

# Monthly Vital Statistics Report



Provisional Data From the CENTERS FOR DISEASE CONTROL AND PREVENTION/National Center for Health Statistics

## Births, Marriages, Divorces, and Deaths for May 1994

### Mortality Surveillance System

pages 5-7

### Diseases of heart:

45-74 years of age by race and sex

### State Maps

pages 8 and 9

### Diseases of heart by sex

### Births

According to provisional reports, an estimated 329,000 births occurred in the United States during May 1994. This was a 2-percent decrease from the provisional number of births reported for May 1993 (335,000). The birth rate, 14.9 live births per 1,000 population, was 3 percent lower than the rate of 15.3 for May 1993. The fertility rate, 65.4 live births per 1,000 women aged 15-44 years, was 2 percent lower than the comparable rate for May 1993 (66.8). The seasonally adjusted fertility rate (65.8) was 3 percent lower than the comparable rate for May 1993 (67.7).

During the first 5 months of 1994, an estimated 1,629,000 births occurred, a 2-percent decrease from the 1,655,000 reported for the first 5 months of 1993. The birth rate for this period decreased by 3 percent from 15.6 in 1993 to 15.2 in 1994. The fertility rate for the first 5 months of 1994 was 66.5, 2 percent lower than the rate for the first 5 months of 1993 (67.7).

An estimated 4,013,000 live births occurred in the 12-month period ending with May 1994, a decline of 1 percent from the 4,050,000 births reported for the same period a year earlier. The birth rate of 15.5 was 2 percent lower than the rate of 15.8 for the preceding 12 months. The

### Provisional Vital Statistics for the United States

[Rates for infant deaths are deaths under 1 year per 1,000 live births; fertility rates are live births per 1,000 women aged 15-44 years; all other rates per 1,000 total population. Data are subject to monthly reporting variation; see Technical notes]

Item	May				January-May				12 months ending with May				
	Number		Rate		Number		Rate		Number		Rate		
	1994	1993	1994	1993	1994	1993	1994	1993	1994	1993	1994	1993	1992
Live births . . . . .	329,000	335,000	14.9	15.3	1,629,000	1,655,000	15.2	15.6	4,013,000	4,050,000	15.5	15.8	16.3
Fertility rate . . . . .	...	...	65.4	66.8	...	...	66.5	67.7	...	...	67.8	68.6	69.8
Deaths . . . . .	186,000	185,000	8.4	8.5	996,000	983,000	9.3	9.2	2,281,000	2,217,000	8.8	8.6	8.6
Infant deaths . . . . .	2,800	2,900	8.3	8.8	13,400	14,400	8.2	8.6	32,300	33,800	8.1	8.4	8.7
Natural increase . . . . .	143,000	150,000	6.5	6.8	633,000	672,000	5.9	6.4	1,732,000	1,833,000	6.7	7.2	7.7
Marriages . . . . .	230,000	221,000	10.4	10.1	814,000	809,000	7.7	7.6	2,339,000	2,341,000	9.0	9.1	9.4
Divorces . . . . .	104,000	103,000	4.7	4.7	493,000	492,000	4.6	4.6	1,188,000	1,204,000	4.6	4.7	4.7
Population base (in millions) . . . . .	...	...	260.2	257.4	...	...	...	...	...	...	259.2	256.3	253.4

NOTES: Figures include revisions received from the States. Twelve-month 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 and Prevention  
National Center for Health Statistics



fertility rate for the most recent 12-month period was 67.8, 1 percent lower than the rate for the 12 months ending with May 1993 (68.6). These lower rates continue the generally downward trend observed since early 1991.

**Natural increase**

As a result of natural increase, the excess of births over deaths, an estimated 143,000 people or 6.5 persons per 1,000 population were added to the population during May 1994.

For the 12-month period ending with May 1994, 1,732,000 persons were added to the population. This represented a rate of natural increase of 6.7, 7 percent lower than the rate of 7.2 for the preceding 12-month period. The decline in the rate of natural increase was due to a decrease in the birth rate and a rise in the death rate.

**Marriages**

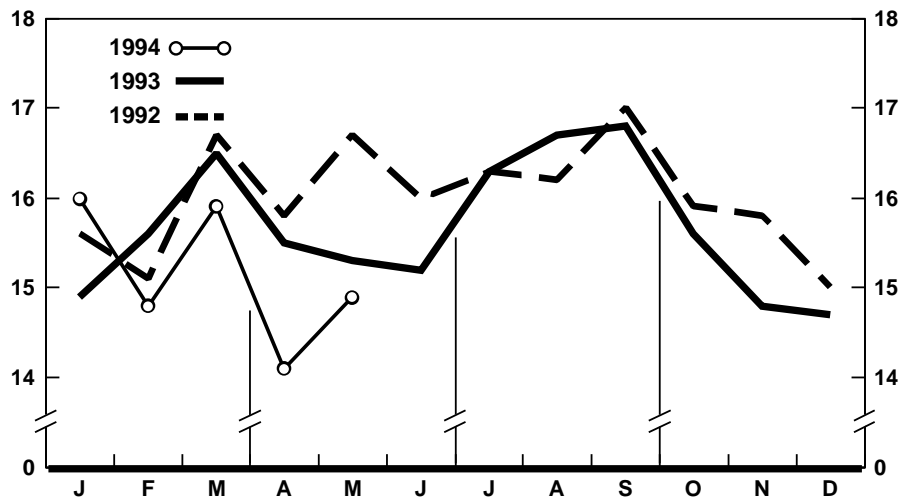
An estimated 230,000 couples married in May 1994, a 4-percent increase over the number for May a year earlier (221,000). The marriage rate per 1,000 population for May was 3 percent higher in 1994 (10.4) than in 1993 (10.1).

For the first 5 months of 1994, the number of marriages and the marriage rate were 1 percent higher than for the same period in 1993. The number of marriages for the period increased from 809,000 in 1993 to 814,000 in 1994 while the marriage rate increased from 7.6 to 7.7.

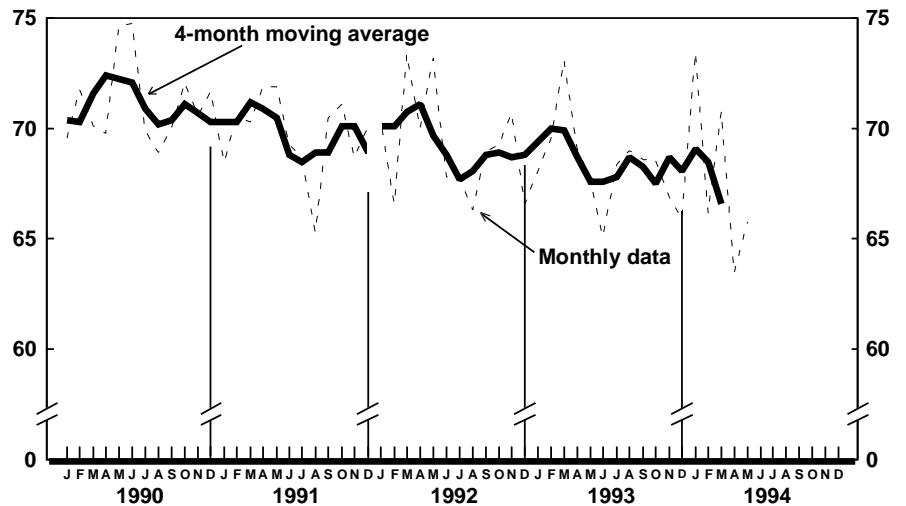
The number of marriages performed during the 12-month period ending with May 1994 (2,339,000) was slightly lower than for the same period a year earlier (2,341,000). The marriage rate for the current 12-month period was 9.0, 1 percent lower than the rate for the 12-month period ending with May 1993 (9.1).

**Divorces**

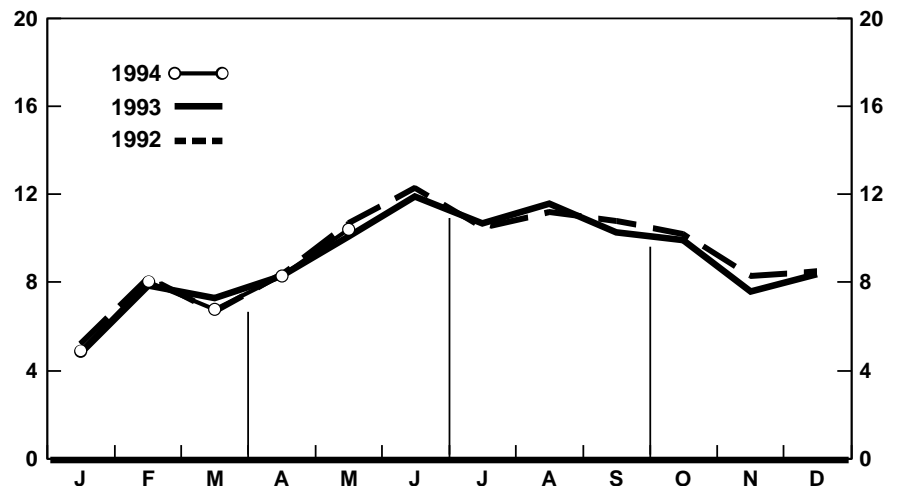
There were an estimated 104,000 divorces granted in May 1994, 1 percent more than in May 1993 (103,000). Despite the slight increase in the number, the divorce rate per 1,000 population for May was 4.7 both years.



Provisional birth rates per 1,000 population by month: United States, 1992-94



Provisional seasonally adjusted fertility rates per 1,000 women aged 15-44 years: United States, 1990-94



Provisional marriage rates per 1,000 population by month: United States, 1992-94

The cumulative number of divorces for January–May 1994 was 493,000, a slight increase over the number for the same period of the previous year (492,000). The marriage rate for the 5-month period was 4.6 in 1993 and 1994.

Divorces granted during the 12-month period ending with May 1994 (1,188,000) numbered 1 percent fewer than for the same period a year earlier (1,204,000). The divorce rate for the current period was 4.6, a 2-percent decline compared with the rate for the 12-month period ending with May 1993 (4.7).

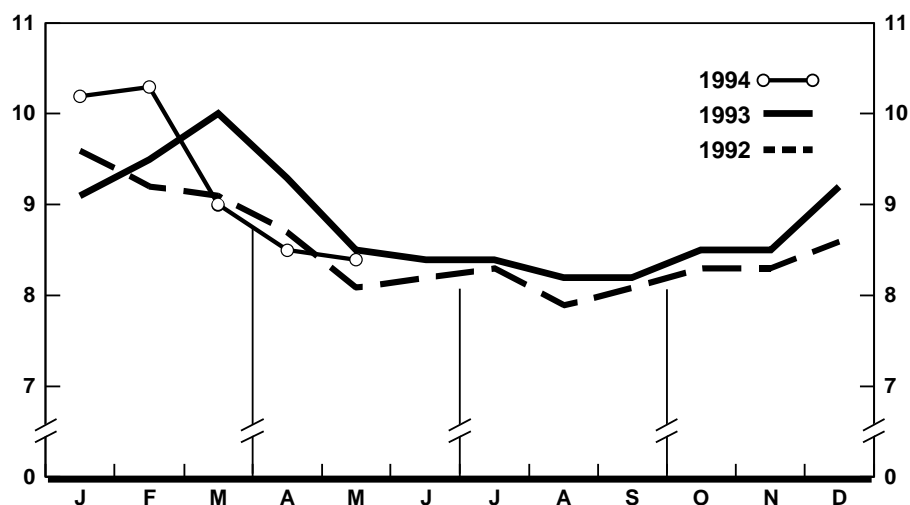
### Deaths

For May 1994 there were an estimated 186,000 deaths in the United States. The death rate was 8.4 deaths per 1,000 population, 1 percent lower than the rate of 8.5 for May a year earlier. Among the 186,000 deaths for May 1994 were 2,800 deaths at ages under 1 year.

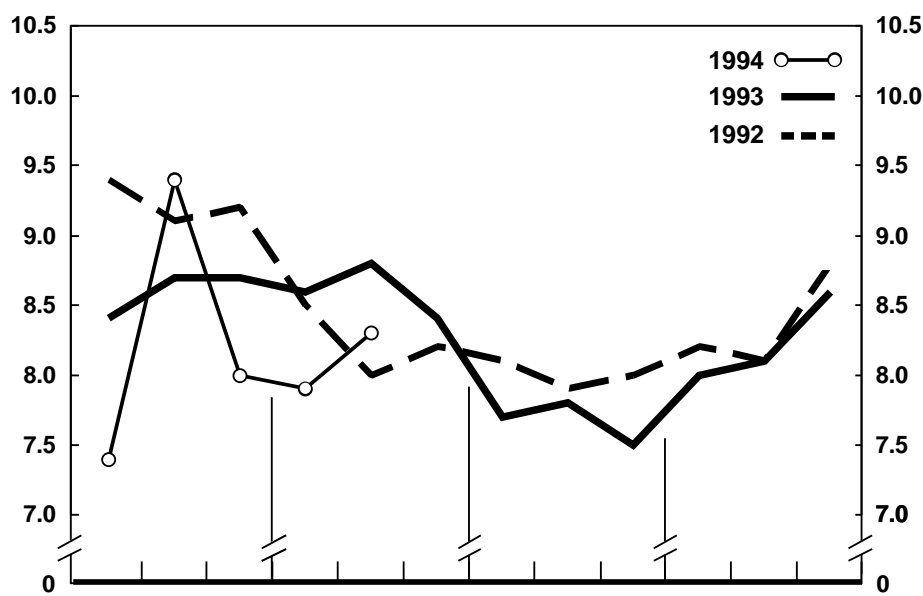
According to provisional statistics, there were 996,000 deaths during the first 5 months of 1994, 1 percent higher than estimated for the first 5 months of 1993 (983,000). The death rate, 9.3 per 1,000 population, was 1 percent higher than the January to May 1993 rate of 9.2. Among the 996,000 deaths for the first 5 months of 1994 were 13,400 deaths at ages under 1 year, yielding an infant mortality rate of 8.2 per 1,000 live births. This rate was 5 percent lower than the rate of 8.6 for the comparable period in 1993.

The death rate for the 12 months ending with May 1994 was 8.8 deaths per 1,000 population, 2 percent higher than the rate of 8.6 for the comparable 12-month period a year earlier. The infant mortality rate for the most recent 12-month period was 8.1 per 1,000 live births, 4 percent lower than the rate of 8.4 for the 12 months ending with May 1993.

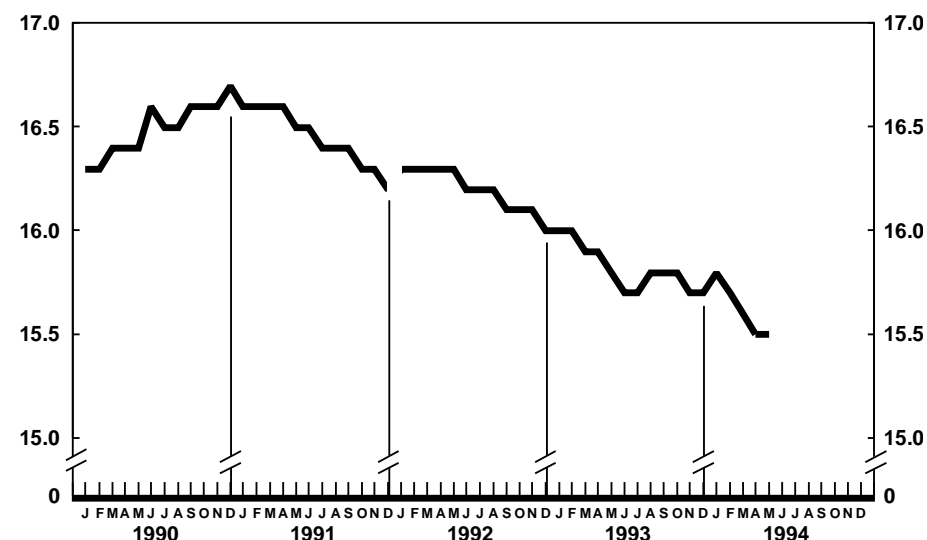
*Current Mortality Sample, 12 months ending with April 1994*—The provisional death rate for the 12 months ending with April 1994 was 880.5 per 100,000 population, 2 percent higher than the rate of 861.8 for the 12-month period ending April 1993. The increase



Provisional death rates per 1,000 population by month: United States, 1992–94



Provisional infant mortality rates per 1,000 live births by month: United States, 1992–94



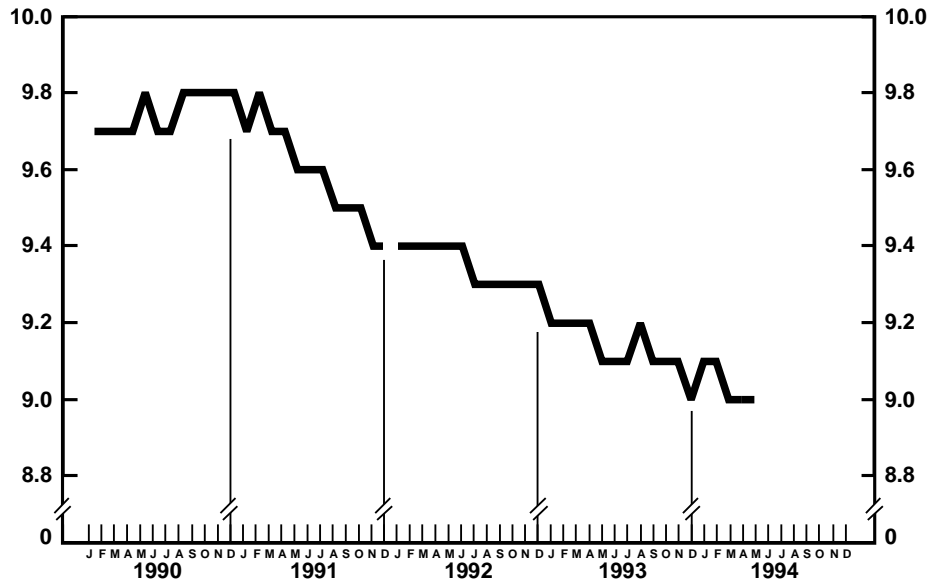
Provisional birth rates per 1,000 population for successive 12-month periods ending with month indicated: United States, 1990–94

in the death rate between the consecutive 12-month periods reflects higher mortality for several causes of death, many of which are believed to be associated with influenza epidemics in 1993 (1). The provisional age-adjusted death rate for the 12-month period ending with April 1994 was 512.4 per 100,000 U.S. standard million population, 1 percent higher than the rate of 506.6 for the 12-month period ending with April 1993. 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. Among the race-sex groups, the estimated age-adjusted death rates increased for white males and black males. By age the death rate for the total population increased for the following age groups: 25-34 years, 45-54 years, 75-84 years, and 85 years and over.

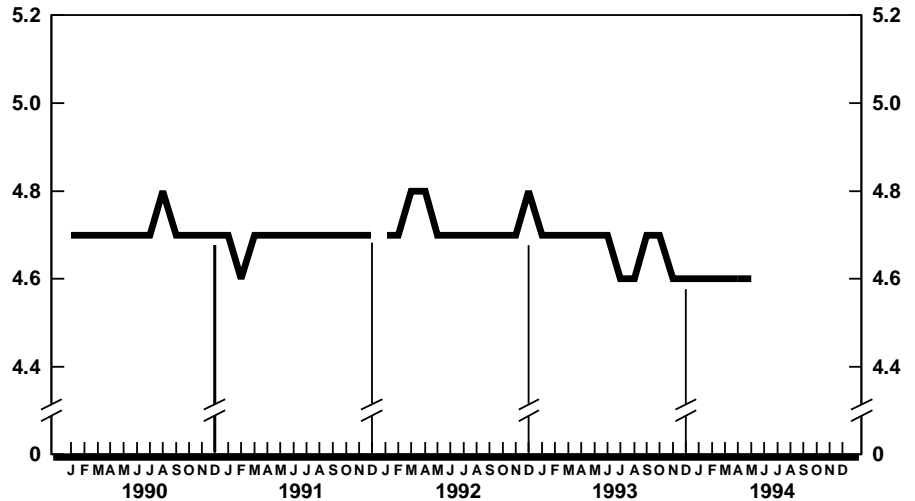
Among the major causes of death, the estimated death rate increased between the two successive 12-month periods for Cerebrovascular diseases, Accidents and adverse effects, Chronic obstructive pulmonary diseases and allied conditions, Pneumonia and influenza, Diabetes mellitus, and Human immunodeficiency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

The death rate for injury by firearms for the 12 months ending with April 1994 was 15.1 per 100,000 population, 5 percent higher than the rate of 14.4 for the comparable 12-month period a year earlier.

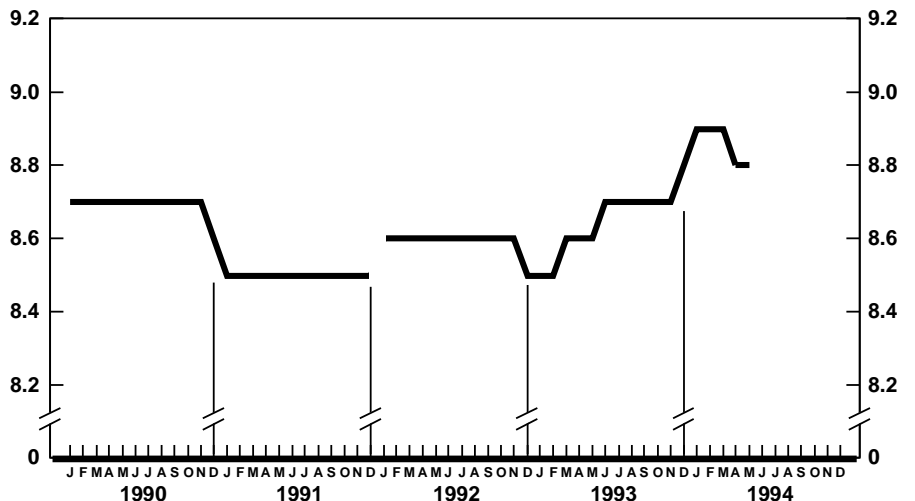
The infant mortality rate for the 12 months ending with April 1994 was 815.2 per 100,000 live births, 2 percent lower than the rate of 832.1 for the same 12-month period a year earlier. For infants under 28 days, the 12-month rate ending with April 1994 was 526.3 compared with a rate of 523.8 for the 12-month period a year earlier. The infant mortality rate for infants 28 days to 11 months was 288.8 compared with a rate of 308.4 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.



Provisional marriage rates per 1,000 population for successive 12-month periods ending with month indicated: United States, 1990-94



Provisional divorce rates per 1,000 population for successive 12-month periods ending with month indicated: United States, 1990-94



Provisional death rates per 1,000 population for successive 12-month periods ending with month indicated: United States, 1990-94

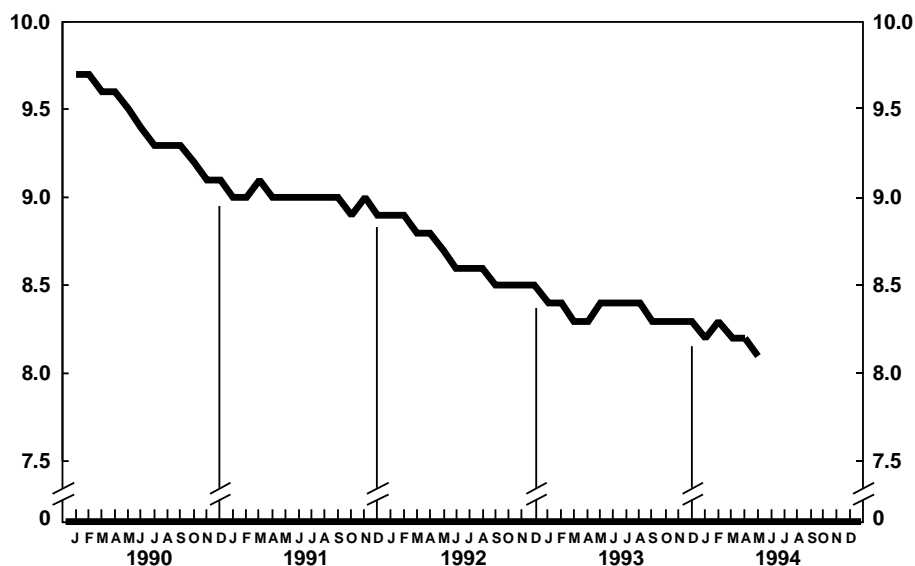
### Mortality Surveillance System

Discussed this month are recent trends in death rates for Diseases of heart for the black and white populations by sex for ages 45–74 years. In this issue final mortality data are analyzed for data year 1991 and provisional data from January 1985 to December 1993.

In 1991, the latest year for which final mortality data are available, Diseases of heart was the leading cause of death among black women aged 45–74 years and accounted for 16,144 deaths or 32 percent of all deaths for this age-race-sex group. Among white women aged 45–74 years, Diseases of heart was the second leading cause of death, after Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (cancer). It accounted for 75,293 deaths or 26 percent of all deaths for this age-race-sex group.

Among black men aged 45–74 years, Diseases of heart was the leading cause of death and accounted for 21,337 deaths or 31 percent of all deaths for this age-race-sex group. Among white men in this same age group, Diseases of heart was also the leading cause of death. It accounted for 148,381 deaths or 35 percent of all deaths for this age-race-sex group.

Based on 1991 final data, the death rate for Diseases of heart for black men aged 45–74 years was 1.4 times the rate for white men and 1.7 times the rate for black women in this age group. For black women aged 45–74 years, the death rate was 1.8 times the rate for white women in this age group. The rate for white men was 2.2 times the rate for white women. Trends based on provisional data for Diseases of heart for these demographic groups are presented in the Mortality Surveillance System charts and accompanying text that follow.

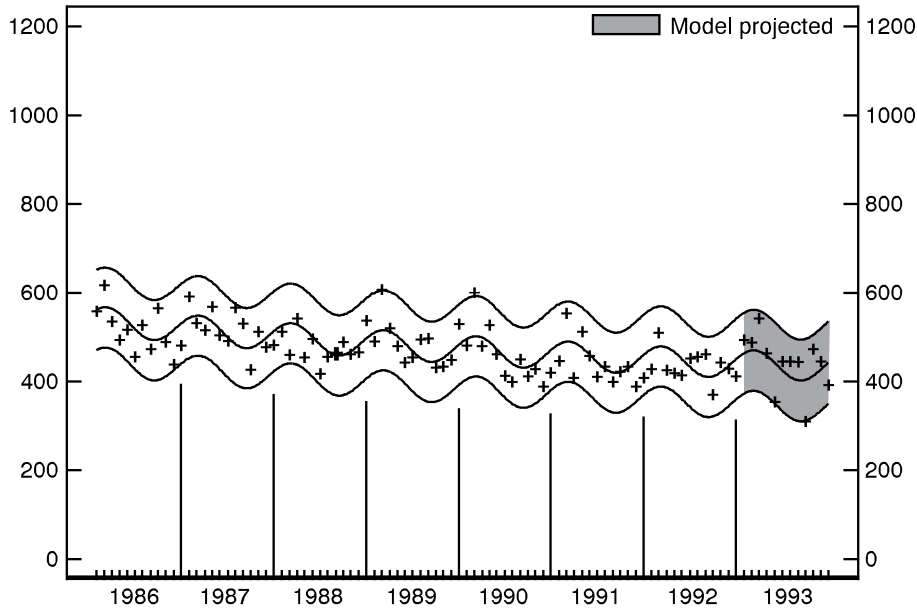


Provisional infant mortality rates per 1,000 live births for successive 12-month periods ending with month indicated: United States, 1990–94

## Mortality Surveillance System charts

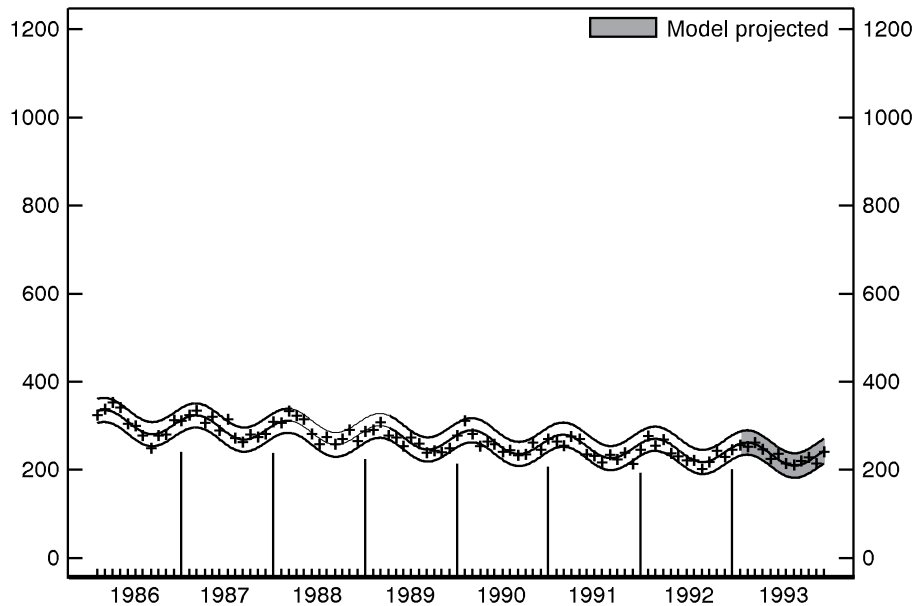
[Observed and fitted provisional monthly death rates and 95-percent prediction intervals. Model fitted using death rates for January 1985–December 1992; projected for January 1993–December 1993. See Technical notes]

Trends in mortality from Diseases of heart (including coronary heart disease) are presented in the charts below. Reduction of mortality from coronary heart disease is addressed in *Healthy People 2000* (objectives 1.1, 2.1, 3.1, and 15.1) (2).



Provisional death rates per 100,000 black females 45–74 years of age for Diseases of heart by month: United States, 1986–93

- For the modeled period, provisional death rates decreased.
- For the projection period, observed provisional monthly death rates fell within 95-percent prediction intervals.
- Mortality shows a seasonal pattern with death rates higher in winter.



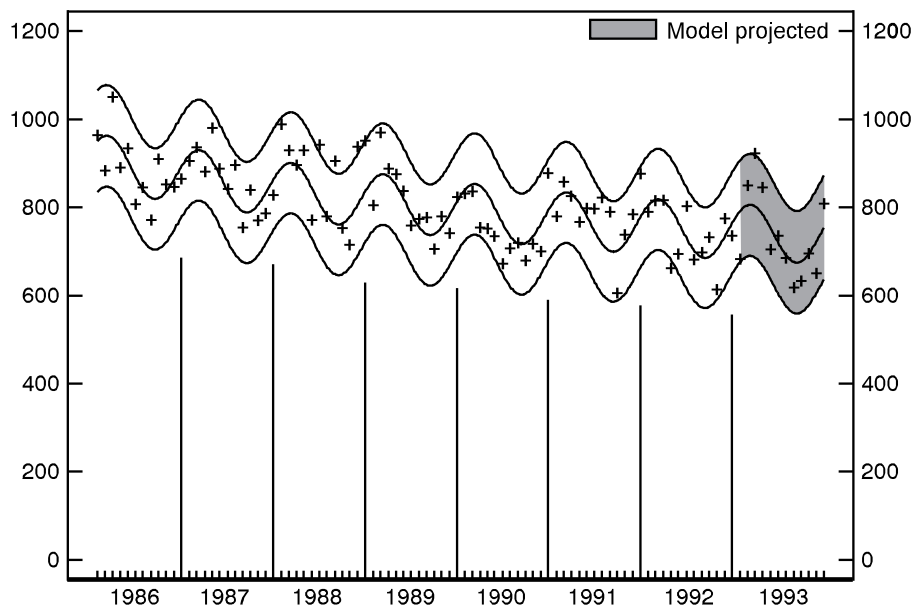
Provisional death rates per 100,000 white females 45–74 years of age for Diseases of heart by month: United States, 1986–93

- For the modeled period, provisional death rates decreased.
- For the projection period, observed provisional monthly death rates fell within 95-percent prediction intervals.
- Mortality shows a seasonal pattern with death rates higher in winter.

### Mortality Surveillance System charts—Con.

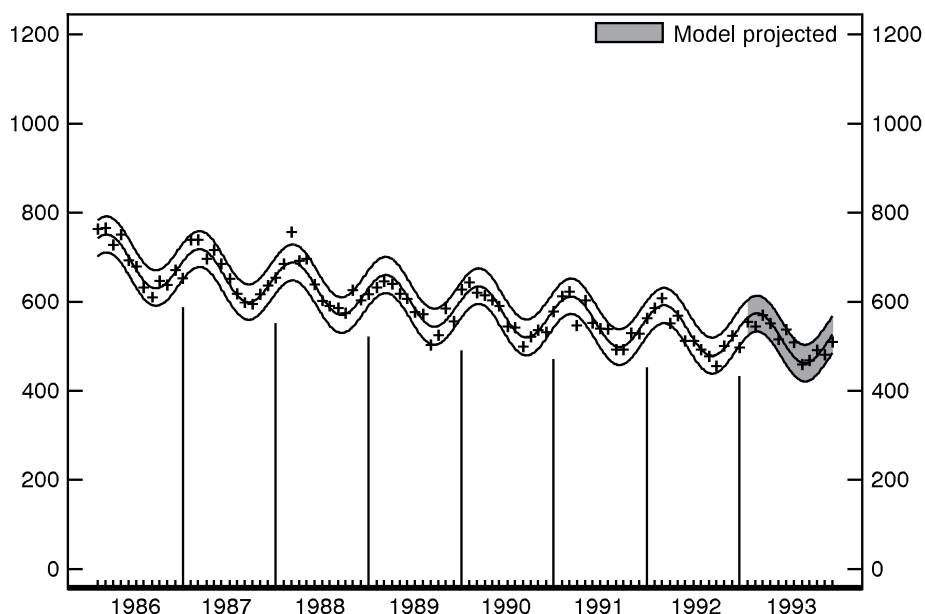
[Observed and fitted provisional monthly death rates and 95-percent prediction intervals. Model fitted using death rates for January 1985–December 1992; projected for January 1993–December 1993. See Technical notes]

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Provisional death rates per 100,000 black males 45–74 years of age for Diseases of heart by month: United States, 1986–93

- For the modeled period, provisional death rates decreased.
- For the projection period, observed provisional monthly death rates, except for one, fell within 95-percent prediction intervals.
- Mortality shows a seasonal pattern with death rates higher in winter.

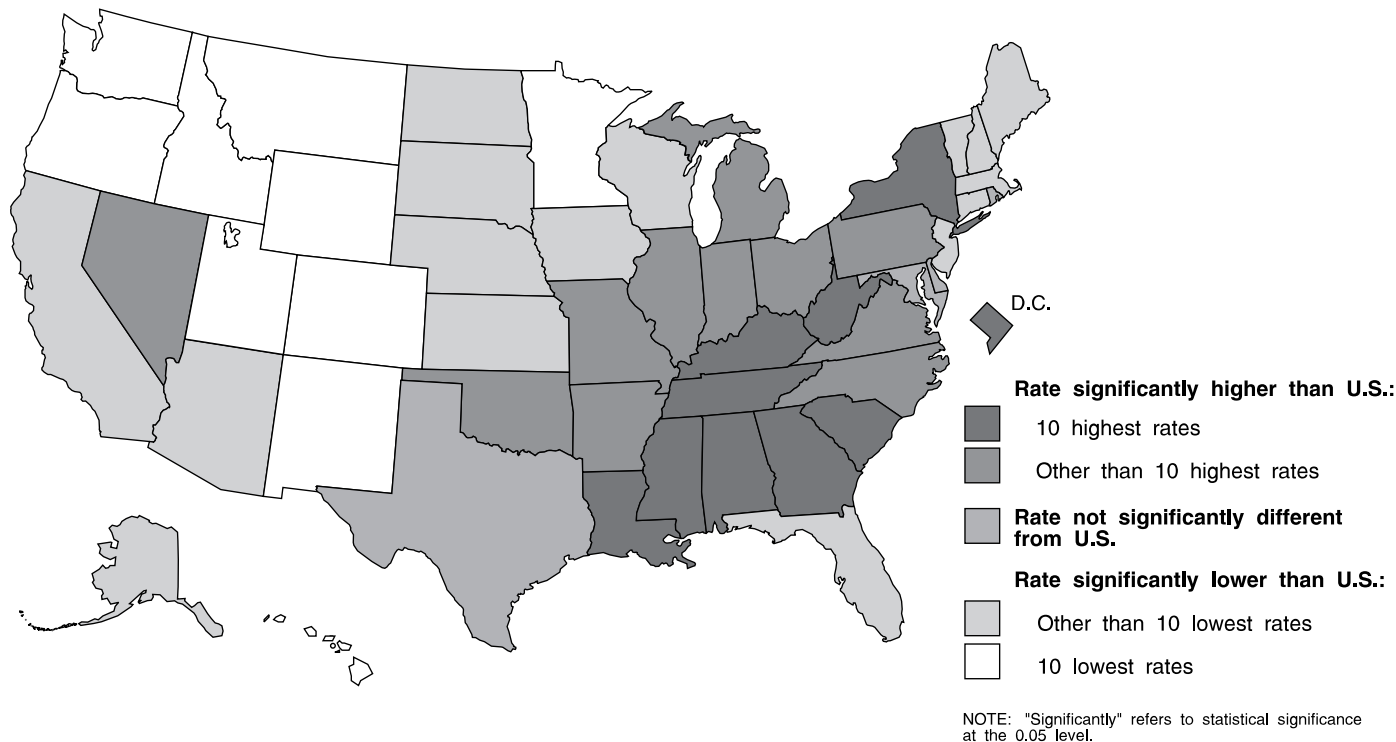


Provisional death rates per 100,000 white males 45–74 years of age for Diseases of heart by month: United States, 1986–93

- For the modeled period, provisional death rates decreased.
- For the projection period, observed provisional monthly death rates fell within 95-percent prediction intervals.
- Mortality shows a seasonal pattern with death rates higher in winter.

**Final 3-year total number of deaths and average annual age-adjusted death rates and 95-percent confidence limits for Diseases of heart for males: United States and each State, 1989-91**

[Data are final by State of residence]



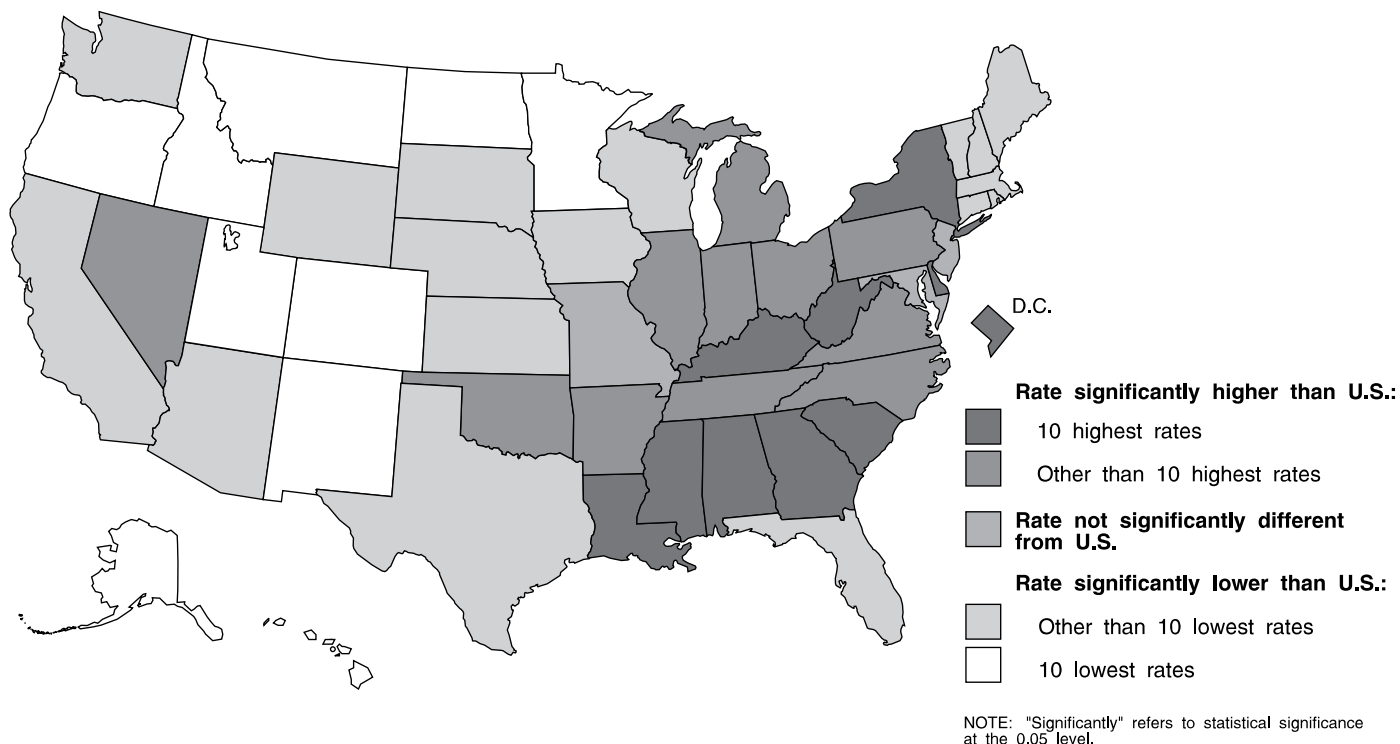
Area	Deaths, 3-year total (final)	Age-adjusted rate (final)	95-percent confidence limits		Area	Deaths, 3-year total (final)	Age-adjusted rate (final)	95-percent confidence limits	
			Lower	Upper				Lower	Upper
United States . . . . .	1,088,804	208.0	207.6	208.4	South Atlantic—Con.				
New England					West Virginia . . . . .	11,038	††256.9	251.9	261.9
Maine . . . . .	5,569	††200.7	195.2	206.2	North Carolina . . . . .	29,004	††227.9	225.2	230.6
New Hampshire . . . . .	4,156	††194.6	188.5	200.7	South Carolina . . . . .	14,592	††236.8	232.9	240.7
Vermont . . . . .	2,135	††186.0	177.8	194.2	Georgia . . . . .	24,921	††235.4	232.5	238.3
Massachusetts . . . . .	24,847	††191.6	189.1	194.1	Florida . . . . .	73,419	††188.2	186.7	189.7
Rhode Island . . . . .	4,793	202.7	196.6	208.8	East South Central				
Connecticut . . . . .	14,173	††189.5	186.3	192.7	Kentucky . . . . .	18,451	††240.3	236.7	243.9
Middle Atlantic					Tennessee . . . . .	23,740	††236.5	233.4	239.6
New York . . . . .	90,649	††231.1	229.5	232.7	Alabama . . . . .	19,919	††240.9	237.4	244.4
New Jersey . . . . .	34,858	††203.6	201.4	205.8	Mississippi . . . . .	14,105	††276.1	271.3	280.9
Pennsylvania . . . . .	64,266	††223.6	221.8	225.4	West South Central				
East North Central					Arkansas . . . . .	12,605	††219.9	215.8	224.0
Ohio . . . . .	51,666	††224.3	222.3	226.3	Louisiana . . . . .	18,766	††247.7	244.1	251.3
Indiana . . . . .	25,035	††215.8	213.0	218.6	Oklahoma . . . . .	16,330	††230.0	226.3	233.7
Illinois . . . . .	52,447	††221.5	219.5	223.5	Texas . . . . .	61,350	206.6	204.9	208.3
Michigan . . . . .	41,755	††222.6	220.4	224.8	Mountain				
Wisconsin . . . . .	22,178	††192.1	189.4	194.8	Montana . . . . .	3,269	††170.1	163.9	176.3
West North Central					Idaho . . . . .	3,725	††166.7	161.0	172.4
Minnesota . . . . .	16,933	††171.4	168.6	174.2	Wyoming . . . . .	1,516	††174.1	165.1	183.1
Iowa . . . . .	13,987	††192.0	188.5	195.5	Colorado . . . . .	9,398	††157.7	154.4	161.0
Missouri . . . . .	26,073	††218.4	215.6	221.2	New Mexico . . . . .	4,862	††163.5	158.7	168.3
North Dakota . . . . .	3,081	††185.6	178.3	192.9	Arizona . . . . .	14,333	††176.5	173.4	179.6
South Dakota . . . . .	3,723	††199.6	192.5	206.7	Utah . . . . .	4,356	††153.1	148.4	157.8
Nebraska . . . . .	7,530	††190.7	186.0	195.4	Nevada . . . . .	5,098	††220.4	214.4	226.4
Kansas . . . . .	11,173	††187.9	184.1	191.7	Pacific				
South Atlantic					Washington . . . . .	17,432	††169.6	167.0	172.2
Delaware . . . . .	2,800	210.2	202.3	218.1	Oregon . . . . .	11,737	††171.4	168.1	174.7
Maryland . . . . .	17,795	205.3	202.3	208.3	California . . . . .	102,312	††184.2	183.0	185.4
District of Columbia . . . . .	2,801	††249.2	239.6	258.8	Alaska . . . . .	931	††175.2	163.8	186.6
Virginia . . . . .	23,645	††213.3	210.6	216.0	Hawaii . . . . .	3,527	††145.7	140.6	150.8

NOTES: Data are final. Rates per 100,000 U.S. standard million population; see Technical notes. The symbols † and †† denote statistical significance of the difference between the U.S. and State rates at the 0.05 and 0.01 levels, respectively. For method of computation of rates, confidence limits, and tests of statistical significance, see Technical notes.



**Final 3-year total number of deaths and average annual age-adjusted death rates and 95-percent confidence limits for Diseases of heart for females: United States and each State, 1989-91**

[Data are final by State of residence]



Area	Deaths, 3-year total (final)	Age-adjusted rate (final)	95-percent confidence limits		Area	Deaths, 3-year total (final)	Age-adjusted rate (final)	95-percent confidence limits	
			Lower	Upper				Lower	Upper
United States . . . . .	1,085,983	109.6	109.4	109.8	South Atlantic—Con.				
New England					West Virginia . . . . .	10,468	††130.0	127.0	133.0
Maine . . . . .	5,644	††100.1	96.9	103.3	North Carolina . . . . .	27,495	††114.2	112.6	115.8
New Hampshire . . . . .	4,177	††98.1	94.5	101.7	South Carolina . . . . .	13,822	††125.0	122.7	127.3
Vermont . . . . .	2,233	††92.8	88.0	97.6	Georgia . . . . .	24,690	††123.2	121.4	125.0
Massachusetts . . . . .	27,858	††96.7	95.3	98.1	Florida . . . . .	64,954	††93.7	92.8	94.6
Rhode Island . . . . .	5,308	††100.6	97.2	104.0	East South Central				
Connecticut . . . . .	14,815	††98.2	96.3	100.1	Kentucky . . . . .	17,625	††121.4	119.3	123.5
Middle Atlantic					Tennessee . . . . .	22,720	††119.4	117.6	121.2
New York . . . . .	101,571	††128.3	127.3	129.3	Alabama . . . . .	19,332	††123.8	121.7	125.9
New Jersey . . . . .	36,484	††109.2	107.9	110.5	Mississippi . . . . .	14,373	††151.6	148.6	154.6
Pennsylvania . . . . .	67,767	††118.6	117.5	119.7	West South Central				
East North Central					Arkansas . . . . .	11,934	†112.4	109.9	114.9
Ohio . . . . .	53,350	††120.7	119.5	121.9	Louisiana . . . . .	18,850	††137.1	134.8	139.4
Indiana . . . . .	25,841	††113.5	111.8	115.2	Oklahoma . . . . .	16,058	††117.9	115.6	120.2
Illinois . . . . .	55,226	††118.5	117.3	119.7	Texas . . . . .	57,818	††107.2	106.2	108.2
Michigan . . . . .	41,577	††120.9	119.5	122.3	Mountain				
Wisconsin . . . . .	21,667	††95.3	93.7	96.9	Montana . . . . .	2,694	††79.6	75.9	83.3
West North Central					Idaho . . . . .	3,140	††84.0	80.5	87.5
Minnesota . . . . .	15,403	††78.5	76.9	80.1	Wyoming . . . . .	1,334	††89.8	84.2	95.4
Iowa . . . . .	14,942	††93.2	91.2	95.2	Colorado . . . . .	8,985	††81.4	79.4	83.4
Missouri . . . . .	27,238	††111.1	109.4	112.8	New Mexico . . . . .	4,249	††86.4	83.4	89.4
North Dakota . . . . .	2,555	††82.0	77.8	86.2	Arizona . . . . .	12,032	††89.6	87.8	91.4
South Dakota . . . . .	3,336	††89.1	85.0	93.2	Utah . . . . .	3,894	††82.6	79.6	85.6
Nebraska . . . . .	7,773	††95.7	92.9	98.5	Nevada . . . . .	3,702	††116.6	112.6	120.6
Kansas . . . . .	11,745	††95.6	93.3	97.9	Pacific				
South Atlantic					Washington . . . . .	16,198	††87.5	85.9	89.1
Delaware . . . . .	2,981	††122.3	117.2	127.4	Oregon . . . . .	10,651	††85.6	83.6	87.6
Maryland . . . . .	17,954	††111.4	109.5	113.3	California . . . . .	102,306	††101.1	100.4	101.8
District of Columbia . . . . .	2,924	††134.0	128.2	139.8	Alaska . . . . .	459	††79.4	72.0	86.8
Virginia . . . . .	23,248	††113.4	111.7	115.1	Hawaii . . . . .	2,583	††80.7	77.2	84.2

NOTES: Data are final. Rates per 100,000 U.S. standard million population; see Technical notes. The symbols † and †† denote statistical significance of the difference between the U.S. and State rates at the 0.05 and 0.01 levels, respectively. For method of computation of rates, confidence limits, and tests of statistical significance, see Technical notes.

**Table 1. Provisional number of live births, marriages, divorces, deaths, and infant deaths and rates, by month: United States, January 1993–May 1994**

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

Period	Live births				Marriages		Divorces		Deaths		Infant deaths	
	Number	Rate per 1,000 women aged 15–44 years			Number	Rate per 1,000 population	Number	Rate per 1,000 population	Number	Rate per 1,000 population	Number	Rate per 1,000 live births
		Rate per 1,000 population	Unadjusted	Seasonally adjusted <sup>1</sup>								
<b>1993:</b>												
January . . . . .	325,000	14.9	64.7	68.1	103,000	4.8	92,000	4.2	198,000	9.1	2,800	8.4
February . . . . .	308,000	15.6	68.0	69.6	154,000	7.9	87,000	4.4	187,000	9.5	2,700	8.7
March . . . . .	360,000	16.5	71.7	73.1	157,000	7.3	113,000	5.2	217,000	10.0	3,000	8.7
April . . . . .	328,000	15.5	67.5	69.1	174,000	8.3	98,000	4.6	196,000	9.3	2,800	8.6
May . . . . .	335,000	15.3	66.8	67.7	221,000	10.1	103,000	4.7	185,000	8.5	2,900	8.8
June . . . . .	321,000	15.2	66.1	65.1	252,000	11.9	101,000	4.8	178,000	8.4	2,700	8.4
July . . . . .	357,000	16.3	71.2	68.4	235,000	10.7	100,000	4.6	184,000	8.4	2,700	7.7
August . . . . .	367,000	16.7	73.0	69.0	254,000	11.6	100,000	4.6	180,000	8.2	2,700	7.8
September . . . . .	356,000	16.8	73.3	68.6	218,000	10.3	101,000	4.8	174,000	8.2	2,600	7.5
October . . . . .	344,000	15.6	68.4	68.6	218,000	9.9	102,000	4.7	188,000	8.5	2,800	8.0
November . . . . .	316,000	14.8	64.9	66.9	162,000	7.6	94,000	4.4	180,000	8.5	2,600	8.1
December . . . . .	323,000	14.7	64.3	65.9	185,000	8.4	96,000	4.4	202,000	9.2	2,800	8.6
<b>1994:</b>												
January . . . . .	352,000	16.0	70.0	73.5	107,000	4.9	97,000	4.4	224,000	10.2	2,500	7.4
February . . . . .	295,000	14.8	64.9	66.2	156,000	8.0	90,000	4.5	204,000	10.3	2,800	9.4
March . . . . .	352,000	15.9	69.9	70.8	147,000	6.8	103,000	4.7	199,000	9.0	2,700	8.0
April . . . . .	302,000	14.1	62.0	63.5	174,000	8.3	100,000	4.7	182,000	8.5	2,500	7.9
May . . . . .	329,000	14.9	65.4	65.8	230,000	10.4	104,000	4.7	186,000	8.4	2,800	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 revisions received from the States and, therefore, may differ from those previously published.

**Symbols**

- - - Data not available
- . . . Category not applicable
- Quantity zero
- 0.0 Quantity more than zero but less than 0.05
- \* Figure does not meet standards of reliability or precision (see Technical notes)





**Table 4. Provisional number of deaths under 1 year and infant mortality rates: each division and State, 12 months ending with May 1993 and 1994**

[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 May			
	1994		1993	
	Number	Rate	Number	Rate
New England . . . . .	1,773	15.8	1,191	6.5
Maine . . . . .	93	6.3	71	4.6
New Hampshire . . . . .	92	6.1	76	4.9
Vermont . . . . .	33	4.8	46	6.2
Massachusetts . . . . .	453	5.4	557	6.6
Rhode Island . . . . .	102	7.5	131	9.0
Connecticut . . . . .	---	---	310	6.9
Middle Atlantic . . . . .	12,285	18.3	4,853	8.5
New York . . . . .	---	---	2,451	8.7
New Jersey . . . . .	984	8.4	977	7.9
Pennsylvania . . . . .	1,301	8.3	1,425	8.7
East North Central . . . . .	5,830	9.1	6,038	9.2
Ohio . . . . .	1,483	9.4	1,367	8.3
Indiana . . . . .	725	8.7	826	9.8
Illinois . . . . .	1,842	9.7	1,927	9.9
Michigan . . . . .	1,249	8.9	1,398	9.9
Wisconsin . . . . .	531	7.6	520	7.4
West North Central . . . . .	2,036	8.0	2,016	7.9
Minnesota . . . . .	483	7.5	457	7.0
Iowa . . . . .	233	6.5	247	6.5
Missouri . . . . .	626	8.2	684	9.1
North Dakota . . . . .	62	7.2	54	6.1
South Dakota . . . . .	114	10.6	113	10.3
Nebraska . . . . .	184	8.2	161	7.1
Kansas . . . . .	334	8.9	300	8.2
South Atlantic . . . . .	6,058	9.1	6,635	9.8
Delaware . . . . .	88	8.5	108	9.9
Maryland . . . . .	676	9.4	705	9.2
District of Columbia . . . . .	170	18.0	185	18.5
Virginia . . . . .	748	8.0	939	9.7
West Virginia . . . . .	170	7.7	220	9.8
North Carolina . . . . .	1,010	10.1	1,070	10.5
South Carolina . . . . .	475	8.9	564	10.1
Georgia . . . . .	1,149	10.4	1,134	10.1
Florida . . . . .	1,572	8.1	1,710	8.9
East South Central . . . . .	2,116	9.1	2,334	10.0
Kentucky . . . . .	428	8.2	472	8.9
Tennessee . . . . .	618	8.3	699	9.5
Alabama . . . . .	623	9.9	650	10.3
Mississippi . . . . .	447	10.5	513	11.9
West South Central . . . . .	3,843	8.1	3,819	8.0
Arkansas . . . . .	311	9.1	322	9.3
Louisiana . . . . .	629	9.2	674	9.7
Oklahoma . . . . .	449	9.6	437	9.3
Texas <sup>2</sup> . . . . .	2,454	7.5	2,386	7.3
Mountain . . . . .	1,720	7.1	1,886	7.6
Montana . . . . .	88	7.8	85	7.5
Idaho . . . . .	130	7.6	154	8.7
Wyoming . . . . .	31	4.7	69	10.2
Colorado . . . . .	371	6.8	412	7.5
New Mexico . . . . .	270	9.7	210	7.3
Arizona . . . . .	488	7.3	571	8.2
Utah . . . . .	205	5.5	245	6.7
Nevada . . . . .	137	6.5	140	6.3
Pacific . . . . .	14,371	16.7	5,033	6.8
Washington . . . . .	---	---	475	6.3
Oregon . . . . .	290	6.9	314	7.5
California <sup>2</sup> . . . . .	3,876	6.7	4,026	6.8
Alaska . . . . .	76	6.0	85	7.8
Hawaii . . . . .	129	6.7	133	6.7

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

<sup>2</sup>Figures include adjustments for varying length of reporting periods; see Technical notes.

NOTES: 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, April 1993 and 1994, cumulative figures 1993 and 1994, and 12 months ending with April 1993 and 1994—Con.**

[Data are provisional, estimated from a 10-percent sample of deaths. Age-specific rates on an annual basis per 100,000 population in specified group; age-adjusted rates per 100,000 U.S. standard million population; see Technical notes. 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	April				January–April				12 months ending with April							
	1994		1993		1994		1993		1994		1993					
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate				
Black female																
All ages . . . . .	10,100	718.2	11,300	816.0	45,050	802.4	45,500	822.9	128,110	753.2	127,160	759.5				
Under 1 year . . . . .	} 410	113.6	520	145.9	1,230	<sup>2</sup> 1,207.8	1,520	<sup>2</sup> 1,456.1	4,100	<sup>2</sup> 1,314.1	4,970	<sup>2</sup> 1,572.8				
1–4 years . . . . .					300	73.7	340	84.2	760	61.5	840	68.7				
5–14 years . . . . .					270	30.0	280	31.7	870	30.8	750	27.2				
15–24 years . . . . .					150	67.7	210	95.7	610	67.8	720	82.0	1,840	68.5	2,050	76.8
25–34 years . . . . .					310	131.2	380	159.9	1,620	171.2	1,560	163.0	4,310	149.4	4,550	157.1
35–44 years . . . . .	630	287.1	940	442.2	2,810	322.4	3,070	362.1	8,470	321.1	8,360	327.3				
45–54 years . . . . .	870	635.3	770	591.1	3,620	665.3	3,420	658.7	10,860	665.8	9,850	633.8				
55–64 years . . . . .	1,160	1,201.1	1,340	1,403.0	5,490	1,422.9	5,830	1,528.1	16,000	1,367.5	17,100	1,479.2				
65–74 years . . . . .	1,960	2,547.7	2,210	2,903.7	8,880	2,885.7	9,650	3,173.0	26,840	2,873.7	26,200	2,841.6				
75–84 years . . . . .	2,620	6,048.7	2,690	6,306.0	11,130	6,451.8	10,750	6,299.8	29,750	5,688.3	29,580	5,721.5				
85 years and over . . . . .	1,970	13,774.9	2,210	15,632.7	9,020	15,838.9	8,340	14,769.9	24,170	13,971.1	22,860	13,368.4				
Not stated . . . . .	10	...	10	...	60	...	30	...	120	...	60	...				
Age-adjusted rate <sup>3</sup> . . . . .	...	537.8	...	612.9	...	601.2	...	628.8	...	575.3	...	585.3				

<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 9 for infant mortality rates.

<sup>3</sup>For method of computation, see Technical notes.

NOTES: 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, April 1993 and 1994, cumulative figures 1993 and 1994, and 12 months ending with April 1993 and 1994**

[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)	April		April		January–April		January–April		12 months ending with April		12 months ending with April	
	1994		1993		1994		1993		1994		1993	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All causes . . . . .	182,000	853.5	196,000	926.6	810,000	948.7	798,000	944.8	2,280,000	880.5	2,207,000	861.8
Shigellosis and amebiasis . . . . .	—	*	—	*	10	*	—	*	10	*	—	*
Certain other intestinal infections . . . . .	90	*	60	*	320	0.4	230	0.3	670	0.3	690	0.3
Tuberculosis . . . . .	110	0.5	190	0.9	490	0.6	580	0.7	1,440	0.6	1,510	0.6
Tuberculosis of respiratory system . . . . .	110	0.5	170	0.8	400	0.5	480	0.6	1,150	0.4	1,210	0.5
Other tuberculosis . . . . .	10	*	20	*	90	*	100	*	290	0.1	300	0.1
Whooping cough . . . . .	—	*	—	*	20	*	10	*	20	*	20	*
Streptococcal sore throat, scarlatina, and erysipelas . . . . .	—	*	—	*	—	*	—	*	—	*	—	*
Meningococcal infection . . . . .	20	*	40	*	110	0.1	130	0.1	260	0.1	280	0.1
Septicemia . . . . .	1,710	8.0	1,830	8.7	7,660	9.0	7,320	8.7	20,730	8.0	20,010	7.8
Acute poliomyelitis . . . . .	—	*	—	*	—	*	—	*	—	*	—	*
Measles . . . . .	—	*	—	*	—	*	—	*	—	*	—	*
Viral hepatitis . . . . .	180	0.8	220	1.0	910	1.0	820	1.0	2,600	1.0	2,090	0.8
Syphilis . . . . .	—	*	—	*	60	*	10	*	150	0.1	40	*
All other infectious and parasitic diseases <sup>1</sup> . . . . .	3,470	16.2	3,590	17.0	15,110	17.7	14,280	16.9	44,970	17.4	40,250	15.7
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues . . . . .	41,820	195.7	43,270	204.7	178,350	208.9	177,900	210.7	531,720	205.4	526,140	205.4
Malignant neoplasms of lip, oral cavity, and pharynx . . . . .	550	2.6	690	3.3	2,540	3.0	2,700	3.2	8,000	3.1	8,110	3.2
Malignant neoplasms of digestive organs and peritoneum . . . . .	9,940	46.5	9,970	47.2	41,740	48.9	39,960	47.3	125,240	48.4	121,720	47.5
Malignant neoplasms of respiratory and intrathoracic organs . . . . .	11,800	55.2	12,580	59.5	50,570	59.2	52,230	61.9	152,270	58.8	153,110	59.8
Malignant neoplasm of breast . . . . .	3,500	16.4	3,800	18.0	14,570	17.1	15,220	18.0	44,060	17.0	43,780	17.1
Malignant neoplasms of genital organs . . . . .	4,750	22.2	4,940	23.4	20,370	23.9	20,820	24.7	60,290	23.3	59,830	23.4
Malignant neoplasms of urinary organs . . . . .	1,790	8.4	1,940	9.2	7,690	9.0	7,750	9.2	22,070	8.5	22,690	8.9
Malignant neoplasms of all other and unspecified sites . . . . .	5,160	24.1	5,150	24.4	22,250	26.1	21,750	25.8	66,880	25.8	64,550	25.2
Leukemia . . . . .	1,630	7.6	1,520	7.2	6,990	8.2	6,620	7.8	19,320	7.5	19,830	7.7
Other malignant neoplasms of lymphatic and hematopoietic tissues . . . . .	2,700	12.6	2,680	12.7	11,620	13.6	10,840	12.8	33,610	13.0	32,510	12.7
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature . . . . .	610	2.8	610	2.9	2,640	3.1	2,580	3.1	8,110	3.1	7,440	2.9
Diabetes mellitus . . . . .	4,250	19.9	4,700	22.2	19,430	22.7	19,610	23.2	54,850	21.2	51,380	20.1
Nutritional deficiencies . . . . .	250	1.2	220	1.0	1,150	1.3	1,040	1.2	3,440	1.3	3,110	1.2
Anemias . . . . .	410	1.9	360	1.7	1,420	1.7	1,560	1.8	4,390	1.7	4,280	1.7
Meningitis . . . . .	40	*	40	*	370	0.4	330	0.4	860	0.3	770	0.3
Major cardiovascular diseases . . . . .	76,480	357.9	83,210	393.6	340,020	398.3	339,950	402.5	940,560	363.3	925,320	361.3
Diseases of heart . . . . .	59,650	279.1	65,460	309.7	264,400	309.7	266,060	315.1	735,330	284.0	727,310	284.0
Rheumatic fever and rheumatic heart disease . . . . .	540	2.5	540	2.5	1,970	2.3	1,990	2.4	5,560	2.1	5,770	2.3
Hypertensive heart disease . . . . .	1,930	9.0	2,010	9.5	8,440	9.9	8,590	10.2	23,120	8.9	23,260	9.1
Hypertensive heart and renal disease . . . . .	220	1.0	230	1.1	680	0.8	790	0.9	2,170	0.8	2,340	0.9
Ischemic heart disease . . . . .	39,500	184.8	43,290	204.8	174,520	204.4	175,920	208.3	484,120	187.0	482,250	188.3
Acute myocardial infarction . . . . .	18,540	86.8	20,090	95.0	81,850	95.9	81,300	96.3	227,230	87.8	227,410	88.8
Other acute and subacute forms of ischemic heart disease . . . . .	190	0.9	190	0.9	980	1.1	990	1.2	2,950	1.1	2,810	1.1
Angina pectoris . . . . .	100	*	80	*	360	0.4	270	0.3	820	0.3	910	0.4
Old myocardial infarction and other forms of chronic ischemic heart disease . . . . .	20,680	96.8	22,940	108.5	91,330	107.0	93,350	110.5	253,110	97.8	251,120	98.0
Other diseases of endocardium . . . . .	1,040	4.9	1,330	6.3	5,090	6.0	5,150	6.1	14,420	5.6	14,690	5.7
All other forms of heart disease . . . . .	16,420	76.8	18,060	85.4	73,710	86.3	73,620	87.2	205,950	79.5	198,990	77.7
Hypertension with or without renal disease . . . . .	860	4.0	920	4.3	4,170	4.9	3,730	4.4	10,970	4.2	10,240	4.0
Cerebrovascular diseases . . . . .	12,390	58.0	13,050	61.7	55,150	64.6	54,050	64.0	150,600	58.2	146,030	57.0
Intracerebral and other intracranial hemorrhage . . . . .	1,840	8.6	1,890	8.9	7,480	8.8	8,020	9.5	20,730	8.0	21,510	8.4
Cerebral thrombosis and unspecified occlusion of cerebral arteries . . . . .	1,310	6.1	1,320	6.2	5,400	6.3	5,620	6.7	15,590	6.0	15,560	6.1

See footnotes at end of table.

**Table 6. Provisional number of deaths and death rates for 72 selected causes and Human immunodeficiency virus infection: United States, April 1993 and 1994, cumulative figures 1993 and 1994, and 12 months ending with April 1993 and 1994—Con.**

[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)	April		January–April				12 months ending with April						
	1994		1993		1994		1993		1994		1993		
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	
Cerebral embolism . . . . .	434.1	70	*	20	*	340	0.4	180	0.2	650	0.3	580	0.2
All other and late effects of cerebrovascular diseases . . . . .	430,433,435–438	9,170	42.9	9,830	46.5	41,940	49.1	40,220	47.6	113,630	43.9	108,390	42.3
Atherosclerosis . . . . .	.440	1,400	6.5	1,450	6.8	6,710	7.9	6,530	7.7	17,230	6.7	17,000	6.6
Other diseases of arteries, arterioles, and capillaries . . . . .	.441–448	2,180	10.2	2,340	11.1	9,580	11.2	9,570	11.3	26,430	10.2	24,740	9.7
Acute bronchitis and bronchiolitis . . . . .	.466	40	*	40	*	340	0.4	310	0.3	590	0.2	580	0.2
Pneumonia and influenza . . . . .	.480–487	6,220	29.1	8,180	38.7	36,050	42.2	32,660	38.7	83,110	32.1	76,520	29.9
Pneumonia . . . . .	.480–486	6,190	29.0	8,040	38.0	34,870	40.8	32,030	37.9	81,630	31.5	75,780	29.6
Influenza . . . . .	.487	30	*	140	0.7	1,180	1.4	630	0.8	1,470	0.6	730	0.3
Chronic obstructive pulmonary diseases and allied conditions . . . . .	.490–496	8,250	38.6	9,660	45.7	39,880	46.7	37,990	45.0	102,510	39.6	93,330	36.4
Bronchitis, chronic and unspecified . . . . .	.490–491	220	1.0	270	1.3	1,460	1.7	1,500	1.8	3,550	1.4	3,660	1.4
Emphysema . . . . .	.492	1,370	6.4	1,680	7.9	6,440	7.5	6,880	8.1	17,540	6.8	17,380	6.8
Asthma . . . . .	.493	370	1.7	460	2.2	2,100	2.4	1,740	2.1	5,220	2.0	4,530	1.8
Other chronic obstructive pulmonary diseases and allied conditions . . . . .	.494–496	6,280	29.4	7,260	34.3	29,880	35.0	27,860	33.0	76,190	29.4	67,770	26.5
Ulcer of stomach and duodenum . . . . .	.531–533	630	2.9	530	2.5	2,210	2.6	2,110	2.5	5,640	2.2	5,790	2.3
Appendicitis . . . . .	.540–543	10	*	40	*	80	*	160	0.2	370	0.1	320	0.1
Hernia of abdominal cavity and intestinal obstruction without mention of hernia . . . . .	.550–553,560	450	2.1	430	2.0	2,070	2.4	1,870	2.2	5,980	2.3	5,730	2.2
Chronic liver disease and cirrhosis . . . . .	.571	2,110	9.9	2,150	10.2	8,610	10.1	8,440	10.0	24,840	9.6	24,740	9.7
Cholelithiasis and other disorders of gallbladder . . . . .	.574–575	280	1.3	190	0.9	940	1.1	960	1.1	2,650	1.0	2,860	1.1
Nephritis and nephrotic syndrome, and nephrosis . . . . .	.580–589	2,180	10.2	2,110	10.0	8,910	10.4	9,280	11.0	24,300	9.4	24,020	9.4
Acute glomerulonephritis and nephrotic syndrome . . . . .	.580–581	30	*	20	*	110	0.1	110	0.1	330	0.1	280	0.1
Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified . . . . .	.582–583,587	150	0.7	140	0.7	520	0.6	510	0.6	1,580	0.6	1,480	0.6
Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause . . . . .	.584–586,588–589	2,000	9.4	1,960	9.3	8,280	9.7	8,650	10.2	22,390	8.6	22,260	8.7
Infections of kidney . . . . .	.590	80	*	110	0.5	410	0.5	350	0.4	1,050	0.4	1,050	0.4
Hyperplasia of prostate . . . . .	.600	30	*	50	*	140	0.2	150	0.2	440	0.2	370	0.1
Complications of pregnancy, childbirth, and the puerperium . . . . .	.630–676	20	*	30	*	90	*	140	0.2	250	0.1	370	0.1
Pregnancy with abortive outcome . . . . .	.630–638	–	*	–	*	30	*	30	*	60	*	60	*
Other complications of pregnancy, childbirth, and the puerperium . . . . .	.640–676	20	*	30	*	60	*	110	0.1	190	0.1	310	0.1
Congenital anomalies . . . . .	.740–759	770	3.6	860	4.1	3,720	4.4	3,820	4.5	11,520	4.4	11,990	4.7
Certain conditions originating in the perinatal period . . . . .	.760–779	1,000	4.7	1,330	6.3	4,520	5.3	4,930	5.8	15,200	5.9	15,350	6.0
Birth trauma, intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome . . . . .	.767–769	140	0.6	320	1.5	850	1.0	980	1.2	2,790	1.1	3,090	1.2
Other conditions originating in the perinatal period . . . . .	.760–766,770–779	860	4.0	1,000	4.7	3,670	4.3	3,950	4.7	12,410	4.8	12,250	4.8
Symptoms, signs, and ill-defined conditions . . . . .	.780–799	2,990	14.0	3,830	18.1	13,680	16.0	13,840	16.4	39,140	15.1	36,890	14.4
All other diseases . . . . .	.Residual	16,180	75.7	16,980	80.3	73,710	86.3	70,540	83.5	200,630	77.5	185,170	72.3
Accidents and adverse effects . . . . .	.E800–E949	7,030	32.9	6,560	31.0	27,740	32.5	25,720	30.4	89,040	34.4	83,480	32.6
Motor vehicle accidents . . . . .	.E810–E825	3,430	16.0	3,100	14.7	12,380	14.5	11,620	13.8	41,540	16.0	40,540	15.8
All other accidents and adverse effects . . . . .	.E800–E807,E826–E949	3,600	16.8	3,470	16.4	15,350	18.0	14,090	16.7	47,490	18.3	42,950	16.8
Suicide . . . . .	.E950–E959	2,730	12.8	2,320	11.0	10,120	11.8	9,520	11.3	30,600	11.8	28,380	11.1
Homicide and legal intervention . . . . .	.E960–E978	1,680	7.9	1,890	8.9	7,760	9.1	7,720	9.1	24,820	9.6	24,660	9.6
All other external causes . . . . .	.E980–E999	260	1.2	210	1.0	770	0.9	990	1.2	2,380	0.9	2,410	0.9
Human immunodeficiency virus infection <sup>2</sup> . . . . .	*042–*044	3,010	14.1	2,900	13.7	12,830	15.0	11,780	13.9	38,020	14.7	33,470	13.1

<sup>1</sup>Includes data for deaths due to Human immunodeficiency virus infection (category nos. \*042–\*044) shown separately below; see Technical notes.

<sup>2</sup>Included in All other infectious and parasitic diseases shown above.

NOTES: 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, April 1993 and 1994, cumulative figures 1993 and 1994, and 12 months ending with April 1993 and 1994**

[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)	April				January–April				12 months ending with April			
	1994		1993		1994		1993		1994		1993	
	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	41,820	195.7	43,270	204.7	178,350	208.9	177,900	210.7	531,720	205.4	526,140	205.4
Malignant neoplasm of esophagus . . . . .150	1,010	4.7	790	3.7	3,850	4.5	3,140	3.7	10,940	4.2	10,440	4.1
Malignant neoplasm of stomach . . . . .151	970	4.5	1,330	6.3	4,230	4.9	4,550	5.4	13,520	5.2	13,070	5.1
Malignant neoplasms of colon, rectum, rectosigmoid junction, and anus . . . . .153,154	4,470	20.9	4,680	22.1	19,340	22.6	18,010	21.3	57,900	22.4	55,880	21.8
Malignant neoplasm of pancreas . . . . .157	2,100	9.8	2,040	9.6	8,920	10.4	9,030	10.7	26,470	10.2	26,750	10.4
Malignant neoplasms of trachea, bronchus, and lung . . . . .162	11,350	53.1	12,140	57.4	48,850	57.2	50,660	60.0	147,070	56.8	148,230	57.9
Malignant melanoma of skin . . . . .172	740	3.5	540	2.5	2,380	2.8	2,280	2.7	6,880	2.7	6,890	2.7
Malignant neoplasm of cervix uteri . . . . .180	400	1.9	380	1.8	1,510	1.8	1,690	2.0	4,630	1.8	4,550	1.8
Malignant neoplasms of body of uterus and of uterus, part unspecified . . . . .179,182	530	2.5	350	1.7	1,950	2.3	2,020	2.4	5,920	2.3	6,170	2.4
Malignant neoplasm of ovary . . . . .183.0	930	4.3	1,030	4.9	4,160	4.9	4,400	5.2	12,510	4.8	12,990	5.1
Malignant neoplasm of prostate . . . . .185	2,720	12.7	3,020	14.3	11,960	14.0	12,170	14.4	35,130	13.6	34,380	13.4
Malignant neoplasm of bladder . . . . .188	900	4.2	880	4.2	3,800	4.4	3,920	4.6	10,900	4.2	11,270	4.4
Malignant neoplasms of kidney and other and unspecified urinary organs . . . . .189	890	4.2	1,060	5.0	3,890	4.6	3,830	4.5	11,170	4.3	11,420	4.5
Malignant neoplasms of brain and other and unspecified parts of nervous system . . . . .191,192	920	4.3	850	4.0	3,840	4.5	3,720	4.4	11,270	4.4	11,020	4.3
Hodgkin's disease . . . . .201	130	0.6	170	0.8	530	0.6	600	0.7	1,540	0.6	1,760	0.7
Malignant lymphoma other than Hodgkin's disease . . . . .200,202	1,820	8.5	1,770	8.4	7,490	8.8	6,870	8.1	21,960	8.5	21,090	8.2
Multiple myeloma and other immunoproliferative neoplasms . . . . .203	750	3.5	740	3.5	3,600	4.2	3,370	4.0	10,110	3.9	9,660	3.8

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

NOTES: 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 and death rates for injury by firearms: United States, April 1993 and 1994, cumulative figures 1993 and 1994, and 12 months ending with April 1993 and 1994**

[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)	April				January–April				12 months ending with April			
	1994		1993		1994		1993		1994		1993	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Injury by firearms . . . . .E922,E955.0–E955.4,E965.0–965.4,E970,E985.0–E985.4	3,050	14.3	3,130	14.8	12,530	14.7	12,150	14.4	39,170	15.1	36,790	14.4
Accident caused by firearm missile . . . . .E922	130	0.6	180	0.8	430	0.5	590	0.7	1,520	0.6	1,720	0.7
Suicide by firearms . . . . .E955.0–E955.4	1,630	7.6	1,490	7.0	6,430	7.5	5,870	6.9	19,370	7.5	17,670	6.9
Homicide and legal intervention by firearms . . . . .E965.0–E965.4,E970	1,250	5.8	1,430	6.8	5,600	6.6	5,550	6.6	18,000	7.0	17,060	6.7
Injury by firearms, undetermined whether accidentally or purposely inflicted . . . . .E985.0–E985.4	30	*	30	*	70	*	150	0.2	290	0.1	340	0.1

NOTES: 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 9. Provisional number of deaths under 1 year and infant mortality rates, by age and for 10 selected causes: United States, April 1993 and 1994, cumulative figures 1993 and 1994, and 12 months ending with April 1993 and 1994**

[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)	April		January–April				12 months ending with April					
	1994		1993		1994		1993		1994		1993	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Total, under 1 year . . . . .	2,500	792.2	2,800	861.9	10,600	814.9	11,500	860.8	32,400	815.2	33,700	832.1
Under 28 days . . . . .	1,450	466.4	1,830	555.9	6,280	483.1	6,760	508.1	20,920	526.3	21,210	523.8
28 days to 11 months . . . . .	1,000	321.6	1,000	303.8	4,300	330.8	4,690	352.5	11,480	288.8	12,490	308.4
Certain gastrointestinal diseases . . . . .008–009,535,555–558	20	*	30	*	80	*	80	*	200	5.0	310	7.7
Pneumonia and influenza . . . . .480–487	60	*	40	*	240	18.5	210	15.8	490	12.3	560	13.8
Congenital anomalies . . . . .740–759	540	173.7	470	142.8	2,220	170.8	2,170	163.1	6,770	170.3	7,110	175.6
Disorders relating to short gestation and unspecified low birthweight . . . . .765	330	106.1	340	103.3	1,220	93.8	1,300	97.7	4,010	100.9	3,840	94.8
Birth trauma . . . . .767	20	*	30	*	90	*	50	*	180	4.5	160	4.0
Intrauterine hypoxia and birth asphyxia . . . . .768	10	*	80	*	170	13.1	240	18.0	580	14.6	750	18.5
Respiratory distress syndrome . . . . .769	110	35.4	210	63.8	570	43.8	680	51.1	1,970	49.6	2,150	53.1
Other conditions originating in the perinatal period . . . . .760–764,766,770–779	530	170.5	630	191.4	2,350	180.8	2,610	196.2	8,160	205.3	8,290	204.7
Sudden infant death syndrome . . . . .798.0	270	86.8	450	136.7	1,310	100.8	1,690	127.0	3,920	98.6	4,190	103.5
All other causes . . . . .Residual	570	183.3	560	170.1	2,330	179.2	2,420	181.9	6,110	153.7	6,350	156.8

NOTES: 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 unless otherwise specified and include only events occurring within the United States. Mortality data exclude fetal deaths.

Birth, death, and infant death figures 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 three most recent years for which final data were available and are 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. 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 California shown in tables 2 and 4 contain adjustments for varying length of State reporting periods. Figures for Texas for all events shown in tables 2-4 also are adjusted for varying length of State reporting 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 are included in the U.S. totals shown elsewhere in this report.

U.S. totals for births, deaths, and infant deaths are based on the State estimates by State of residence 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. 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), 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, 1989*, 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. Rates shown in this report were computed using populations comparable to those used for final data. Monthly rates are based on populations estimated for the specific month. Year-to-date rates are averages of monthly rates that have been weighted by the number of days in the corresponding months. 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 deaths under 1 year of age for the specified period (monthly, year-to-date, or 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 Nature and sources of data. Because monthly infant mortality rates are based on relatively few events, they are highly variable. Therefore, comparisons of monthly infant mortality rates should be interpreted cautiously; see Random variation.

Age-adjusted death rates are used to compare relative mortality risks across groups and over time. However, they should be viewed as constructs or indexes rather than as direct or actual measures of mortality risk. Statistically, they are weighted averages of the age-specific death rates, where the weights represent the fixed population proportions by age. See chapter 5 of an earlier report (3). The age-adjusted death rates presented in this report were computed by the direct method, that is, by applying age-specific death rates to the U.S. standard million population (4). See also chapter 10 of an earlier report (3). Age groups in table 5 were used to compute the age-adjusted

rates shown in that table. The age-adjusted death rates on which the State maps are based and which are shown with the State maps were computed from average annual age-specific death rates in 10-year age groups for the specified 3-year period. The average annual age-specific death rates were computed by dividing the number of deaths in an age group for the 3-year period by three times the population in that age group estimated at the midpoint of the period (5). It is important not to compare age-adjusted 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 for the United States by age, race, sex, and cause are estimated 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 sometimes is not available when the sample is drawn. As a result, estimates based on sample counts for certain causes are biased. Correction for bias is not made in this report but is made in the annual summary (issue number 13 in this series) each year.

Estimated numbers of deaths 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, the National Center for Health Statistics introduced category numbers \*042–\*044 for classifying and coding Human immunodeficiency virus infection. The asterisk before the category numbers indicates that these codes are not part of the *Ninth Revision of the International Classification of Diseases*. Deaths classified to these categories are included in All other infectious and parasitic diseases in the List of 72 Selected Causes of Death and are also shown separately at the bottom of table 6.

*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 following 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 fall between the two.

The chances are about 2 in 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 in 20 that the percent difference is less than twice the percent shown. A figure based on 100 or fewer estimated deaths has a relative standard error of 30 percent or more and is, therefore, considered unreliable. A rate based on 100 or fewer estimated deaths has been replaced by an asterisk.

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 (MSS) charts are based entirely on monthly provisional data from the 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 for January 1985 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 for January 1986 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 (6). Symbols in each chart represent actual monthly death rates based on the CMS. In some cases the data are converted by the natural logarithm before fitting the model. For graphical purposes the data are converted 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 on request for the charts published in the MSS. Time series

**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

regression models have been used previously to describe trends in mortality data (7-9). A list of MSS cause-of-death topics and comparable *Healthy People 2000* (2) objectives is presented on the back of this report.

### State maps

Unlike other data presented in this report, the State maps are based on final data instead of provisional data. The age-adjusted death rates used to produce the State maps were computed by using a 3-year total number of deaths for 1989-91 and the 1990 census population enumerated as of April 1, 1990 (5). Assigning the States into the given categories on the maps was carried out in two steps: a) determining whether the State age-adjusted death rate differed significantly from the corresponding U.S. rate at the 0.05 level of significance; b) then grouping the State rates found to be significantly different from the U.S. rate into the four categories: 10 highest State rates of those significantly greater than the U.S. rate, remaining State rates significantly greater than the U.S. rate, 10 lowest State rates of those significantly lower than the U.S. rate, and remaining State rates significantly lower than the U.S. rate. Age-adjusted death rates and the corresponding 95-percent confidence intervals are shown in the tables. The symbols † and †† in the tables are used to denote State rates that differ significantly from the U.S. rate at the 0.05 and 0.01 levels of significance, respectively. Different procedures were used to determine tests of statistical significance and confidence intervals, depending on the number of deaths.

For 50 deaths or more, the standard normal Z statistic was used to perform the significance test:

$$Z = (R'_s - R'_{us}) / \sqrt{S^2(R'_s) + S^2(R'_{us})}$$

where

$R'_s$  = age-adjusted rate for

1989-91 for the given State per 100,000 U.S. standard million population

$R'_{us}$  = age-adjusted rate for 1989-91 for the United States per 100,000 U.S. standard million population

$S^2(R'_s)$  = estimated variance of the age-adjusted death rate for 1989-91 for the State

$S^2(R'_{us})$  = estimated variance of the age-adjusted death rate for 1989-91 for the United States

The variance of the age-adjusted death rate was computed in terms of the variances of age-specific death rates (10) under the assumption that the age-specific death rates are binomial proportions (11). The 95-percent confidence limits were estimated as follows:

$$\text{Lower limit} = R'_s - 1.96 \cdot S(R'_s)$$

and

$$\text{Upper limit} = R'_s + 1.96 \cdot S(R'_s)$$

For 1-49 deaths the lower and upper 95-percent confidence limits were estimated as described elsewhere (12). The difference between the State and U.S. age-adjusted rates was determined to be statistically significant at the 0.05 or 0.01 level if the rates' respective 95-percent or 99-percent confidence limits did not overlap.

For zero deaths, the following test statistic ( $\lambda$ ) was used to perform the significance test:

$$\lambda = \left[ \sum_{x=1}^n M_{x(us)} \cdot P_{x(s)} \right] / 100,000$$

where

$M_{x(us)}$  = age-specific death rate per 100,000 population in the  $x^{\text{th}}$  age group for the United States

$P_{x(s)}$  = population in the  $x^{\text{th}}$  age group for the given State

$n$  = number of age groups = 11.

The difference between the State and U.S. age-adjusted rates was determined to be statistically significant at the 0.05 level

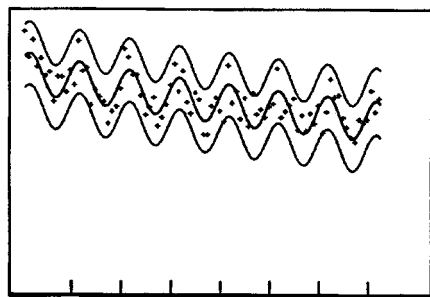
if  $3.00 \leq \lambda < 4.61$ . The difference between the State and U.S. age-adjusted rates was determined to be statistically significant at 0.01 level if  $\lambda \geq 4.61$  (13). For zero deaths, confidence limits for the age-adjusted death rates are not applicable.

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**Mortality Surveillance System topics**

<i>MVSR issue</i>	<i>Cause-of-death</i>	<i>Healthy People 2000 Objective Number</i>
Vol. 42 No. 6	Malignant neoplasms including neoplasms of lymphatic and hematopoietic tissues	2.2 (16.1)
Vol. 42 No. 7	Malignant neoplasms of trachea, bronchus, and lung	3.2 (16.2)
Vol. 42 No. 8	Malignant neoplasm of prostate, Malignant neoplasm of breast	( <sup>1</sup> ), 16.3
Vol. 42 No. 9	Motor vehicle accidents	9.3
Vol. 42 No. 10	Suicide	6.1 (7.2)
Vol. 42 No. 11	Accidents and adverse effects, Homicide and legal intervention	9.1, 7.1 ( <sup>2</sup> )
Vol. 42 No. 12	Infant mortality, Neonatal mortality, Postneonatal mortality, and Sudden infant death syndrome	14.1 ( <sup>3</sup> )
Vol. 43 No. 1	Human immunodeficiency virus infection	( <sup>4</sup> )
Vol. 43 No. 2	Cerebrovascular diseases	15.2
Vol. 43 No. 3	Chronic obstructive pulmonary diseases and allied conditions	3.3
Vol. 43 No. 4	Diabetes mellitus	17.9
Vol. 43 No. 5	Diseases of heart	1.1 (2.1, 3.1, 15.1)



<sup>1</sup>No *Healthy People 2000* objective addresses mortality from Malignant neoplasm of prostate.  
<sup>2</sup>No *Healthy People 2000* objective addresses mortality from Legal intervention.  
<sup>3</sup>No *Healthy People 2000* objective addresses mortality from Sudden infant death syndrome.  
<sup>4</sup>No *Healthy People 2000* objective addresses mortality from this cause. See Chapter 18 for objectives related to Human immunodeficiency virus infection.  
 NOTE: The cause-of-death categories used in *Healthy People 2000* objective(s) may differ from those used in NCHS Mortality Tabulation Lists.

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