year (219,000). However, the marriage rate (per 1,000 population) for October was slightly lower in 1991 (10.2) than in 1990 (10.3).

For the first 10 months of 1991, the number of marriages totaled 2,008,000, a 3-percent decline from the comparable period in 1990 (2,066,000). The marriage rate for the 10-month period dropped 4 percent from 9.9 in 1990 to 9.5 in 1991.

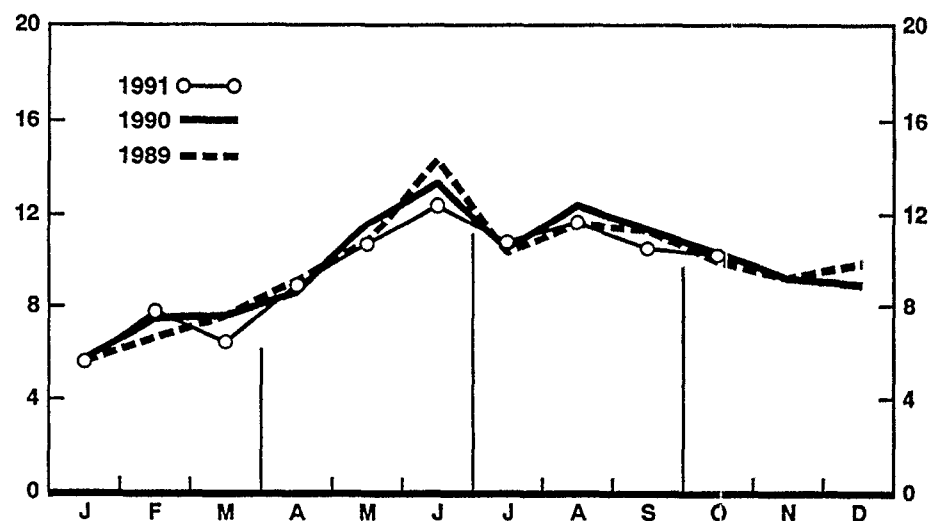
For the 12-month period ending with October 1991, the number of marriages (2,390,000) was 3 percent lower than for the same period in 1990 (2,462,000). The marriage rate was 9.4, a 4-percent decline from the rate for the 12 months ending with October 1990 (9.8).



Provisional birth rates per 1,000 population by month: United States, 1989-91



Provisional seasonally adjusted fertility rates per 1,000 women aged 15-44: United States, 1987-91



Provisional marriage rates per 1,000 population by month: United States, 1989-91

### Divorces

Provisionally, divorces granted in October 1991 numbered 98,000, which was 6,000 more than in October 1990 (92,000). Likewise, the divorce rate (per 1,000 population) for October increased, from 4.3 in 1990 to 4.6 in 1991.

For the first 10 months of 1991, the number of divorces (995,000) increased slightly from the same period of the previous year (981,000) but the divorce rate remained steady at 4.7.

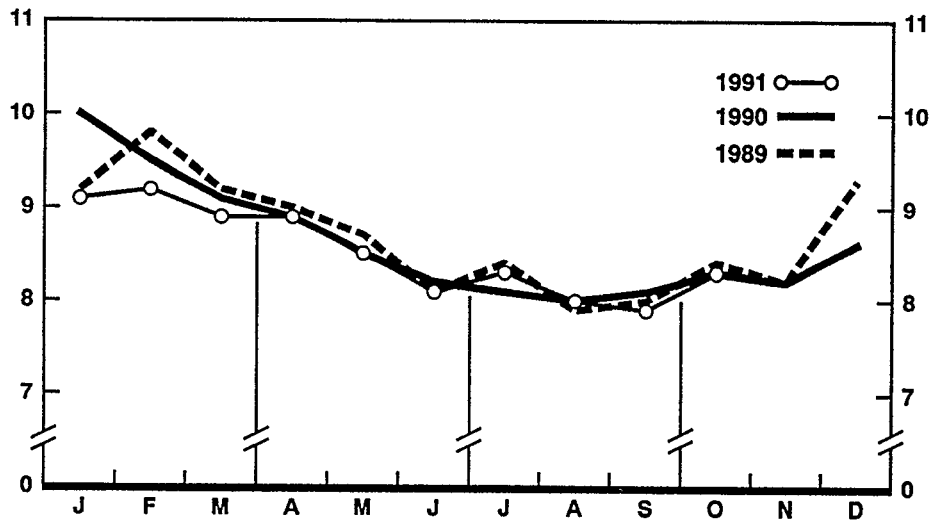
For the 12 months ending with October 1991, both the number of divorces and the divorce rate were virtually unchanged from the same period in 1990. The number of divorces increased by less than 1 percent, from 1,185,000 in 1990 to 1,189,000 in 1991, and the divorce rate was 4.7 for both years.

### Deaths

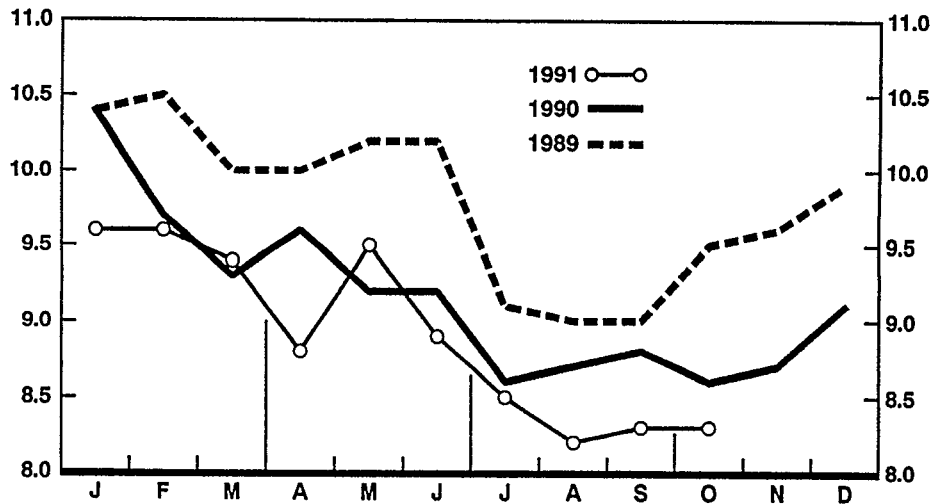
For October 1991 there were an estimated 180,000 deaths in the United States. The death rate was 8.3 deaths per 1,000 population, the same as the rate for October a year earlier. Among the 180,000 deaths for October 1991 were 3,000 deaths at ages under 1 year.

According to provisional statistics there were 1,797,000 deaths during the first 10 months of 1991, 1 percent less than estimated for January–October 1990 (1,808,000). The death rate, 8.5 per 1,000 population, was 2 percent lower than the January–October 1990 rate of 8.7. Among the 1,797,000 deaths for the first 10 months of 1991 were 30,600 deaths at ages under 1 year, yielding an infant mortality rate of 8.9 per 1,000 live births. This rate was 3 percent lower than the rate of 9.2 for the first 10 months of 1990.

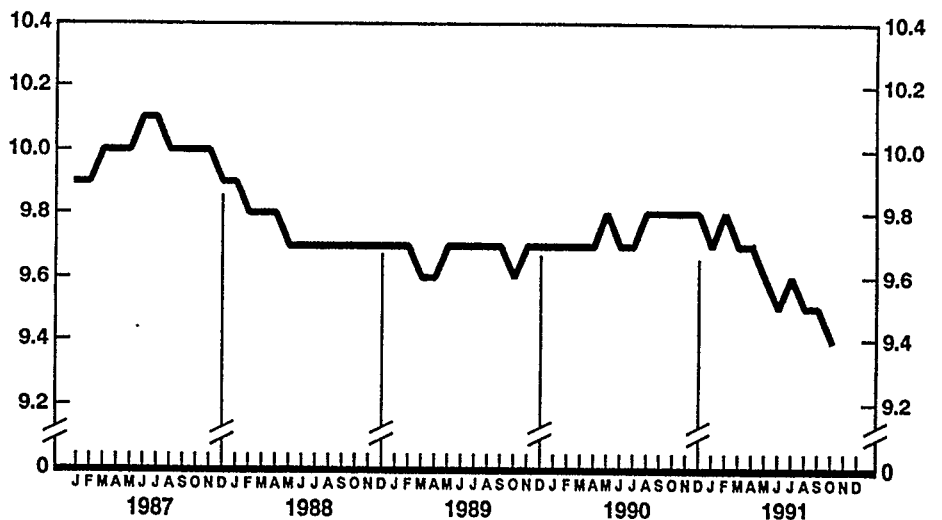
The death rate for the 12 months ending with October 1991 was 8.5 deaths per 1,000 population, 2 percent lower than the rate of 8.7 for the comparable 12-month period a year earlier. The infant mortality rate was 8.9 per 1,000 live births, 3 percent lower than the rate of 9.2 for the 12 months ending with October 1990.



Provisional death rates per 1,000 population by month: United States, 1989-91



Provisional infant mortality rates per 1,000 live births by month: United States, 1989-91

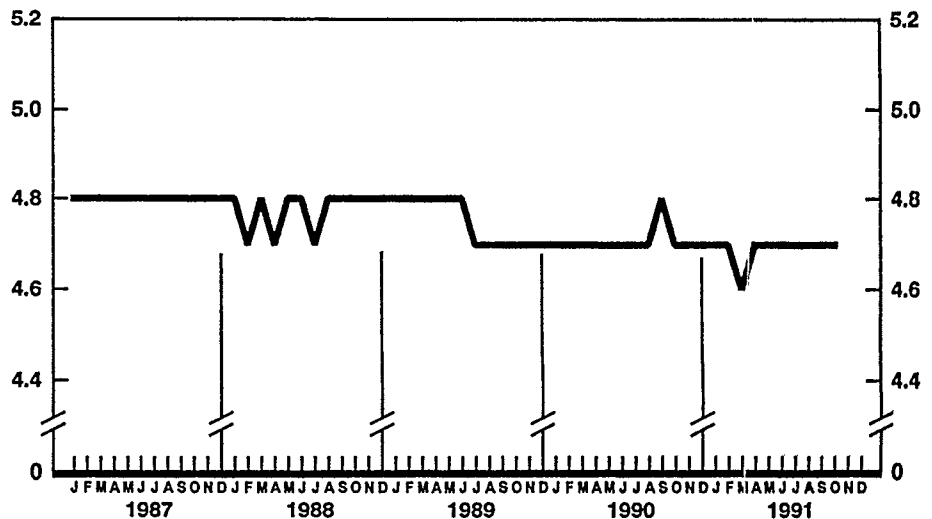


Provisional marriage rates per 1,000 population for successive 12-month periods ending with month indicated: United States, 1987-91

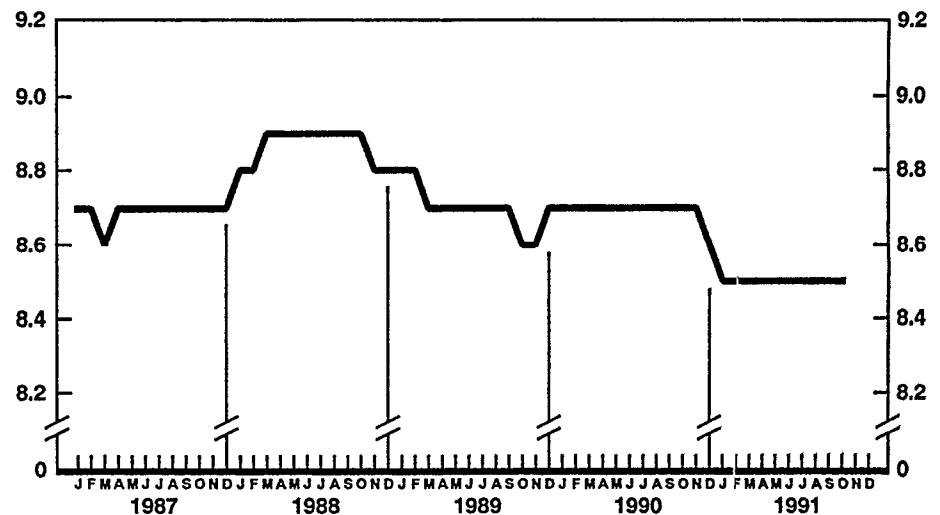
*Current Mortality Sample, 12 months ending with September 1991*—The provisional death rate for the 12 months ending with September 1991 was 850.3 deaths per 100,000 population, 2 percent lower than the rate of 868.9 for the 12-month period ending September 1990. Age-adjusted death rates control for changes and variations in the age composition of the population; therefore, they are better indicators than crude rates for showing changes in mortality risk over time and for showing differences between race-sex groups within the population. The provisional age-adjusted death rate for the 12-month period ending with September 1991 was 506.1 deaths per 100,000 population, 3 percent lower than the rate of 520.3 for the 12-month period ending with September 1990. Among the race-sex groups the estimated age-adjusted death rates decreased for white males, white females, and black females. By age, the death rate for the total population decreased for the following age groups: under 1 year, 45–54 years, 55–64 years, 65–74 years, 75–84 years, and 85 years and over.

Among the major causes of death, the estimated death rate increased between the two successive 12-month periods for Human immunodeficiency virus infection. The death rate decreased between the two successive 12-month periods for Diseases of heart, Cerebrovascular diseases, Accidents and adverse effects, Chronic obstructive pulmonary diseases and allied conditions, Pneumonia and influenza, Suicide, and Atherosclerosis.

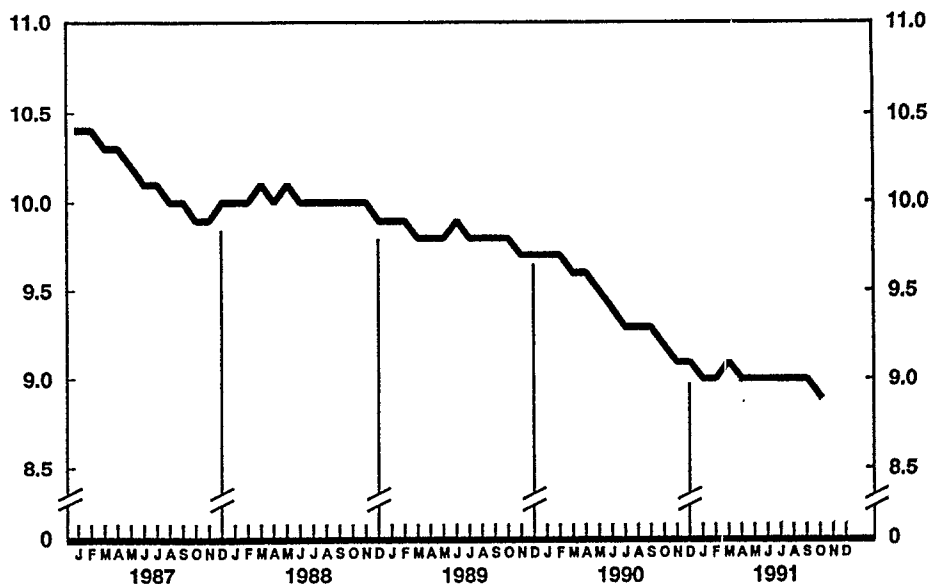
The infant mortality rate for the 12 months ending with September 1991 was 897.0 per 100,000 live births, 3 percent lower than the rate of 929.4 for the same 12-month period a year earlier. For infants under 28 days the 12-month rate ending September 1991 was 564.6 compared with a rate of 580.0 for the 12-month period a year earlier. The infant mortality rate for infants 28 days to 11 months was 332.3 compared with a rate of 350.6 for the 12-month period a year earlier. The changes in the mortality rates for infants under 28 days and for those 28 days to 11 months were not statistically significant. Among causes of infant



Provisional divorce rates per 1,000 population for successive 12-month periods ending with month indicated: United States, 1987-91



Provisional death rates per 1,000 population for successive 12-month periods ending with month indicated: United States, 1987-91



Provisional Infant mortality rates per 1,000 live births for successive 12-month periods ending with month indicated: United States, 1987-91

death the infant mortality rate increased between the two successive 12-month periods for Disorders relating to short gestation and unspecified low birthweight. The infant mortality rate decreased for Sudden infant death syndrome.

### **Mortality Surveillance System**

Discussed this month are recent trends in death rates for Suicide for men and women aged 25-44 and 45-74 years. In this issue, final mortality data are analyzed for data year 1989 and

provisional data from January 1982-May 1991.

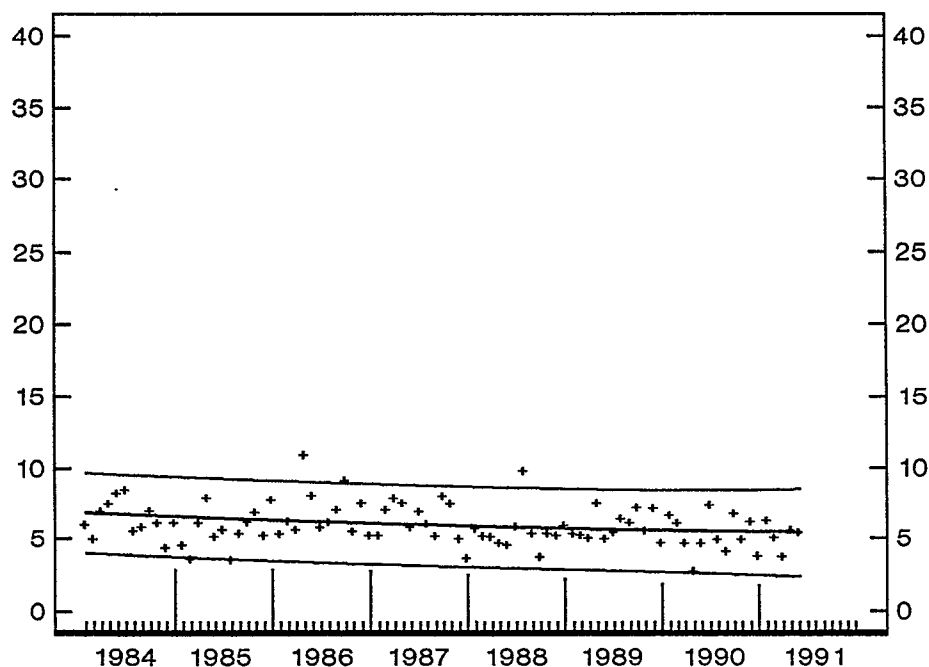
In 1989, the latest year for which final mortality data are available, Suicide accounted for 22,155 deaths, or 2 percent of deaths from all causes for persons aged 25-74 years. For males and females combined, for ages 25-44 and 45-74 years, Suicide was the fifth and the ninth leading cause of death, respectively.

Based on 1989 final data, the death rate for Suicide for men in the older age group, 45-74 years, was 1.1 times the rate for the younger men

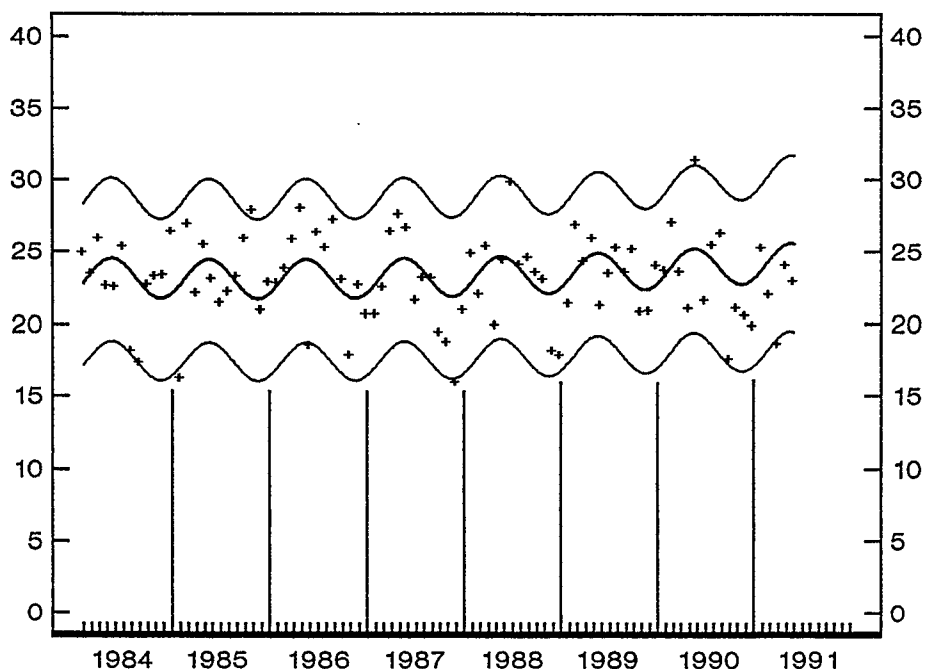
aged 25-44 years; similarly, the rate for women in the older age group was also 1.1 times the rate for the younger women. By contrast, the percent of all deaths from Suicide was substantially less for both men and women in the older age group compared with men and women in the younger age group. For both age groups the death rate for men was almost four times that for women. Trends in Suicide for these demographic groups based on provisional data are presented in the Mortality Surveillance System charts and accompanying text that follow.

## Mortality Surveillance System Charts

[Observed and fitted provisional monthly death rates and 95-percent prediction intervals. Models fitted to provisional data for January 1982–May 1990; see Technical notes]



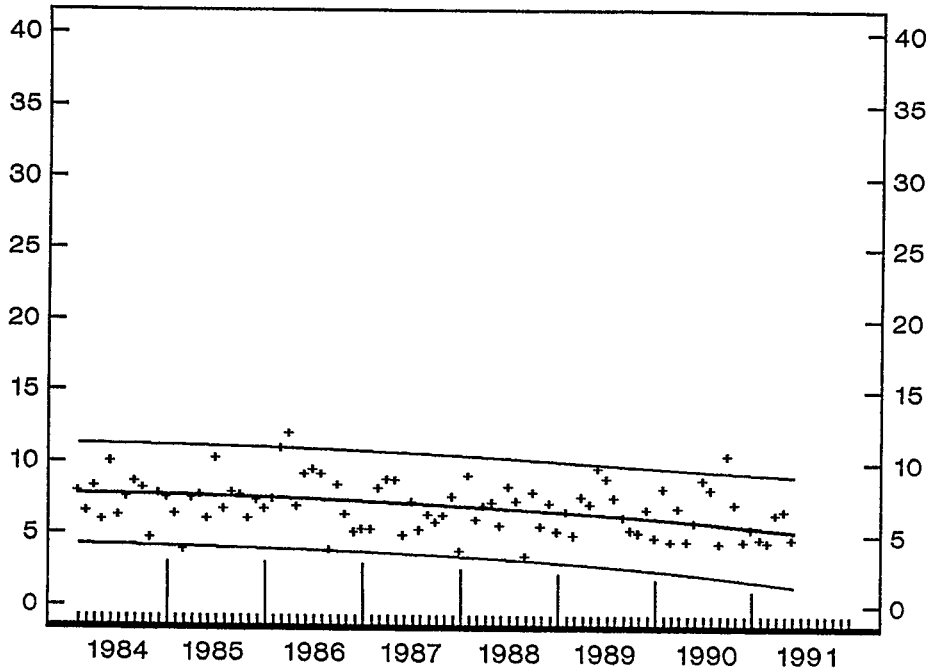
Provisional death rates per 100,000 females 25–44 years of age for Suicide, by month: United States, 1984–91



Provisional death rates per 100,000 males 25–44 years of age for Suicide, by month: United States, 1984–91

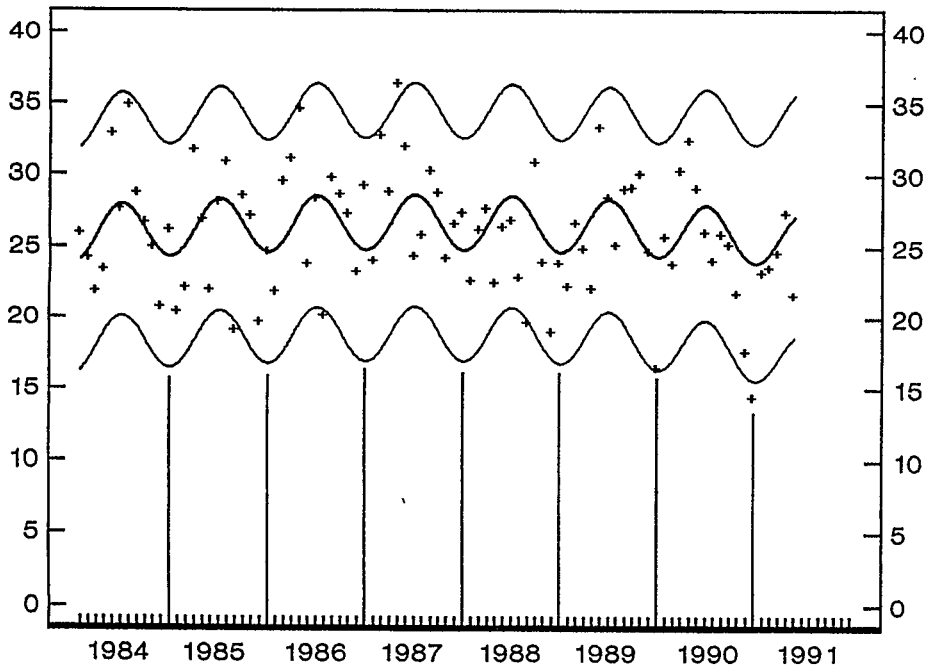
In 1989, the latest year for which final mortality data are available, Suicide was the fourth leading cause of death for women aged 25–44 years—after Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (cancer), Accidents and adverse effects, and Diseases of heart—and accounted for 2,454 deaths, or 6 percent of all deaths. For the period shown in the chart through May 1990, provisional death rates for Suicide decreased for women aged 25–44 years. For the most recent 12-month period, June 1990–May 1991, the observed monthly rates fell within the 95-percent prediction intervals of a model estimated on the basis of provisional monthly death rates for January 1982–May 1990.

According to 1989 final data, Suicide was the fifth leading cause of death for men aged 25–44 years—after Accidents and adverse effects, Human immunodeficiency virus infection, Diseases of heart, and cancer—and accounted for 9,442 deaths, or 9 percent of all deaths for this age-sex group. For the period shown in the chart through May 1990, provisional death rates for this cause of death showed no discernible upward or downward trend for men in this age group. For the most recent 12-month period, June 1990–May 1991, the observed monthly rates, except for 1 month, were within the 95-percent prediction intervals of a model estimated on the basis of provisional monthly death rates for January 1982–May 1990. Provisional death rates for men in this age group showed a seasonal pattern of mortality with a tendency for rates to be higher in the spring.



Provisional death rates per 100,000 females 45-74 years of age for Suicide, by month: United States, 1984-91

In 1989, the latest year for which final data are available, Suicide was the 11th leading cause of death for women aged 45-74 years and accounted for 2,363 deaths, or 1 percent of all deaths for this age-sex group. Provisional death rates for this cause for women aged 45-74 years were stable from January 1982 to the mid-1980's and then decreased through May 1990. For the most recent 12-month period, June 1990-May 1991, the observed monthly rates, except for 1 month, were within the 95-percent prediction intervals of a model estimated on the basis of provisional monthly death rates for January 1982-May 1990.



Provisional death rates per 100,000 males 45-74 years of age for Suicide, by month: United States, 1984-91

According to 1989 final data, Suicide was the ninth leading cause of death for men aged 45-74 years and accounted for 7,896 deaths, or 2 percent of all deaths for this age-sex group. For these men, provisional death rates for Suicide increased from January 1982 to the late 1980's and, as shown in the chart, have decreased since then through May 1990. For the most recent 12-month period, June 1990-May 1991, 11 of the 12 observed monthly rates were below the predicted line, including 1 below the 95-percent prediction band of a model estimated on the basis of provisional monthly death rates for January 1982-May 1990. This suggests that the downward trend for the most recent 12-month period may be greater than expected. Provisional death rates for the older men also showed a seasonal pattern of mortality with a tendency for rates to be higher in the summer.

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**Symbols**

- - - Data not available
  - . . . Category not applicable
  - Quantity zero
  - 0.0 Quantity more than zero but less than 0.05
  - Z Quantity more than zero but less than 500 where numbers are rounded to thousands
  - \* Figure does not meet standards of reliability or precision (see Technical notes)
-



**Table 1. Provisional number of live births, marriages, deaths, infant deaths, and rates, by month: United States, January 1990–October 1991**

[Data are provisional and are subject to monthly reporting variation; see Technical notes]

Period	Live births				Marriages		Deaths		Infant deaths	
	Number	Rate per 1,000 population	Rate per 1,000 women 15–44		Number	Rate per 1,000 population	Number	Rate per 1,000 population	Number	Rate per 1,000 live births
			Unadjusted	Seasonally adjusted <sup>1</sup>						
<b>1990:</b>										
January . . . . .	330,000	15.6	66.4	69.6	121,000	5.7	213,000	10.0	3,500	10.4
February . . . . .	316,000	16.5	70.2	71.8	143,000	7.5	182,000	9.5	3,100	9.7
March . . . . .	342,000	16.1	68.7	70.1	161,000	7.6	193,000	9.1	3,200	9.3
April . . . . .	330,000	16.1	68.5	69.8	177,000	8.6	182,000	8.9	3,200	9.6
May . . . . .	368,000	17.3	73.9	74.7	247,000	11.6	180,000	8.5	3,300	9.2
June . . . . .	361,000	17.5	74.7	74.8	274,000	13.3	169,000	8.2	3,200	9.2
July . . . . .	364,000	17.1	72.9	69.9	224,000	10.5	173,000	8.1	3,100	8.6
August . . . . .	362,000	17.0	72.6	68.9	264,000	12.4	170,000	8.0	3,100	8.7
September . . . . .	362,000	17.5	74.8	70.0	236,000	11.4	168,000	8.1	3,100	8.8
October . . . . .	361,000	16.9	72.2	72.1	219,000	10.3	178,000	8.3	3,100	8.6
November . . . . .	333,000	16.1	68.8	70.6	190,000	9.2	169,000	8.2	3,000	8.7
December . . . . .	350,000	16.3	70.0	71.7	191,000	8.9	185,000	8.6	3,200	9.1
<b>1991:</b>										
January . . . . .	325,000	15.2	65.0	68.5	120,000	5.6	195,000	9.1	3,300	9.6
February . . . . .	312,000	16.1	68.9	70.5	151,000	7.8	179,000	9.2	3,100	9.6
March . . . . .	346,000	16.1	69.0	70.3	140,000	6.5	191,000	8.9	3,200	9.4
April . . . . .	340,000	16.4	70.2	71.9	186,000	8.9	185,000	8.9	3,000	8.8
May . . . . .	355,000	16.5	70.9	71.8	230,000	10.7	183,000	8.5	3,300	9.5
June . . . . .	342,000	16.4	70.4	69.3	257,000	12.4	168,000	8.1	3,000	8.9
July . . . . .	358,000	16.6	71.4	68.7	232,000	10.8	178,000	8.3	3,000	8.5
August . . . . .	346,000	16.1	69.1	65.3	253,000	11.7	172,000	8.0	2,800	8.2
September . . . . .	366,000	17.5	75.4	70.6	220,000	10.5	165,000	7.9	2,900	8.3
October . . . . .	355,000	16.4	70.8	71.0	220,000	10.2	180,000	8.3	3,000	8.3

<sup>1</sup>The method of seasonal adjustment, developed by the U.S. Bureau of the Census, is described in *The X-11 Variant of the Census Method II Seasonal Adjustment Program*, Technical Paper No. 15 (1967 revision).

NOTE: Figures include all revisions received from the States and, therefore, may differ from those previously published.

**Table 2. Provisional number of live births and deaths: each division and State, October 1990 and 1991, and cumulative figures, 1989-91**  
 [Data are estimates by State of residence; see Technical notes]

Area	Live births					Deaths				
	October		January-October			October		January-October		
	1991	1990	1991	1990	1989	1991	1990	1991	1990	1989
New England . . . . .	16,589	17,621	160,812	171,021	165,714	8,398	8,773	92,553	96,112	96,026
Maine . . . . .	1,639	1,563	13,927	14,603	14,392	623	866	8,821	9,226	8,634
New Hampshire . . . . .	1,298	1,351	13,725	14,679	15,533	737	636	7,023	7,076	7,189
Vermont . . . . .	877	759	6,607	7,008	6,762	430	370	3,839	3,877	3,644
Massachusetts . . . . .	7,560	8,405	74,475	79,383	76,894	3,711	3,778	42,414	45,725	45,609
Rhode Island . . . . .	1,318	1,156	12,281	12,530	12,289	758	802	7,667	7,875	7,923
Connecticut . . . . .	3,897	4,387	39,797	42,818	39,844	2,139	2,321	22,789	22,333	23,027
Middle Atlantic . . . . .	54,452	55,781	484,239	499,683	488,261	31,391	30,779	298,978	302,693	303,953
New York . . . . .	31,061	30,315	249,043	256,032	247,763	15,169	14,741	139,603	141,882	142,905
New Jersey . . . . .	9,997	10,947	92,134	98,949	96,896	5,895	5,714	57,655	58,456	58,900
Pennsylvania . . . . .	13,394	14,519	143,062	144,702	143,602	10,327	10,324	101,720	102,355	102,148
East North Central . . . . .	138,776	58,338	1,393,123	566,704	543,884	121,976	31,731	1,223,781	310,779	308,835
Ohio . . . . .	12,554	14,362	131,534	137,279	133,595	7,711	8,464	80,894	82,324	81,041
Indiana . . . . .	8,020	7,326	71,210	71,420	69,725	4,040	3,961	41,254	41,554	40,773
Illinois . . . . .	---	16,098	---	162,276	159,808	---	8,857	---	86,077	86,653
Michigan . . . . .	13,126	14,923	130,225	134,403	119,980	6,864	6,931	66,164	66,017	65,801
Wisconsin . . . . .	5,076	5,629	60,154	61,326	60,776	3,361	3,518	35,469	34,807	34,567
West North Central . . . . .	22,433	24,205	219,236	229,108	222,933	13,440	13,106	133,648	136,053	135,421
Minnesota . . . . .	5,881	5,739	56,407	58,036	55,508	2,989	3,083	28,979	28,893	28,362
Iowa . . . . .	3,208	3,473	28,926	32,174	32,855	2,882	2,133	21,155	23,048	21,382
Missouri . . . . .	5,871	7,234	64,656	67,624	65,919	3,504	3,874	42,705	42,955	45,064
North Dakota . . . . .	732	789	7,687	8,024	8,373	514	483	4,600	4,765	4,573
South Dakota . . . . .	1,124	1,033	9,357	9,323	9,269	607	568	5,489	5,443	5,458
Nebraska . . . . .	1,890	1,732	20,153	20,089	19,873	1,015	1,052	11,920	11,990	12,251
Kansas . . . . .	3,727	4,205	32,050	33,838	31,136	1,929	1,913	18,800	18,959	18,331
South Atlantic . . . . .	62,008	64,905	576,440	590,322	565,425	33,124	31,969	329,013	327,967	323,381
Delaware . . . . .	981	993	9,596	9,442	9,301	525	521	4,857	4,790	4,910
Maryland . . . . .	8,041	7,741	68,097	68,441	62,326	3,063	3,325	30,408	31,732	31,649
District of Columbia . . . . .	882	861	8,724	9,193	9,347	452	567	5,707	6,265	6,554
Virginia . . . . .	8,299	8,320	81,880	84,372	81,384	4,046	4,077	40,300	40,244	38,930
West Virginia . . . . .	2,432	2,036	19,314	18,991	18,841	1,681	1,672	16,678	16,609	16,224
North Carolina . . . . .	8,561	8,997	85,432	87,855	85,768	4,821	4,761	48,510	47,804	47,348
South Carolina . . . . .	4,771	5,150	48,281	49,278	47,428	2,709	2,573	24,782	24,735	24,097
Georgia . . . . .	9,930	11,790	93,729	95,279	92,001	4,921	3,935	44,791	44,292	44,819
Florida . . . . .	18,111	19,017	161,387	167,471	159,029	10,906	10,538	112,980	111,496	108,850
East South Central . . . . .	20,899	20,679	194,050	201,478	193,545	11,995	12,340	119,156	122,633	117,777
Kentucky . . . . .	4,557	4,712	46,276	49,134	45,911	3,012	3,078	29,154	29,870	29,357
Tennessee . . . . .	6,754	5,862	60,642	61,293	60,277	3,494	3,552	37,599	38,245	36,717
Alabama . . . . .	5,620	6,294	50,626	54,425	51,640	3,326	3,633	31,354	33,418	31,219
Mississippi . . . . .	3,968	3,811	36,506	36,626	35,717	2,163	2,077	21,049	21,100	20,484
West South Central . . . . .	40,015	39,881	400,403	399,101	370,217	17,454	17,228	185,906	184,882	178,431
Arkansas . . . . .	3,056	2,911	29,049	30,239	30,038	2,034	1,998	19,950	20,801	20,526
Louisiana . . . . .	5,497	5,537	62,076	61,546	56,924	2,677	2,741	32,014	31,599	29,758
Oklahoma . . . . .	3,586	4,278	40,045	39,444	39,999	2,508	2,480	25,200	25,414	24,637
Texas <sup>2</sup> . . . . .	27,876	27,155	269,233	267,872	243,256	10,235	10,009	108,742	107,068	103,510
Mountain . . . . .	22,436	20,780	205,386	203,729	195,545	8,245	7,757	83,440	80,822	79,309
Montana . . . . .	985	966	9,743	9,795	9,843	599	624	5,951	5,789	5,613
Idaho . . . . .	1,667	1,336	14,726	14,070	13,124	652	704	6,525	6,379	6,272
Wyoming . . . . .	597	599	5,716	5,777	5,871	273	275	2,605	2,701	2,687
Colorado . . . . .	5,065	5,099	45,982	44,518	42,568	2,074	2,054	18,738	17,717	17,748
New Mexico . . . . .	2,304	2,342	23,303	24,228	24,307	1,159	576	9,417	8,991	8,956
Arizona . . . . .	6,603	5,880	56,992	57,441	55,225	2,195	2,047	24,545	23,960	23,489
Utah . . . . .	3,501	3,380	29,984	30,585	29,746	916	986	7,749	7,829	7,459
Nevada . . . . .	1,714	1,178	18,940	17,315	14,861	377	491	7,910	7,456	7,085
Pacific . . . . .	69,146	69,219	627,811	640,601	590,648	25,553	23,939	245,145	243,387	242,732
Washington . . . . .	7,736	6,156	63,400	67,877	60,649	2,488	2,862	30,970	30,933	30,680
Oregon . . . . .	3,439	3,628	35,937	37,290	34,957	2,006	2,170	20,712	21,311	21,663
California <sup>3</sup> . . . . .	55,375	56,655	502,542	508,849	469,205	20,369	18,185	186,106	183,667	183,424
Alaska . . . . .	880	972	9,268	9,527	9,667	158	178	1,794	1,825	1,690
Hawaii . . . . .	1,716	1,808	16,664	17,058	16,170	532	544	5,563	5,651	5,275

<sup>1</sup>Excludes figures for State(s) shown below as not available.  
<sup>2</sup>Beginning with data for February 1991, figures include adjustments for varying length of reporting period, see Technical notes.  
<sup>3</sup>Figures for all years include adjustments for varying length of reporting period, see Technical notes.

Data for all years are provisional estimates by State of residence rather than by State of occurrence and, therefore, figures for 1989 and 1990 differ from those published previously.

NOTE: Figures include all revisions received from the States. Cumulative figures for the current year reflect revisions received for previous months, and figures for earlier years may differ from those previously published.

**Table 3. Provisional number of marriages and divorces: each division and State, October 1990 and 1991, and cumulative figures, 1989-91**

[By State of occurrence. Number of events reported; see Technical notes. Divorces include reported annulments]

Area	Marriages					Divorces				
	October		January-October			October		January-October		
	1991	1990	1991	1990	1989	1991	1990	1991	1990	1989
New England	17,154	12,729	162,812	96,022	95,691	12,261	2,903	125,657	37,318	38,299
Maine	1,053	1,343	8,564	10,080	10,915	284	507	4,730	4,253	4,824
New Hampshire	1,220	1,110	8,408	8,977	9,409	387	394	4,210	4,533	4,271
Vermont	874	755	5,134	5,252	5,156	192	197	2,177	2,133	2,094
Massachusetts	3,142	5,689	34,167	40,019	39,810	1,132	697	11,703	14,087	13,030
Rhode Island	865	921	6,539	7,141	7,230	266	310	2,837	3,267	3,062
Connecticut	---	2,911	---	24,553	23,171	---	798	---	9,045	11,018
Middle Atlantic	116,515	30,375	1113,762	261,211	260,184	10,138	9,217	95,860	103,786	105,291
New York <sup>2</sup>	---	14,600	---	138,066	136,570	4,938	3,800	46,863	49,393	51,700
New Jersey	6,433	6,783	47,309	49,170	51,187	1,669	1,828	15,645	20,617	21,748
Pennsylvania	10,082	8,992	66,453	73,975	72,427	3,531	3,589	33,352	33,776	31,843
East North Central	125,113	125,845	1223,169	1228,805	302,508	18,990	19,310	193,818	190,904	124,359
Ohio	9,845	9,680	82,075	78,825	81,891	4,154	4,300	45,235	41,829	39,889
Indiana	5,083	4,938	42,960	46,433	47,178	---	---	---	---	---
Illinois	---	---	---	---	70,047	---	---	---	---	37,725
Michigan	7,805	8,604	64,120	66,271	66,711	3,289	3,623	33,135	34,249	32,301
Wisconsin	2,380	2,623	34,014	37,276	36,681	1,547	1,387	15,448	14,826	14,444
West North Central	14,008	14,548	129,208	133,805	134,498	5,891	6,140	66,274	64,273	62,204
Minnesota	3,585	3,721	29,147	29,778	30,328	1,465	1,568	12,875	12,672	12,930
Iowa	2,460	2,380	20,205	21,372	20,761	854	951	10,211	9,203	8,339
Missouri	4,267	4,636	39,372	41,327	43,639	1,768	1,800	21,872	22,097	22,075
North Dakota	400	414	4,110	4,129	4,258	190	190	1,825	1,970	1,874
South Dakota	640	674	6,546	6,726	6,245	246	239	2,279	2,216	2,129
Nebraska	822	889	11,000	10,764	10,964	442	519	5,348	5,383	5,255
Kansas	1,834	1,834	18,828	19,709	18,303	926	873	11,864	10,732	9,602
South Atlantic	139,801	37,910	1373,544	386,376	368,193	119,088	19,268	1194,592	192,115	178,730
Delaware	550	581	4,563	4,804	5,117	246	261	2,469	2,443	2,577
Maryland	4,912	4,276	37,838	38,730	40,435	1,415	1,591	13,603	13,351	13,088
District of Columbia	---	559	---	4,097	4,165	---	251	---	2,315	2,077
Virginia	6,110	6,483	58,084	60,163	58,247	2,421	2,338	23,368	22,591	21,204
West Virginia	938	1,128	10,708	11,146	11,240	842	734	8,448	7,788	7,931
North Carolina	4,074	4,464	41,468	44,080	42,948	2,739	2,875	28,341	28,754	27,186
South Carolina	4,142	4,197	44,420	46,827	45,197	1,377	1,539	12,245	13,724	12,352
Georgia	8,563	4,286	61,733	57,710	45,508	3,046	2,269	36,726	32,807	25,205
Florida	10,512	11,936	114,730	118,819	115,336	7,002	7,410	69,392	68,342	67,110
East South Central	15,767	15,087	153,625	154,622	152,320	7,935	8,066	78,650	79,808	76,682
Kentucky	4,330	4,225	41,008	43,217	43,278	1,554	1,682	17,933	18,446	17,952
Tennessee	6,057	5,226	57,725	54,407	54,317	3,268	3,400	27,128	26,984	26,114
Alabama	3,474	3,906	35,524	36,898	34,656	2,027	2,048	22,713	21,720	21,698
Mississippi	1,906	1,730	19,368	20,100	20,069	1,086	936	10,876	12,658	10,918
West South Central	24,690	20,981	249,386	241,786	235,660	11,318	11,908	1128,426	1114,384	1112,299
Arkansas	3,130	2,503	32,393	29,745	29,080	1,523	1,237	15,813	14,122	13,751
Louisiana	4,492	3,381	30,632	32,649	31,699	---	---	---	---	---
Oklahoma	2,515	2,597	27,418	27,561	27,625	2,157	2,095	19,977	21,332	19,549
Texas <sup>3</sup>	14,553	12,500	158,943	151,831	147,256	7,638	8,576	92,636	78,930	78,999
Mountain	10,316	19,584	1106,331	1108,689	205,666	14,800	7,727	14,735	7,209	6,906
Montana	556	548	6,352	6,099	5,902	400	396	288	345	295
Idaho	1,096	1,535	12,121	12,911	11,178	479	682	565	547	446
Wyoming	419	345	4,154	4,133	3,901	278	284	222	277	238
Colorado	2,042	2,223	25,274	27,591	27,786	---	1,573	---	1,637	1,453
New Mexico <sup>4,5</sup>	1,009	933	11,126	11,076	10,675	764	717	677	655	624
Arizona <sup>2</sup>	3,340	3,087	30,919	30,769	30,078	2,153	2,147	2,114	1,919	1,991
Utah	1,854	913	16,385	16,110	15,979	726	807	869	750	858
Nevada	---	---	---	---	100,167	---	1,121	---	1,079	1,001
Pacific	17,611	31,514	184,673	282,047	264,222	14,567	11,468	14,843	9,858	11,882
Washington	4,017	4,036	43,890	42,922	37,367	2,093	2,320	2,975	1,879	2,430
Oregon	1,780	1,696	20,591	20,957	19,698	1,780	1,359	1,201	1,208	1,386
California	---	23,859	---	198,005	187,294	---	7,121	---	6,365	7,442
Alaska	411	530	5,161	4,902	4,746	306	221	307	163	236
Hawaii	1,403	1,393	15,031	15,261	15,117	388	447	360	243	388

<sup>1</sup>Excludes figures for State(s) shown below as not available.

<sup>2</sup>Figures for marriages are marriage licenses issued for some counties.

<sup>3</sup>Beginning with data for February 1991, figures include adjustments for varying length of reporting period, see Technical notes.

<sup>4</sup>Figures for marriages are marriage licenses issued.

<sup>5</sup>Figures for divorces include estimates for some counties.

Data are provisional estimates by State of occurrence rather than by State of residence and should be interpreted accordingly.

NOTE: Figures include all revisions received from the States. Cumulative figures for the current year reflect revisions received for previous months, and figures for earlier years may differ from those previously published.

Table 4. Provisional number of deaths under 1 year and infant mortality rates: each division and State, 12 months ending with October 1990 and 1991

[Data are estimates by State of residence; see Technical notes. Infant mortality rates are deaths under 1 year per 1,000 live births in specified area]

Area	12 months ending with October			
	1991		1990	
	Number	Rate	Number	Rate
New England . . . . .	1,986	16.9	1,531	7.4
Maine . . . . .	102	6.3	114	6.4
New Hampshire . . . . .	101	6.2	127	7.3
Vermont . . . . .	47	6.0	55	6.6
Massachusetts . . . . .	641	7.3	713	7.3
Rhode Island . . . . .	95	6.5	109	7.3
Connecticut . . . . .	---	---	413	8.1
Middle Atlantic . . . . .	12,620	19.1	5,706	9.7
New York . . . . .	---	---	2,856	9.6
New Jersey . . . . .	1,042	8.9	1,113	9.1
Pennsylvania . . . . .	1,578	9.3	1,737	10.2
East North Central . . . . .	14,388	19.3	6,777	10.0
Ohio . . . . .	1,516	9.5	1,577	9.5
Indiana . . . . .	755	8.9	843	10.0
Illinois . . . . .	---	---	2,057	10.5
Michigan . . . . .	1,541	9.9	1,662	10.5
Wisconsin . . . . .	576	8.0	638	8.7
West North Central . . . . .	2,264	8.6	2,221	8.2
Minnesota . . . . .	496	7.4	516	7.5
Iowa . . . . .	278	7.7	349	9.2
Missouri . . . . .	785	10.0	682	8.5
North Dakota . . . . .	81	8.8	70	7.3
South Dakota . . . . .	97	8.9	113	10.2
Nebraska . . . . .	187	7.8	174	7.2
Kansas . . . . .	340	8.9	317	8.0
South Atlantic . . . . .	16,432	110.6	7,373	10.5
Delaware . . . . .	138	12.1	115	10.2
Maryland . . . . .	---	---	741	9.2
District of Columbia . . . . .	177	16.9	202	18.3
Virginia . . . . .	972	10.0	1,035	10.4
West Virginia . . . . .	205	9.1	212	9.5
North Carolina . . . . .	1,121	11.0	1,168	11.2
South Carolina . . . . .	605	10.4	727	12.2
Georgia . . . . .	1,387	12.5	1,250	11.2
Florida . . . . .	1,827	9.4	1,923	9.5
East South Central . . . . .	2,362	10.0	2,434	10.2
Kentucky . . . . .	470	8.6	486	8.5
Tennessee . . . . .	711	9.9	758	10.4
Alabama . . . . .	679	10.5	651	10.1
Mississippi . . . . .	502	11.5	539	12.3
West South Central . . . . .	4,070	8.4	4,174	8.7
Arkansas . . . . .	366	10.5	357	10.0
Louisiana . . . . .	735	10.2	759	10.4
Oklahoma . . . . .	474	9.9	470	10.0
Texas <sup>2</sup> . . . . .	2,495	7.6	2,588	8.0
Mountain . . . . .	1,934	7.9	2,085	8.5
Montana . . . . .	90	7.7	104	9.0
Idaho . . . . .	152	8.8	142	8.6
Wyoming . . . . .	52	7.5	56	8.2
Colorado . . . . .	441	8.1	436	8.0
New Mexico . . . . .	252	9.1	233	8.4
Arizona . . . . .	562	8.2	643	9.2
Utah . . . . .	222	6.2	285	7.9
Nevada . . . . .	163	7.1	186	8.9
Pacific . . . . .	11,118	17.5	6,070	8.0
Washington . . . . .	567	7.7	631	7.7
Oregon . . . . .	326	7.6	332	7.4
California <sup>3</sup> . . . . .	---	---	4,835	8.0
Alaska . . . . .	97	8.5	124	10.7
Hawaii . . . . .	128	6.4	148	7.3

<sup>1</sup>Excludes figures for State shown below as not available.<sup>2</sup>Beginning with data for February 1991, figures include adjustments for varying length of reporting period, see Technical notes.<sup>3</sup>Figures for all years include adjustments for varying length of reporting period, see Technical notes.

Data for all years are provisional estimates by State of residence rather than by State of occurrence and, therefore, differ from those published previously.

NOTE: Figures include all revisions received from the States. Figures for the current year reflect revisions received for previous months, and figures for earlier years may differ from those previously published.

**Table 5. Provisional number of deaths and death rates, by age, race, and sex, and age-adjusted death rates by race and sex: United States, September 1990 and 1991, cumulative figures 1990 and 1991, and 12 months ending with September 1990 and 1991**

[Data are provisional, estimated from a 10-percent sample of deaths. Rates on an annual basis per 100,000 estimated population in specified group. Due to rounding of estimates, figures may not add to totals. For method of computation and information on standard errors of the estimates see Technical notes]

Age, race, and sex	September				January–September				12 months ending with September			
	1991		1990		1991		1990		1991		1990	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
<b>All races, both sexes<sup>1</sup></b>												
All ages . . . . .	165,000	791.8	168,000	811.6	1,617,000	854.4	1,630,000	870.4	2,149,000	850.3	2,174,000	868.9
Under 1 year . . . . .					30,600	<sup>2</sup> 903.3	31,900	<sup>2</sup> 950.1	36,800	<sup>2</sup> 899.7	38,400	<sup>2</sup> 959.2
1–4 years . . . . .	} 4,080	88.9	4,390	97.1	5,690	49.9	5,210	46.3	7,160	47.0	6,820	45.6
5–14 years . . . . .					6,530	24.1	6,590	24.8	8,500	23.5	8,720	24.5
15–24 years . . . . .	3,290	113.0	3,470	117.9	28,200	106.3	28,450	105.6	36,640	103.3	37,480	103.9
25–34 years . . . . .	4,970	139.6	5,260	146.5	44,920	138.3	46,330	141.5	59,490	137.0	61,960	141.6
35–44 years . . . . .	6,930	213.6	6,640	211.9	64,860	221.8	62,600	222.3	86,210	221.2	83,110	221.5
45–54 years . . . . .	8,730	402.8	9,950	472.5	88,870	456.6	88,970	467.9	118,110	455.1	119,420	470.8
55–64 years . . . . .	19,210	1,096.8	19,450	1,105.4	185,760	1,163.7	189,950	1,183.9	247,520	1,159.6	254,590	1,186.3
65–74 years . . . . .	37,610	2,449.3	38,170	2,512.6	360,060	2,586.2	363,460	2,641.6	477,490	2,567.6	482,230	2,624.7
75–84 years . . . . .	44,890	5,337.2	45,190	5,488.2	451,730	5,947.5	456,930	6,145.9	602,000	5,938.1	609,850	6,147.7
85 years and over . . . . .	35,500	12,993.9	34,990	13,391.4	351,900	14,371.7	351,590	14,984.6	467,900	14,330.8	469,360	15,009.9
Not stated . . . . .	100	...	130	...	670	...	1,180	...	960	...	1,510	...
Age-adjusted rate . . . . .	...	475.1	...	493.9	...	509.0	...	520.8	...	506.1	...	520.3
<b>All races, male<sup>1</sup></b>												
All ages . . . . .	85,100	835.6	87,790	871.7	836,970	907.1	846,830	927.4	1,111,750	902.6	1,127,550	924.5
Under 1 year . . . . .					15,860	<sup>2</sup> 1,013.1	16,370	<sup>2</sup> 1,056.2	21,130	<sup>2</sup> 1,005.2	21,720	<sup>2</sup> 1,055.9
1–4 years . . . . .	} 2,340	99.5	2,480	107.1	3,020	51.7	2,910	50.8	3,880	49.8	3,780	49.4
5–14 years . . . . .					4,010	28.9	4,100	30.0	5,200	28.0	5,400	29.6
15–24 years . . . . .	2,440	165.6	2,730	183.3	21,410	159.4	21,530	158.0	27,800	155.1	28,330	155.3
25–34 years . . . . .	3,650	204.7	4,050	225.4	32,940	202.7	34,230	208.9	43,520	200.4	45,540	207.9
35–44 years . . . . .	4,790	298.2	4,490	289.9	44,530	307.9	42,970	308.7	58,980	306.0	56,480	304.5
45–54 years . . . . .	5,230	495.8	6,420	626.7	56,350	595.0	56,430	610.3	74,520	590.3	75,810	614.3
55–64 years . . . . .	11,640	1,401.6	11,840	1,421.5	114,250	1,510.3	115,740	1,524.7	151,310	1,495.9	155,540	1,532.4
65–74 years . . . . .	21,700	3,160.4	22,080	3,255.8	206,050	3,312.7	209,290	3,410.3	273,260	3,289.1	278,590	3,399.9
75–84 years . . . . .	21,750	6,757.5	22,380	7,143.0	222,020	7,653.5	226,600	8,025.8	298,980	7,673.9	300,810	7,987.5
85 years and over . . . . .	11,500	15,093.5	11,220	15,407.4	116,130	16,999.3	115,870	17,710.2	154,610	16,971.5	154,590	17,728.2
Not stated . . . . .	60	...	90	...	400	...	790	...	570	...	970	...
Age-adjusted rate . . . . .	...	609.6	...	645.6	...	659.8	...	677.5	...	655.4	...	676.1
<b>All races, female<sup>1</sup></b>												
All ages . . . . .	80,220	750.3	79,870	754.5	779,840	804.4	783,240	816.1	1,037,190	800.8	1,046,090	816.0
Under 1 year . . . . .					11,770	<sup>2</sup> 788.1	12,450	<sup>2</sup> 842.9	15,830	<sup>2</sup> 789.5	16,880	<sup>2</sup> 860.3
1–4 years . . . . .	} 1,740	77.7	1,910	86.6	2,670	47.9	2,300	42.1	3,280	44.1	3,050	41.8
5–14 years . . . . .					2,510	19.0	2,490	19.2	3,300	18.7	3,330	19.2
15–24 years . . . . .	840	58.4	740	50.9	6,780	51.7	6,920	51.9	8,840	50.4	9,140	51.3
25–34 years . . . . .	1,320	74.3	1,220	68.0	11,980	73.8	12,100	74.0	15,970	73.6	16,410	75.1
35–44 years . . . . .	2,150	131.3	2,150	135.7	20,320	137.7	19,630	137.8	27,240	138.3	26,640	140.4
45–54 years . . . . .	3,510	315.5	3,530	326.4	32,520	325.5	32,540	333.2	43,590	327.1	43,610	334.7
55–64 years . . . . .	7,570	822.1	7,610	821.3	71,510	851.7	74,210	877.7	96,210	856.8	99,050	875.8
65–74 years . . . . .	15,920	1,875.2	16,090	1,913.0	154,010	2,000.1	154,170	2,022.7	204,220	1,984.8	203,640	2,000.4
75–84 years . . . . .	23,140	4,457.5	22,810	4,471.8	229,720	4,893.5	230,330	4,995.6	305,020	4,866.3	309,030	5,021.6
85 years and over . . . . .	23,990	12,176.8	23,770	12,606.9	235,770	13,353.6	235,720	13,929.5	313,290	13,308.8	314,770	13,958.8
Not stated . . . . .	40	...	40	...	270	...	390	...	390	...	550	...
Age-adjusted rate . . . . .	...	363.0	...	367.4	...	384.2	...	392.2	...	383.0	...	392.4
<b>White</b>												
All ages . . . . .	142,440	815.0	145,950	841.8	1,396,180	880.6	1,414,220	898.9	1,860,140	878.2	1,885,060	896.8
Under 1 year . . . . .					18,100	<sup>2</sup> 748.7	19,590	<sup>2</sup> 813.0	24,770	<sup>2</sup> 763.1	26,030	<sup>2</sup> 812.7
1–4 years . . . . .	} 2,690	73.5	3,180	88.0	3,940	43.5	3,730	41.5	5,050	41.6	4,920	41.1
5–14 years . . . . .					4,750	21.9	4,950	23.1	6,330	21.9	6,520	22.9
15–24 years . . . . .	2,320	98.7	2,570	107.7	20,440	95.2	21,100	96.6	26,690	93.0	27,800	95.0
25–34 years . . . . .	3,600	121.6	3,730	124.6	32,210	119.2	33,630	123.1	42,530	117.6	44,490	121.8
35–44 years . . . . .	5,030	182.6	5,050	189.3	47,490	191.1	46,100	192.1	63,600	191.9	61,670	192.8
45–54 years . . . . .	6,740	361.6	8,130	448.7	69,720	416.7	70,270	429.3	92,920	416.4	94,030	430.6
55–64 years . . . . .	15,660	1,030.2	16,510	1,077.5	153,530	1,107.1	158,050	1,129.6	205,450	1,107.4	211,910	1,132.3
65–74 years . . . . .	32,890	2,412.3	33,140	2,450.8	313,180	2,531.5	318,280	2,596.9	416,300	2,518.5	422,220	2,579.4
75–84 years . . . . .	40,890	5,383.0	41,080	5,517.2	407,860	5,942.7	413,040	6,141.5	543,690	5,934.8	551,050	6,139.8
85 years and over . . . . .	32,540	13,161.7	32,450	13,699.1	324,380	14,634.3	324,820	15,268.1	432,020	14,615.0	433,500	15,291.0
Not stated . . . . .	80	...	110	...	570	...	670	...	790	...	920	...
Age-adjusted rate . . . . .	...	451.4	...	477.1	...	485.2	...	498.9	...	483.9	...	498.0

See footnotes at end of table.

**Table 5. Provisional number of deaths and death rates, by age, race, and sex, and age-adjusted death rates by race and sex: United States, September 1990 and 1991, cumulative figures 1990 and 1991, and 12 months ending with September 1990 and 1991 - Con.**

[Data are provisional, estimated from a 10-percent sample of deaths. Rates on an annual basis per 100,000 estimated population in specified group. Due to rounding of estimates, figures may not add to totals. For method of computation and information on standard errors of the estimates see Technical notes]

Age, race, and sex	September				January-September				12 months ending with September			
	1991		1990		1991		1990		1991		1990	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
<b>White male</b>												
All ages . . . . .	72,690	849.3	75,990	895.5	716,020	922.4	728,730	946.4	953,400	919.8	969,780	942.8
Under 1 year . . . . .					10,440	2842.0	11,220	2906.4	14,280	2857.7	14,860	2904.4
1-4 years . . . . .	1,600	85.3	1,890	101.9	2,150	46.2	2,050	44.6	2,820	45.3	2,710	44.1
5-14 years . . . . .					2,930	26.3	3,070	28.0	3,870	26.1	4,050	27.7
15-24 years . . . . .					1,740	145.9	2,010	166.1	15,370	141.2	15,830	143.0
25-34 years . . . . .	2,610	174.5	2,840	187.8	23,800	174.3	25,190	182.5	31,480	172.4	33,220	179.9
35-44 years . . . . .	3,500	253.6	3,420	256.3	32,980	265.1	32,010	266.5	43,880	264.6	42,410	265.1
45-54 years . . . . .	4,090	446.0	5,290	593.8	44,450	540.0	44,820	557.1	58,710	534.9	60,030	559.1
55-64 years . . . . .	9,560	1,316.5	10,240	1,401.7	95,330	1,439.8	97,640	1,464.8	127,110	1,435.3	131,030	1,469.9
65-74 years . . . . .	19,120	3,124.6	19,350	3,193.9	180,650	3,256.1	184,980	3,371.1	239,740	3,234.5	246,030	3,357.9
75-84 years . . . . .	19,860	6,833.4	20,420	7,215.9	201,090	7,676.8	205,330	8,050.3	269,110	7,699.9	272,380	8,006.5
85 years and over . . . . .	10,560	15,516.9	10,430	16,022.5	106,500	17,450.8	106,120	18,135.0	141,950	17,438.6	141,580	18,151.3
Not stated . . . . .	50	...	90	...	330	...	460	...	440	...	590	...
Age-adjusted rate . . . . .	...	580.0	...	625.4	...	629.3	...	650.2	...	626.8	...	648.4
<b>White female</b>												
All ages . . . . .	69,740	782.1	69,970	790.4	680,160	840.4	685,490	853.3	906,740	838.4	915,280	852.8
Under 1 year . . . . .					7,660	2650.4	8,370	2714.6	10,500	2664.1	11,170	2716.0
1-4 years . . . . .	1,090	61.2	1,280	72.7	1,800	40.4	1,680	38.2	2,230	37.7	2,210	37.8
5-14 years . . . . .					1,830	17.4	1,880	18.1	2,460	17.5	2,470	17.8
15-24 years . . . . .					590	51.0	560	47.6	5,070	47.9	5,270	48.8
25-34 years . . . . .	980	67.0	890	60.1	8,410	62.7	8,450	62.4	11,050	61.7	11,270	62.3
35-44 years . . . . .	1,530	111.3	1,620	121.5	14,510	117.0	14,090	117.2	19,720	119.1	19,260	120.4
45-54 years . . . . .	2,640	278.8	2,840	308.3	25,270	297.1	25,440	305.6	34,210	301.6	34,000	306.2
55-64 years . . . . .	6,100	768.4	6,270	782.1	58,210	803.0	60,400	824.5	78,340	808.0	80,880	825.2
65-74 years . . . . .	13,770	1,832.4	13,790	1,847.6	132,520	1,942.1	133,300	1,968.9	176,560	1,936.4	176,190	1,948.6
75-84 years . . . . .	21,030	4,484.1	20,660	4,475.8	206,770	4,873.0	207,710	4,975.5	274,580	4,846.1	278,660	5,000.2
85 years and over . . . . .	21,980	12,267.1	22,020	12,818.7	217,880	13,563.7	218,710	14,182.8	290,060	13,541.5	291,920	14,205.4
Not stated . . . . .	30	...	20	...	240	...	200	...	350	...	320	...
Age-adjusted rate . . . . .	...	344.3	...	353.2	...	366.1	...	374.7	...	366.3	...	374.6
<b>Black</b>												
All ages . . . . .	20,630	789.5	19,420	755.8	197,410	835.5	193,840	833.8	259,260	822.4	259,550	836.3
Under 1 year . . . . .					8,720	21,738.2	8,530	21,753.1	11,180	21,658.8	11,590	21,802.5
1-4 years . . . . .	1,310	180.9	1,130	159.6	1,550	86.4	1,280	73.8	1,840	76.8	1,630	70.4
5-14 years . . . . .					1,480	34.6	1,390	33.4	1,820	32.1	1,850	33.3
15-24 years . . . . .					830	190.3	810	184.5	6,900	173.6	6,580	163.9
25-34 years . . . . .	1,290	279.2	1,420	308.0	11,430	272.2	11,620	277.2	15,240	272.1	15,920	284.2
35-44 years . . . . .	1,740	477.4	1,400	403.9	15,780	483.1	15,010	483.7	20,560	473.5	19,590	474.0
45-54 years . . . . .	1,790	791.6	1,640	741.2	17,300	848.6	16,790	840.5	22,820	839.6	22,880	858.2
55-64 years . . . . .	3,240	1,804.9	2,620	1,471.7	28,960	1,777.9	29,060	1,798.0	38,080	1,750.0	38,700	1,792.5
65-74 years . . . . .	4,210	3,104.3	4,490	3,380.5	42,090	3,434.3	40,410	3,368.6	55,100	3,370.0	53,990	3,372.3
75-84 years . . . . .	3,550	5,573.1	3,700	5,923.2	38,980	6,768.6	39,060	6,921.0	51,960	6,748.1	52,430	6,962.8
85 years and over . . . . .	2,650	12,448.5	2,180	10,738.2	24,140	12,638.9	23,760	13,013.2	31,680	12,423.5	31,920	13,135.8
Not stated . . . . .	20	...	20	...	90	...	340	...	150	...	430	...
Age-adjusted rate . . . . .	...	704.0	...	673.9	...	742.3	...	741.7	...	730.0	...	744.3
<b>Black male</b>												
All ages . . . . .	11,050	890.5	10,530	863.5	107,330	957.1	105,420	955.6	141,120	944.0	140,970	957.1
Under 1 year . . . . .					4,980	21,953.7	4,760	21,932.8	6,270	21,833.3	6,260	21,920.2
1-4 years . . . . .	700	190.0	550	152.8	790	85.4	730	82.8	920	75.5	890	75.6
5-14 years . . . . .					930	43.1	870	41.1	1,160	40.2	1,130	40.0
15-24 years . . . . .					610	282.5	660	303.9	5,410	275.6	5,160	259.6
25-34 years . . . . .	950	435.0	1,110	509.8	8,110	408.6	8,310	419.6	10,720	406.2	11,270	425.9
35-44 years . . . . .	1,200	719.2	950	600.4	10,530	705.6	9,940	701.1	13,790	695.4	12,850	681.3
45-54 years . . . . .	1,030	1,021.3	1,010	1,022.3	10,790	1,186.8	10,570	1,184.5	14,370	1,184.7	14,410	1,209.9
55-64 years . . . . .	1,910	2,344.9	1,440	1,782.3	17,060	2,307.6	16,440	2,241.0	22,010	2,227.7	22,160	2,261.2
65-74 years . . . . .	2,270	3,868.1	2,420	4,224.3	22,580	4,264.5	21,560	4,176.6	29,950	4,242.2	29,120	4,226.4
75-84 years . . . . .	1,600	6,689.6	1,750	7,470.8	18,090	8,364.6	18,570	8,794.2	24,240	8,387.5	24,790	8,790.8
85 years and over . . . . .	770	12,166.7	630	10,358.1	7,990	14,003.8	8,290	15,084.6	10,640	14,000.0	11,090	15,191.8
Not stated . . . . .	10	088	-	...	70	...	220	...	120	...	270	...
Age-adjusted rate . . . . .	...	907.9	...	878.9	...	972.5	...	970.5	...	958.5	...	973.9

See footnotes at end of table.

**Table 5. Provisional number of deaths and death rates, by age, race, and sex, and age-adjusted death rates by race and sex: United States, September 1990 and 1991, cumulative figures 1990 and 1991, and 12 months ending with September 1990 and 1991—Con.**

[Data are provisional, estimated from a 10-percent sample of deaths. Rates on an annual basis per 100,000 estimated population in specified group. Due to rounding of estimates, figures may not add to totals. For method of computation and information on standard errors of the estimates see Technical notes]

Age, race, and sex	September				January–September				12 months ending with September			
	1991		1990		1991		1990		1991		1990	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
<b>Black female</b>												
All ages . . . . .	9,580	698.3	8,890	658.5	90,080	725.8	88,410	723.8	118,140	712.8	118,580	727.2
Under 1 year . . . . .					3,740	<sup>2</sup> 1,516.1	3,770	<sup>2</sup> 1,572.6	4,910	<sup>2</sup> 1,478.9	5,330	<sup>2</sup> 1,681.4
1–4 years . . . . .	610	171.5	580	166.7	760	85.1	550	64.5	920	78.2	740	65.1
5–14 years . . . . .					550	26.4	520	25.4	660	23.7	720	26.4
15–24 years . . . . .	230	104.5	150	67.6	1,490	73.8	1,410	69.6	1,880	70.1	1,900	70.1
25–34 years . . . . .	340	139.6	320	131.5	3,320	150.2	3,310	149.7	4,530	152.9	4,650	157.3
35–44 years . . . . .	540	273.3	460	244.2	5,250	296.3	5,070	300.0	6,780	287.4	6,740	300.0
45–54 years . . . . .	760	606.7	630	514.4	6,510	578.7	6,230	561.9	8,450	561.5	8,470	574.2
55–64 years . . . . .	1,330	1,356.4	1,180	1,213.6	11,900	1,337.7	12,620	1,430.9	16,070	1,352.7	16,540	1,402.9
65–74 years . . . . .	1,950	2,534.7	2,070	2,740.5	19,500	2,802.6	18,850	2,758.0	25,150	2,707.2	24,870	2,727.0
75–84 years . . . . .	1,950	4,901.9	1,950	4,994.7	20,890	5,799.6	20,490	5,802.5	27,720	5,763.0	27,640	5,868.4
85 years and over . . . . .	1,880	12,567.8	1,540	10,830.4	16,150	12,048.5	15,480	12,105.7	21,040	11,754.2	20,840	12,258.8
Not stated . . . . .	10	...	20	...	20	...	120	...	30	...	160	...
Age-adjusted rate . . . . .	...	538.2	...	509.0	...	557.3	...	559.9	...	547.5	...	562.3

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

<sup>2</sup> Death rates under 1 year (based on population estimates) differ from infant mortality rates (based on live births); see table 8 for infant mortality rates.

NOTE: Figures include all revisions received from the States. Cumulative and 12-month figures for the current year reflect revisions received for previous months, and figures for earlier years may differ from those previously published.

**Table 6. Provisional number of deaths and death rates for 72 selected causes and Human immunodeficiency virus infection: United States, September 1990 and 1991, cumulative figures 1990 and 1991, and 12 months ending with September 1990 and 1991**

[Data are provisional, estimated from a 10-percent sample of deaths. Rates on an annual basis per 100,000 estimated population. Due to rounding of estimates, figures may not add to totals. For method of computation and information on standard errors of the estimates see Technical notes. For explanation of the asterisk preceding cause-of-death codes see Technical notes]

Cause of death (Ninth Revision International Classification of Diseases, 1975)	September		January–September		12 months ending with September							
	1991		1990		1991		1990					
	Number	Rate	Number	Rate	Number	Rate	Number	Rate				
All causes . . . . .	165,000	791.8	168,000	811.6	1,617,000	854.4	1,630,000	870.4	2,149,000	850.3	2,174,000	868.9
Shigellosis and amebiasis . . . . .	—	*	—	*	20	*	—	*	20	*	—	*
Certain other intestinal infections . . . . .	30	*	30	*	500	0.3	330	0.2	600	0.2	440	0.2
Tuberculosis . . . . .	110	0.5	150	0.7	1,250	0.7	1,310	0.7	1,600	0.6	1,760	0.7
Tuberculosis of respiratory system . . . . .	70	*	130	0.6	920	0.5	1,010	0.5	1,190	0.5	1,380	0.6
Other tuberculosis . . . . .	40	*	20	*	320	0.2	300	0.2	410	0.2	380	0.2
Whooping cough . . . . .	—	*	—	*	—	*	20	*	—	*	30	*
Streptococcal sore throat, scarlatina, and erysipelas . . . . .	—	*	—	*	10	*	10	*	10	*	10	*
Meningococcal infection . . . . .	10	*	20	*	210	0.1	100	*	290	0.1	160	0.1
Septicemia . . . . .	1,310	6.3	1,630	7.9	14,240	7.5	14,950	8.0	19,020	7.5	19,930	8.0
Acute poliomyelitis . . . . .	—	*	—	*	10	*	—	*	10	*	—	*
Measles . . . . .	—	*	—	*	20	*	70	*	20	*	80	*
Viral hepatitis . . . . .	160	0.8	120	0.6	1,480	0.8	1,270	0.7	1,870	0.7	1,740	0.7
Syphilis . . . . .	20	*	—	*	100	*	70	*	140	0.1	130	0.1
All other infectious and parasitic diseases <sup>1</sup> . . . . .	2,550	12.2	2,470	11.9	25,650	13.5	23,450	12.5	33,390	13.2	30,960	12.4
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues . . . . .	41,740	199.9	43,430	210.2	385,770	203.9	380,190	203.0	512,680	202.9	505,980	202.3
Malignant neoplasms of lip, oral cavity, and pharynx . . . . .	570	2.7	700	3.4	5,650	3.0	6,030	3.2	7,480	3.0	8,050	3.2
Malignant neoplasms of digestive organs and peritoneum . . . . .	9,650	46.2	10,640	51.5	89,830	47.5	90,180	48.1	120,880	47.8	120,970	48.4
Malignant neoplasms of respiratory and intrathoracic organs . . . . .	12,140	58.1	11,990	58.0	110,170	58.2	107,880	57.6	145,960	57.8	142,780	57.1
Malignant neoplasm of breast . . . . .	3,360	16.1	3,550	17.2	33,570	17.7	33,610	17.9	45,000	17.8	44,490	17.8
Malignant neoplasms of genital organs . . . . .	4,870	23.3	4,860	23.5	44,460	23.5	43,440	23.2	58,980	23.3	57,030	22.8
Malignant neoplasms of urinary organs . . . . .	1,620	7.8	1,660	8.0	15,870	8.4	15,170	8.1	21,040	8.3	20,340	8.1
Malignant neoplasms of all other and unspecified sites . . . . .	5,380	25.8	5,270	25.5	48,250	25.5	47,310	25.2	63,300	25.0	63,840	25.5
Leukemia . . . . .	1,520	7.3	1,850	9.0	14,620	7.7	14,060	7.5	19,220	7.6	18,670	7.5
Other malignant neoplasms of lymphatic and hematopoietic tissues . . . . .	2,630	12.6	2,910	14.1	23,340	12.3	22,520	12.0	30,810	12.2	29,820	11.9
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature . . . . .	660	3.2	620	3.0	5,900	3.1	6,020	3.2	7,710	3.1	7,900	3.2
Diabetes mellitus . . . . .	3,760	18.0	3,400	16.4	37,060	19.6	35,310	18.9	49,520	19.6	47,220	18.9
Nutritional deficiencies . . . . .	260	1.2	200	1.0	2,300	1.2	2,320	1.2	3,050	1.2	3,130	1.3
Anemias . . . . .	340	1.6	340	1.6	2,960	1.6	3,150	1.7	4,020	1.6	4,200	1.7
Meningitis . . . . .	20	*	60	*	530	0.3	900	0.5	780	0.3	1,110	0.4
Major cardiovascular diseases . . . . .	67,890	325.2	68,990	334.0	678,710	358.7	691,240	369.1	906,230	358.6	926,260	370.3
Diseases of heart . . . . .	52,970	253.7	54,120	262.0	534,480	282.5	545,360	291.2	713,010	282.2	729,810	291.7
Rheumatic fever and rheumatic heart disease . . . . .	460	2.2	410	2.0	4,690	2.5	4,690	2.5	6,290	2.5	6,240	2.5
Hypertensive heart disease . . . . .	1,590	7.6	1,560	7.5	16,100	8.5	16,070	8.6	21,170	8.4	21,210	8.5
Hypertensive heart and renal disease . . . . .	110	0.5	180	0.9	1,570	0.8	1,340	0.7	2,070	0.8	2,020	0.8
Ischemic heart disease . . . . .	35,230	168.8	36,690	177.6	356,820	188.6	368,430	196.7	477,360	188.9	494,860	197.8
Acute myocardial infarction . . . . .	17,860	85.6	18,380	89.0	173,900	91.9	182,780	97.6	233,070	92.2	246,310	98.5
Other acute and subacute forms of ischemic heart disease . . . . .	250	1.2	210	1.0	2,230	1.2	2,490	1.3	3,060	1.2	3,390	1.4
Angina pectoris . . . . .	70	*	80	*	690	0.4	600	0.3	830	0.3	740	0.3
Old myocardial infarction and other forms of chronic ischemic heart disease . . . . .	17,050	81.7	18,020	87.2	180,000	95.1	182,550	97.5	240,400	95.1	244,420	97.7
Other diseases of endocardium . . . . .	810	3.9	980	4.7	10,140	5.4	9,190	4.9	13,220	5.2	12,190	4.9
All other forms of heart disease . . . . .	14,770	70.7	14,310	69.3	145,170	76.7	145,650	77.8	192,900	76.3	193,300	77.3
Hypertension with or without renal disease . . . . .	510	2.4	660	3.2	6,300	3.3	6,220	3.3	8,690	3.4	8,280	3.3
Cerebrovascular diseases . . . . .	11,030	52.8	10,880	52.7	106,720	56.4	108,440	57.9	142,470	56.4	145,640	58.2
Intracerebral and other intracranial hemorrhage . . . . .	1,810	8.7	1,420	6.9	14,980	7.9	15,360	8.2	20,010	7.9	20,760	8.3
Cerebral thrombosis and unspecified occlusion of cerebral arteries . . . . .	1,280	6.1	1,270	6.1	13,330	7.0	13,660	7.3	17,540	6.9	18,420	7.4
Cerebral embolism . . . . .	40	*	60	*	530	0.3	450	0.2	740	0.3	680	0.3
All other and late effects of cerebrovascular diseases . . . . .	7,900	37.8	8,130	39.3	77,880	41.1	78,980	42.2	104,180	41.2	105,780	42.3



Atherosclerosis . . . . .	.440	1,330	6.4	1,280	6.2	12,750	6.7	13,530	7.2	16,910	6.7	18,230	7.3
Other diseases of arteries, arterioles, and capillaries . . . . .	.441-448	2,060	9.9	2,050	9.9	18,450	9.7	17,690	9.4	25,150	10.0	24,290	9.7
Acute bronchitis and bronchiolitis . . . . .	.466	30	*	30	*	430	0.2	480	0.2	500	0.2	590	0.2
Pneumonia and influenza . . . . .	.480-487	4,910	23.5	4,740	22.9	56,450	29.8	60,670	32.4	74,480	29.5	79,180	31.7
Pneumonia . . . . .	.480-486	4,890	23.4	4,730	22.9	55,910	29.5	58,830	31.4	73,830	29.2	77,120	30.8
Influenza . . . . .	.487	20	*	10	*	550	0.3	1,840	1.0	640	0.3	2,060	0.8
Chronic obstructive pulmonary disease and allied conditions . . . . .	.490-496	6,240	29.9	5,500	26.6	67,550	35.7	69,250	37.0	87,090	34.5	89,400	35.7
Bronchitis, chronic and unspecified . . . . .	.490-491	310	1.5	170	0.8	2,880	1.5	2,400	1.3	3,590	1.4	3,290	1.3
Emphysema . . . . .	.492	1,130	5.4	1,170	5.7	12,300	6.5	13,250	7.1	15,550	6.2	16,880	6.7
Asthma . . . . .	.493	360	1.7	280	1.4	3,420	1.8	3,720	2.0	4,300	1.7	5,080	2.0
Other chronic obstructive pulmonary diseases and allied conditions . . . . .	.494-496	4,440	21.3	3,890	18.8	48,960	25.9	49,890	26.6	63,640	25.2	64,150	25.6
Ulcer of stomach and duodenum . . . . .	.531-533	490	2.3	460	2.2	4,670	2.5	4,470	2.4	6,040	2.4	6,230	2.5
Appendicitis . . . . .	.540-543	10	*	50	*	380	0.2	310	0.2	500	0.2	440	0.2
Hernia of abdominal cavity and intestinal obstruction without mention of hernia . . . . .	.550-553,560	560	2.7	510	2.5	4,370	2.3	4,220	2.2	5,730	2.3	5,480	2.2
Chronic liver disease and cirrhosis . . . . .	.571	1,910	9.1	2,120	10.3	18,430	9.7	19,240	10.3	24,750	9.8	26,230	10.5
Cholelithiasis and other disorders of gallbladder . . . . .	.574-575	250	1.2	240	1.2	2,340	1.2	2,170	1.2	3,190	1.3	2,860	1.1
Nephritis and nephrotic syndrome, and nephrosis . . . . .	.580-589	1,620	7.8	1,710	8.3	16,630	8.8	16,000	8.5	22,060	8.7	21,870	8.7
Acute glomerulonephritis and nephrotic syndrome . . . . .	.580-581	20	*	80	*	230	0.1	250	0.1	310	0.1	340	0.1
Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified . . . . .	.582-583,587	70	*	160	0.8	1,030	0.5	1,040	0.6	1,370	0.5	1,440	0.6
Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause . . . . .	.584-586,588-589	1,530	7.3	1,470	7.1	15,370	8.1	14,720	7.8	20,370	8.1	20,080	8.0
Infections of kidney . . . . .	.590	50	*	60	*	960	0.5	890	0.5	1,170	0.5	1,190	0.5
Hyperplasia of prostate . . . . .	.600	-	*	30	*	280	0.1	240	0.1	340	0.1	350	0.1
Complications of pregnancy, childbirth, and the puerperium . . . . .	.630-676	30	*	30	*	200	0.1	240	0.1	290	0.1	300	0.1
Pregnancy with abortive outcome . . . . .	.630-638	10	*	20	*	60	*	70	*	70	*	70	*
Other complications of pregnancy, childbirth, and the puerperium . . . . .	.640-676	20	*	10	*	140	0.1	170	0.1	220	0.1	230	0.1
Congenital anomalies . . . . .	.740-759	900	4.3	1,050	5.1	8,990	4.8	9,970	5.3	12,310	4.9	12,890	5.2
Certain conditions originating in the perinatal period . . . . .	.760-779	1,500	7.2	1,590	7.7	12,760	6.7	12,990	6.9	17,090	6.8	17,400	7.0
Birth trauma, intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome . . . . .	.767-769	240	1.1	300	1.4	2,610	1.4	2,540	1.4	3,570	1.4	3,520	1.4
Other conditions originating in the perinatal period . . . . .	.760-766,770-779	1,260	6.0	1,290	6.2	10,150	5.4	10,450	5.6	13,520	5.4	13,880	5.5
Symptoms, signs, and ill-defined conditions . . . . .	.780-799	2,880	13.8	2,650	12.8	25,420	13.4	27,310	14.6	33,960	13.4	37,830	15.1
All other diseases . . . . .	.Residual	13,070	62.6	12,890	62.4	130,310	68.9	128,170	68.4	173,740	68.8	170,950	68.3
Accidents and adverse effects . . . . .	E800-E949	7,520	36.0	7,510	36.4	66,850	35.3	69,230	36.9	89,070	35.2	92,590	37.0
Motor vehicle accidents . . . . .	E810-E825	3,820	18.3	4,220	20.4	32,940	17.4	34,740	18.5	44,820	17.7	46,680	18.7
All other accidents and adverse effects . . . . .	E800-E807,E826-E949	3,700	17.7	3,290	15.9	33,900	17.9	34,490	18.4	44,250	17.5	45,910	18.4
Suicide . . . . .	E950-E959	2,150	10.3	2,490	12.0	22,130	11.7	23,240	12.4	28,540	11.3	30,290	12.1
Homicide and legal intervention . . . . .	E960-E978	2,240	10.7	2,460	11.9	19,520	10.3	18,890	10.1	25,180	10.0	24,570	9.8
All other external causes . . . . .	E980-E999	140	0.7	70	*	1,420	0.7	1,350	0.7	1,980	0.8	1,970	0.8
Human immunodeficiency virus infection <sup>2</sup> . . . . .	*042-*044	2,150	10.3	1,920	9.3	21,100	11.1	17,740	9.5	27,410	10.8	23,630	9.4

<sup>1</sup>Includes data for deaths due to Human immunodeficiency virus infection (category numbers \*042-\*044) shown separately below; see Technical notes.  
<sup>2</sup>Included in All other infectious and parasitic diseases shown above.

NOTE: Figures include all revisions received from the States. Cumulative and 12-month figures for the current year reflect revisions received for previous months, and figures for earlier years may differ from those previously published.

**Table 7. Provisional number of deaths and death rates for 16 selected subcategories of Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues: United States, September 1990 and 1991, cumulative figures 1990 and 1991, and 12 months ending with September 1990 and 1991**

[Data are provisional, estimated from a 10-percent sample of deaths. Rates on an annual basis per 100,000 estimated population. Due to rounding of estimates, figures may not add to totals. For method of computation and information on standard errors of the estimates see Technical notes]

Cause of death (Ninth Revision International Classification of Diseases, 1975)	September		January–September				12 months ending with September					
	1991		1990		1991		1990		1991		1990	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues <sup>1</sup> . . . . .140–208	41,740	199.9	43,430	210.2	385,770	203.9	380,190	203.0	512,680	202.9	505,980	202.3
Malignant neoplasm of esophagus . . . . .150	780	3.7	960	4.6	7,670	4.0	7,400	3.9	9,960	3.9	9,710	3.9
Malignant neoplasm of stomach . . . . .151	1,290	6.2	1,110	5.4	10,820	5.7	10,780	5.8	14,530	5.7	14,790	5.9
Malignant neoplasms of colon, rectum, rectosigmoid junction, and anus . . . . .153,154	4,490	21.5	4,930	23.9	41,220	21.8	42,810	22.9	55,510	22.0	57,440	23.0
Malignant neoplasm of pancreas . . . . .157	1,890	9.1	2,320	11.2	19,260	10.2	17,880	9.5	25,950	10.3	24,140	9.6
Malignant neoplasms of trachea, bronchus, and lung . . . . .162	11,690	56.0	11,550	55.9	106,320	56.2	104,060	55.6	140,890	55.8	137,640	55.0
Malignant melanoma of skin . . . . .172	490	2.3	580	2.8	5,370	2.8	4,810	2.6	6,770	2.7	6,430	2.6
Malignant neoplasm of cervix uteri . . . . .180	360	1.7	410	2.0	3,550	1.9	3,780	2.0	4,800	1.9	4,790	1.9
Malignant neoplasms of body of uterus and of uterus, part unspecified . . . . .179,182	410	2.0	490	2.4	4,340	2.3	4,420	2.3	5,790	2.3	5,820	2.3
Malignant neoplasm of ovary . . . . .183.0	1,180	5.6	1,000	4.8	9,870	5.2	9,230	4.9	12,830	5.1	12,140	4.9
Malignant neoplasm of prostate . . . . .185	2,760	13.2	2,780	13.5	25,280	13.3	24,530	13.1	33,870	13.4	32,400	13.0
Malignant neoplasm of bladder . . . . .188	790	3.8	780	3.8	7,770	4.1	7,460	4.0	10,470	4.1	9,990	4.0
Malignant neoplasms of kidney and other and unspecified urinary organs . . . . .189	820	3.9	880	4.3	8,090	4.3	7,710	4.1	10,560	4.2	10,350	4.1
Malignant neoplasms of brain and other and unspecified parts of nervous system . . . . .191,192	970	4.6	930	4.5	8,410	4.4	8,660	4.6	11,000	4.4	11,400	4.6
Hodgkin's disease . . . . .201	170	0.8	190	0.9	1,230	0.6	1,250	0.7	1,620	0.6	1,700	0.7
Malignant lymphoma other than Hodgkin's disease . . . . .200,202	1,660	7.9	1,740	8.4	15,150	8.0	14,160	7.6	20,020	7.9	18,940	7.6
Multiple myeloma and other immunoproliferative neoplasms . . . . .203	800	3.8	980	4.7	6,960	3.7	7,110	3.8	9,170	3.6	9,180	3.7

<sup>1</sup>Includes figures for subcategories not shown below.

NOTE: Figures include all revisions received from the States. Cumulative and 12-month figures for the current year reflect revisions received for previous months, and figures for earlier years may differ from those previously published.

**Table 8. Provisional number of deaths under 1 year and infant mortality rates, by age and for 10 selected causes: United States, September 1990 and 1991, cumulative figures 1990 and 1991, and 12 months ending with September 1990 and 1991**

[Data are provisional, estimated from a 10-percent sample of deaths. Rates on an annual basis per 100,000 live births. Due to rounding of estimates, figures may not add to totals. For method of computation and information on standard errors of the estimates see Technical notes]

Age and cause of death (Ninth Revision International Classification of Diseases, 1975)	September		January–September				12 months ending with September					
	1991		1990		1991		1990		1991		1990	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Total, under 1 year. . . . .	2,900	834.6	3,100	875.7	27,600	897.9	28,800	927.2	37,000	897.0	38,500	929.4
Under 28 days . . . . .	1,940	555.3	2,150	610.5	17,380	564.8	18,030	581.1	23,260	564.6	24,050	580.0
28 days to 11 months. . . . .	970	277.6	940	266.9	10,250	333.1	10,800	348.1	13,690	332.3	14,540	350.6
Certain gastrointestinal diseases . . . . .008–009,535,555–558	30	*	–	–	260	8.4	150	4.8	310	7.5	220	5.3
Pneumonia and influenza . . . . .480–487	30	*	40	*	510	16.6	440	14.2	650	15.8	550	13.3
Congenital anomalies . . . . .740–759	540	154.6	620	176.0	5,870	190.7	6,300	203.1	8,080	196.1	8,210	198.0
Disorders relating to short gestation and unspecified low birthweight . . . . .765	450	128.8	400	113.6	3,520	114.4	2,870	92.5	4,570	110.9	3,910	94.3
Birth trauma . . . . .767	50	*	30	*	110	3.6	110	3.5	170	4.1	140	3.4
Intrauterine hypoxia and birth asphyxia. . . . .768	60	*	50	*	590	19.2	600	19.3	770	18.7	810	19.5
Respiratory distress syndrome . . . . .769	130	37.2	200	56.8	1,870	60.8	1,760	56.7	2,570	62.4	2,510	60.5
Other conditions originating in the perinatal period. . . . .760–764,766,770–779	810	231.8	880	249.9	6,550	212.8	7,450	240.1	8,720	211.7	9,830	237.1
Sudden infant death syndrome . . . . .798.0	320	91.6	350	99.4	3,100	100.7	3,720	119.9	4,360	105.8	5,060	122.0
All other causes . . . . .Residual	490	140.2	510	144.8	5,240	170.3	5,410	174.4	6,740	163.6	7,370	177.7

NOTE: Figures include all revisions received from the States. Cumulative and 12-month figures for the current year reflect revisions received for previous months, and figures for earlier years may differ from those previously published.

## Technical notes

### Nature and sources of data

Data in this report are provisional and include only events occurring within the United States. Mortality data exclude fetal deaths.

Beginning with the January 1991 issue birth, death, and infant death figures for all years shown in tables 2 and 4 for each State are estimates by State of residence. These estimates are derived by applying adjustment ratios to the actual counts of certificates for all events occurring in the State and received in registration offices during a 1-month period regardless of date of the event. The adjustment ratios for each data year represent the observed relationship between final State occurrence and residence figures for the 3 most recent years for which final data were available, expressed as a single ratio for each State. As in previous years, monthly State marriage and divorce figures represent the actual count of all events occurring in the State (State of occurrence) that were received in the registration offices during the 1-month period. Prior to the January 1991 issue, provisional data for all events were by State of occurrence. Delay in the receipt of certificates in a registration office may result in a low State figure for a given month followed by a high figure for the month(s) in which the delayed records are received. Data for previous months and cumulative data include revised figures received from the States.

Figures for births, deaths, and infant deaths for all years for California shown in tables 2 and 4 contain adjustments for varying length of State reporting periods. Beginning with data for February 1991, figures for Texas for all events shown in tables 2-4 are also adjusted for varying length of State reporting periods. Prior to February 1991 data for Texas were reported for monthly periods. The figures for both States are adjusted by the ratio between the number of days in the data month and the number of days in the State reporting period. The adjusted figures for California and Texas shown in tables 2-4 are included in the U.S. totals.

Beginning with data for January 1991, U.S. totals for births, deaths, and infant deaths are based on the State estimates by State of residence (described above) and, therefore, in effect, exclude events to nonresidents of the United States. Events to nonresidents of the United States are included in all marriage and divorce figures for all years and in the U.S. birth, death, and infant death figures for 1990 and previous years. The effect of excluding events to nonresidents from the U.S. totals is small.

Provisional totals for the United States include estimates for State data shown as not available. Provisional totals for births and marriages for the entire United States include adjustments for observed differences between provisional and final monthly figures.

Divorce figures include reported annulments. The monthly national divorce estimate is obtained by multiplying the total for the reporting areas by the ratio observed between the most recent final annual divorce total for the United States and the provisional total for the reporting areas combined.

*Random variation*—Although the counts in this report are not subject to sampling variability (except the Current Mortality Sample, see below), they may be affected by random variation. 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. For this distribution a simple approximation may be used to estimate the random variation, as follows:

If  $N$  is the number of events in the population and  $R$  is the corresponding rate, the chances are 19 in 20 that

$$1. N - 2\sqrt{N} \text{ and } N + 2\sqrt{N}$$

covers the "true" number of events.

$$2. R - 2 \frac{R}{\sqrt{N}} \text{ and } R + 2 \frac{R}{\sqrt{N}}$$

covers the "true" rate.

If the rate  $R_1$  corresponding to  $N_1$  events is compared with the rate  $R_2$  corresponding to  $N_2$  events, the difference between the two rates may be regarded as statistically significant at the 0.05 level if it exceeds

$$2 \sqrt{\frac{R_1^2}{N_1} + \frac{R_2^2}{N_2}}$$

Additional information on random variation in numbers of events, rates, and ratios may be found in the technical appendixes of *Vital Statistics of the United States, 1988*, Volumes I and II.

### Rates

Rates are on an annual basis and, except for infant mortality rates, are per 1,000 or 100,000 estimated population residing in the United States. The populations used for computing these rates are furnished by the U.S. Bureau of the Census. The population estimates are based on the 1980 Census of Population and do not reflect the results of the 1990 census enumeration. Monthly rates are based on populations estimated for the specific month. Year-to-date rates are averages of the monthly rates weighted by the number of days in each respective month. Rates for 12-month periods are the sum of events for the period per population estimated at the midpoint of the period.

Infant mortality rates are infant deaths for the specified period (monthly, year-to-date, 12-month period) per 1,000 or 100,000 live births. Births used for computing monthly and year-to-date infant mortality rates are adjusted for monthly variation in the number of births; births used to compute 12-month rates do not contain this adjustment. Births used for computing infant mortality rates are not corrected for observed differences between provisional and final monthly figures as described in section on Nature and sources of data. Because monthly infant mortality rates are based on relatively few events, they are highly variable. Therefore, comparisons between monthly infant

mortality rates should be interpreted cautiously; see section on Random variation.

The age-adjusted rates presented in this report are computed by the direct method, that is, by applying the age-specific death rates for age groups shown in the specific table to the standard population distributed by age. The total population as enumerated in 1940 was selected as the standard. It is important not to compare age-adjusted death rates with crude rates.

### Current Mortality Sample

The Current Mortality Sample (CMS) is a 10-percent systematic sample of death certificates drawn each month after the certificates are counted in the State registration offices. Deaths and death rates by age, race, sex, and cause are based on the sample. Because of the additional time required to select and process the certificates, data based on the CMS are published 1 month after publication of the U.S. and State counts. Complete information concerning the underlying cause of death is sometimes not available when the sample is drawn. As a result, estimates based on sample counts for certain causes are biased. Correction for bias is shown in the annual summary (issue No. 13 in this series) for each year.

Estimated numbers of deaths and death rates based on the sample were proportionately adjusted to be consistent with estimates based on the count of death certificates received in State registration offices.

**HIV infection**—Beginning with data for 1987, NCHS introduced category numbers \*042–\*044 for classifying and coding human immunodeficiency virus infection (HIV infection), formerly referred to as human T-cell lymphotropic virus-III/lymphadenopathy-associated virus (HTLV-III/LAV) infection. The asterisk before the category numbers indicates that these codes are not part of the Ninth Revision of the International Classification of Diseases (ICD-9). Deaths classified to these categories are included in All other infectious and parasitic diseases

in the List of 72 Selected Causes of Death as well as shown separately at the bottom of table 6. For 1986 and earlier years these deaths were classified to a number of other causes. Therefore, beginning with 1987, cause-of-death data are not strictly comparable with data for earlier years.

**Sampling variability**—Because the estimates of deaths and death rates presented in this report (with the exception of total deaths and deaths under 1 year) are based on a sample of death certificates, they are subject to sampling variability. The estimated relative standard error shown in the table is a measure of the sampling error of the estimated number of deaths (or of the estimated death rate) expressed as a percent of the estimate. The first column refers to monthly estimates; the second to annual; cumulative year-to-date totals will be between the two.

The chances are about 2 out of 3 that the percent difference between an estimate and the result of a complete count is less than the percent shown. The chances are about 19 out of 20 that the percent difference is less than twice the percent shown. Figures based on 100 or fewer estimated deaths have relative standard errors of 30 percent or more and are, therefore, considered unreliable. Rates based on 100 or fewer estimated deaths are indicated by an “\*”.

**Relative standard errors for estimated numbers of deaths from the Current Mortality Sample expressed as a percent of the estimate**

Estimated number of deaths	Relative standard error of estimate (as percent)	
	170,000 estimated deaths each month	2,000,000 estimated deaths each year
10	94.9	94.9
20	67.1	67.1
50	42.4	42.4
100	30.0	30.0
200	21.2	21.2
500	13.4	13.4
1,000	9.5	9.5
2,000	6.7	6.7
5,000	4.2	4.2
10,000	2.9	3.0
20,000	2.0	2.1
50,000	1.1	1.3
100,000	0.6	0.9
200,000	...	0.6
500,000	...	0.4
1,000,000	...	0.2

Unless otherwise specified, comparisons made in the text between death rates based on the CMS were statistically significant at the 0.05 level of significance. Lack of comment in the text about any two rates does not mean that the difference was tested and found not to be significant at this level.

**Mortality Surveillance System**—The Mortality Surveillance System charts are based entirely on monthly provisional data from the Current Mortality Sample (CMS). Where sample size permits, age-race-sex comparisons are made for the causes of death. Where sample size is too small, only age-sex comparisons are made. A time series regression model of the following form was used:

$$Y(t) = A_0 + A_1t + A_2t^2 + C \cos (2\pi t / 12) + S \sin (2\pi t / 12) + \epsilon_t$$

where

$Y(t)$  = monthly death rate at time  $t$   
 $t$  = month number

$A_0$  = coefficient, which, together with  $C$  determines the  $Y$ -intercept

$A_1$  = coefficient of  $t$

$A_2$  = coefficient of  $t^2$

$C, S$  = coefficients of the harmonic terms

$\epsilon_t$  = error terms, assumed to be independent and normally distributed with means 0 and constant variances,

and  $\cos (2\pi t / 12)$  and  $\sin (2\pi t / 12)$  are 12-month period harmonic functions.

The coefficients of this model were estimated using provisional monthly death rates from January 1982 through the month that is 12 months prior to the latest month shown in the chart. The graph of the estimated equation and 95-percent prediction intervals is shown from January 1984 through the month that is 12 months prior to the latest month shown in the chart; the graph for the subsequent 12 months is projected (1). Symbols in each chart represent actual monthly death rates based on the CMS. In some cases the data are transformed by the natural logarithm before fitting

the model. For graphical purposes the data are transformed back to rates by the inverse of the natural logarithm. This procedure has the advantage of avoiding negative prediction intervals for the model. The models, parameter estimates, and statistical tests for lack of fit are available upon request for the charts published in the Mortality Surveillance System. Time series

regression models have previously been used to describe trends in mortality data (2-4). A list of cause-of-death topics is presented in the table on the back of this report.

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1. Ostle B. Statistics in research. Second edition. The Iowa State University Press. Ames, Iowa, 159-221. 1963.

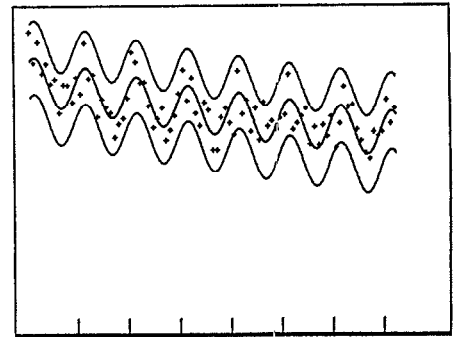
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**Mortality Surveillance System chart topics**

<i>MVSR issue</i>	<i>Cause-of-death chart topics</i>
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