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Monthly

# VITAL STATISTICS REPORT

*Provisional Statistics*

## ANNUAL SUMMARY FOR THE UNITED STATES, 1977

**BIRTHS, DEATHS,  
MARRIAGES,  
AND DIVORCES**

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service

Office of the Assistant Secretary for Health

National Center for Health Statistics

Hyattsville, Maryland 20782



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### SYMBOLS

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# ANNUAL SUMMARY, 1977

## VITAL STATISTICS OF THE UNITED STATES

Item	Rate per 1,000 population						
	1977 <sup>1</sup>	1976	1975	1974	1973	1972	1971
Births .....	15.3	14.8	14.8	14.9	14.9	15.6	17.2
Deaths .....	8.8	8.9	8.9	9.2	9.4	9.4	9.3
Natural increase.....	6.5	5.9	5.9	5.7	5.5	6.2	7.9
Marriages.....	10.1	10.0	10.1	10.5	10.9	11.0	10.6
Divorces (est.) .....	5.0	5.0	4.9	4.6	4.4	4.1	3.7

<sup>1</sup>Provisional.

The provisional vital statistics reported here monthly have been summarized for the entire year. These preliminary totals show more births, marriages, and divorces and fewer deaths and infant deaths in 1977 than in 1976.

### BIRTHS

In 1977 the number of births in the United States rose to an estimated 3,313,000. This was about 5 percent more than the final number recorded for 1976. The birth rate rose about 3

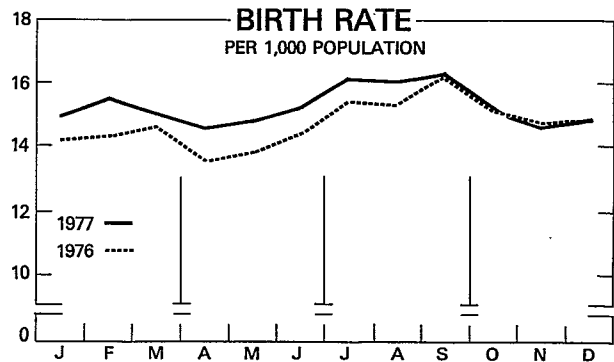


Table A. LIVE BIRTHS, BIRTH RATES, AND FERTILITY RATES, BY MONTH: UNITED STATES, 1976 AND 1977

[Rates on an annual basis. Birth rates per 1,000 population and fertility rates per 1,000 women aged 15-44 years. Data are provisional unless otherwise specified.]

Month	Number			Birth rate			Fertility rate		
	1977	1976	1976 (final)	1977	1976	1976 (final)	1977	1976	1976 (final)
Total .....	3,313,000	3,165,000	3,167,788	15.3	14.7	14.8	67.4	65.6	65.8
January .....	274,000	257,000	257,181	15.0	14.2	14.2	66.3	63.5	63.6
February .....	256,000	242,000	242,868	15.5	14.3	14.3	68.4	64.0	64.1
March .....	276,000	266,000	258,146	15.1	14.6	14.2	66.5	65.5	63.7
April .....	259,000	239,000	243,611	14.6	13.6	13.9	64.4	60.9	62.0
May .....	273,000	252,000	251,603	14.9	13.9	13.9	65.6	62.0	61.8
June .....	272,000	253,000	256,556	15.3	14.4	14.6	67.5	64.0	65.0
July .....	297,000	281,000	277,250	16.2	15.5	15.2	71.2	68.9	67.9
August .....	296,000	278,000	281,987	16.1	15.3	15.5	70.8	68.0	68.9
September.....	290,000	286,000	282,457	16.3	16.2	16.0	71.6	72.2	71.3
October.....	282,000	278,000	278,295	15.3	15.2	15.3	67.3	67.7	67.9
November .....	262,000	260,000	263,506	14.7	14.8	14.9	64.5	65.5	66.3
December.....	275,000	272,000	274,328	14.9	14.9	15.0	65.4	66.1	66.7

percent from the final rate of 14.8 in 1976 to 15.3 births per 1,000 population in 1977. The fertility rate of 67.4 births per 1,000 women 15-44 years of age was up 2 percent from the final rate for 1976, marking the first annual increase in this rate since the increases in 1969 and 1970. Data by month show that most of the increase over the previous year occurred during the first 8 months of 1977 (table A).

The number of births and the birth rate rose because of the growth of the number of women in childbearing ages (assumed to be 15-44 years) as well as the increase in the rate of childbearing. Although the number of women in the childbearing ages has been increasing, in the recent past, declines in the rate of childbearing have prevented substantial increases in the number of births.

The number of women in childbearing ages increased 2 percent between 1976 and 1977. According to projections prepared by the U.S. Bureau of the Census, this number will increase another 6 percent by 1980.

Although the greatest increases are projected for ages 30-39 years (12 percent), increases at the ages of highest fertility (20-29 years) will amount to 6 percent. As a result of these increases in the number of young women, the number of births could continue to rise unless age-specific birth rates fall below their present levels.

Provisional data by place of occurrence show that the number of births and the birth rate rose in all geographic divisions and in all States except Vermont.

## NATURAL INCREASE

During 1977, 1,415,000 persons were added to the population as a result of natural increase (the excess of births over deaths). The rate of natural increase was 6.5 persons per 1,000 population for 1977 compared with the final rate of 5.9 for 1976. This increase was due primarily to the increase in the birth rate.

## DEATHS

During 1977 an estimated 1,898,000 deaths occurred in the United States. The provisional total death rate for 1977 (8.8 deaths per 1,000 population) was the lowest annual rate ever recorded in this country. The final rate for 1976 was 8.9 (table C).

The absence of an influenza epidemic during 1977 may in part be responsible for the record low total death rate. As indicated by monthly death rates, the provisional rates for February and March of 1977 were lower than the rates for the same months of 1976, during which there was an influenza epidemic (table C).

Table B. SEASONALLY ADJUSTED BIRTH AND FERTILITY RATES, BY MONTH: UNITED STATES, 1976 AND 1977

[Rates on an annual basis. Birth rates per 1,000 population and fertility rates per 1,000 women aged 15-44 years. Data are provisional unless otherwise specified]

Month	Birth rate			Fertility rate		
	1977	1976	1976 (final)	1977	1976	1976 (final)
January .....	15.4	14.5	14.6	68.3	65.1	65.5
February .....	15.7	14.4	14.6	69.7	64.6	65.2
March .....	15.4	15.0	14.6	68.2	67.1	65.2
April .....	15.3	14.3	14.5	67.2	64.1	64.8
May .....	15.5	14.5	14.5	68.3	64.6	64.4
June .....	15.6	14.8	14.9	69.0	65.9	66.3
July .....	15.5	15.0	14.6	68.2	66.6	65.2
August .....	15.2	14.4	14.7	66.9	63.9	65.3
September .....	15.2	15.2	14.9	66.6	67.8	66.3
October .....	15.0	14.9	15.0	66.0	66.3	66.8
November .....	15.0	14.9	15.1	65.7	66.3	67.2
December .....	15.0	14.9	15.1	65.8	66.0	67.0

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Table C. DEATHS AND DEATH RATES, BY MONTH: UNITED STATES, 1976 AND 1977

[Rates on an annual basis per 1,000 population. Data are provisional unless otherwise specified]

Month	Number			Rate		
	1977	1976	1976 (final)	1977	1976	1976 (final)
Total.....	1,898,000	1,912,000	1,909,440	8.8	8.9	8.9
January.....	173,000	169,000	169,042	9.5	9.3	9.3
February.....	161,000	171,000	173,348	9.7	10.1	10.2
March.....	166,000	187,000	179,968	9.0	10.3	9.9
April.....	157,000	160,000	157,791	8.8	9.1	9.0
May.....	156,000	156,000	154,777	8.5	8.6	8.5
June.....	150,000	148,000	148,111	8.5	8.4	8.4
July.....	159,000	153,000	151,290	8.6	8.4	8.3
August.....	149,000	146,000	148,270	8.1	8.0	8.1
September.....	147,000	145,000	144,363	8.3	8.2	8.2
October.....	159,000	158,000	157,120	8.6	8.7	8.6
November.....	153,000	154,000	156,885	8.6	8.7	8.9
December.....	168,000	166,000	168,475	9.1	9.1	9.2

Expectation of Life

The record low death rate is also reflected in the life expectancy. The estimated expectation of life at birth in 1977 was 73.2 years for the total population, the highest life expectancy ever attained in the United States. Expectation of life at birth is the average number of years that an infant would be expected to live if the age-specific death rates observed during the year of the infant's birth were to continue unchanged throughout its life.

Based on the respective annual age-specific death rates, the expectations of life at birth for 1968-77 were as follows:

1977 (est.)	73.2	1972	71.1
1976	72.8	1971	71.1
1975	72.5	1970	70.9
1974	71.9	1969	70.4
1973	71.3	1968	70.2

Record high life expectancies at birth were, also, observed for white females (77.7 years), all other females (73.8 years), white males (69.9 years), and all other males (65.0 years).

Death Rates by Age, Color, and Sex

The 1.4-percent decline in the total death rate between 1977 and 1976 reflects decreases in the rate at ages under 1 year and for every 10-year age group in the span 35 years and over (table D). In addition, the provisional death

Table D. DEATH RATES BY AGE: UNITED STATES, 1976 AND 1977

[For 1977, based on a 10-percent sample of deaths. Rates per 100,000 population in specified group]

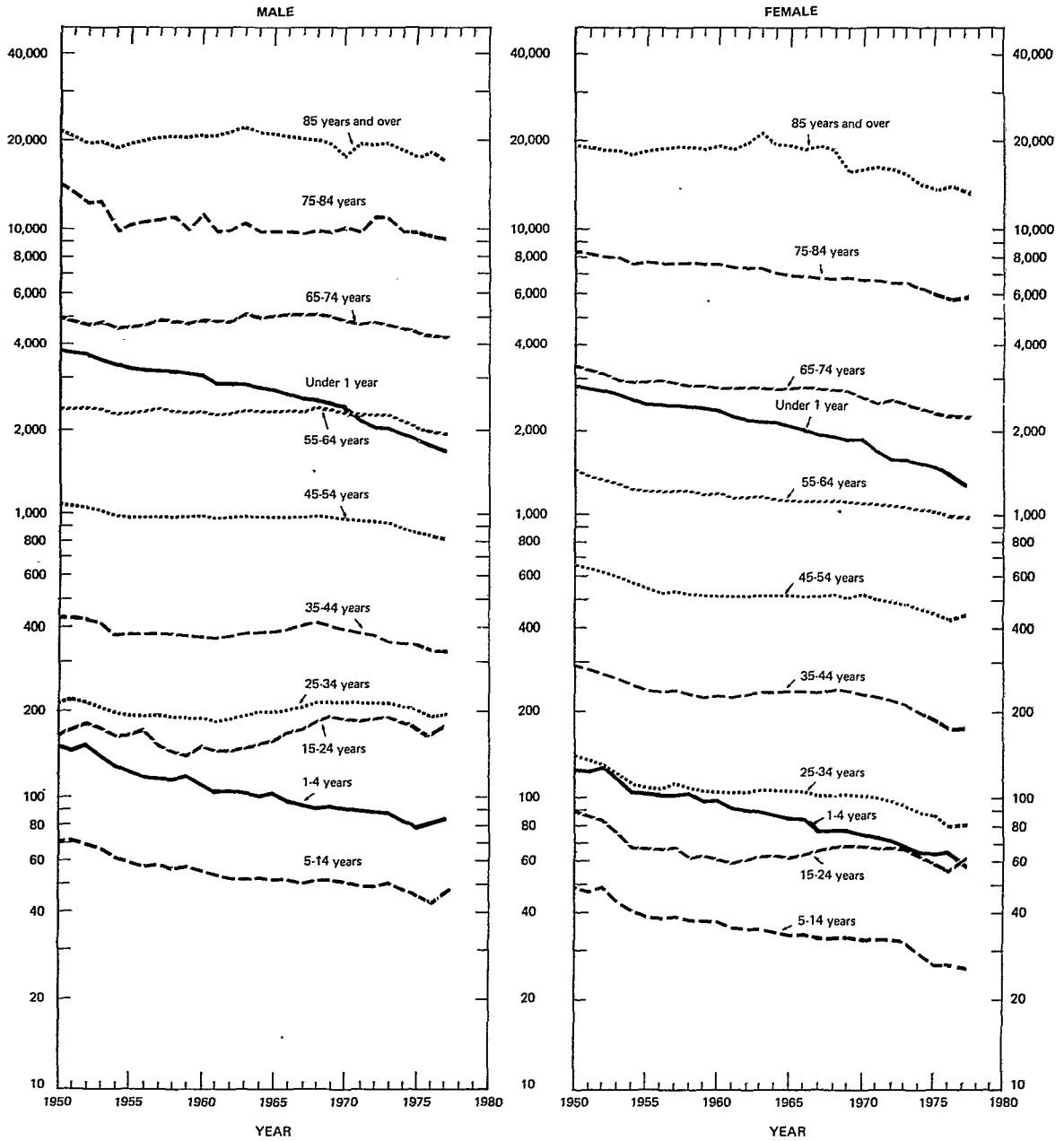
Age	1977 (est.)	1977 (final)	Percent difference
All ages <sup>1</sup> .....	877.4	889.6	-1.4
Under 1 year.....	1,470.0	1,595.0	-7.8
1-4 years.....	71.3	69.9	2.0
5-14 years.....	36.5	34.7	5.2
15-24 years.....	119.3	113.5	5.1
25-34 years.....	138.9	136.2	2.0
35-44 years.....	246.6	254.1	-3.0
45-54 years.....	614.9	634.8	-3.1
55-64 years.....	1,432.5	1,475.6	-2.9
65-74 years.....	3,056.8	3,127.6	-2.3
75-84 years.....	7,178.9	7,331.6	-2.1
85+ years.....	14,643.6	15,486.9	-5.4

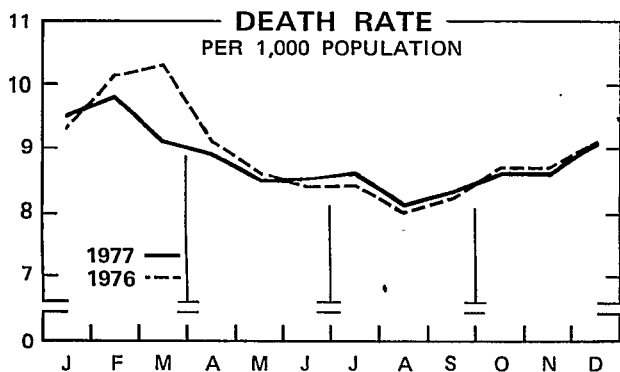
<sup>1</sup>Figures for age not stated included in "All ages" but not distributed among age groups.

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DEATH RATES PER 100,000 POPULATION, BY AGE AND SEX : UNITED STATES, 1950-77

[For 1977, based on a 10-percent sample of deaths; for all other years, based on final data]





rates for 1977 for these age groups were the lowest ever recorded in the United States. For age groups in the span 1-34 years, however, the rates increased between the final rate for 1976 and the provisional rate for 1977. Death rates for the four color-sex groups follow a similar pattern.

*Sex differentials for mortality by age.*—The 1977 death rate for the male population (10.0 per 1,000 population) was 1.3 times the corresponding rate for the female population (7.7). This was the same as the ratio for 1976. For both years the death rate was higher for males than for females in each age group. The ratio of male to female mortality varied by age, attaining a peak at ages 15-24 of 3.0 in 1977.

*Color differentials in mortality by age.*—The 1977 death rate for persons other than white (7.9 per 1,000 population) was lower than the rate for white persons (8.9). However, the reverse was true for each age group under 85 years. This phenomenon reflects in part differences in the age composition of the two groups. The population of persons other than white is younger than the white population. For 1977 the population of races other than white had a median age of 24.3 years. Only 7.5 percent of its population was 65 years and over. By comparison the white population had a median age of 30.3 years and 11.4 percent of its population was 65 years and over.

### Major Causes of Death

The 15 leading causes of death are ranked for 1977 in table E. Deaths assigned to these

causes accounted for 87.4 percent of the total number of deaths in 1977. The list of the leading causes for 1977 included one change from the list based on final data for 1976. Septicemia became the 15th leading cause, replacing Peptic ulcer.

Age-adjusted death rates control for changes and variations in the age composition of the population. Such rates, therefore, permit comparisons over time, and among causes of death free from differences due to the age structure of the population. Age-adjusted death rates are shown for 13 of the 15 leading causes (table F). Since deaths from the other two causes (Congenital anomalies and Certain causes of mortality in early infancy) occur almost entirely at ages under 1 year, age-adjusted rates for these causes are not shown.

The age-adjusted rates were lower for 8 of these 13 leading causes for 1977 than they were

Table E. DEATH RATES FROM 15 LEADING CAUSES OF DEATH: UNITED STATES, 1977

[Based on a 10-percent sample of deaths. Rates per 100,000 population. See table 8 for category numbers of causes of death]

Rank	Cause of death	Death rate	Per- cent of total deaths
...	All causes .....	877.4	100.0
1	Diseases of heart .....	331.6	37.8
2	Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues .....	179.1	20.4
3	Cerebrovascular diseases.....	84.5	9.6
4	Accidents .....	48.5	5.5
5	Influenza and pneumonia.....	23.1	2.6
6	Diabetes mellitus.....	15.5	1.8
7	Cirrhosis of liver.....	14.5	1.7
8	Arteriosclerosis .....	13.4	1.5
9	Suicide .....	13.1	1.5
10	Certain causes of mortality in early infancy .....	10.8	1.2
11	Bronchitis, emphysema, and asthma .....	10.3	1.2
12	Homicide .....	9.7	1.1
13	Congenital anomalies .....	5.8	0.7
14	Nephritis and nephrosis.....	3.8	0.4
15	Septicemia .....	3.4	0.4
...	All other causes.....	110.3	12.6



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Table F. AGE-ADJUSTED DEATH RATES FOR 15 LEADING CAUSES OF DEATH: UNITED STATES, 1968, 1976, AND 1977

[Rates per 100,000 population]

Rank	Cause of death	1977 (est.)	1976	1968
...	All causes .....	611.9	627.5	743.8
1	Diseases of heart.....	209.8	216.7	268.5
2	Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues.....	132.9	132.3	129.2
3	Cerebrovascular diseases.....	48.4	51.4	71.3
4	Accidents .....	44.7	43.2	55.0
...	Motor vehicle accidents.....	22.8	21.5	28.4
...	All other accidents.....	21.9	21.7	26.7
5	Influenza and pneumonia.....	13.8	17.4	26.9
6	Diabetes mellitus.....	10.6	11.1	14.6
7	Cirrhosis of liver.....	13.3	13.6	13.9
8	Arteriosclerosis.....	6.1	6.4	9.6
9	Suicide.....	12.8	12.3	10.9
10	Certain causes of mortality in early infancy.....	(1)	(1)	(1)
11	Bronchitis, emphysema, and asthma.....	7.1	7.9	12.8
12	Homicide.....	10.1	9.5	8.3
13	Congenital anomalies.....	(1)	(1)	(1)
14	Nephritis and nephrosis.....	2.6	2.8	3.9
15	Septicemia.....	2.5	2.3	1.2
...	All other causes.....	...	...	...

<sup>1</sup>Since deaths from these causes occur among infants, rates adjusted to the total population of the United States in 1940 are not shown. See table J.

for 1976. The largest decrease occurred for Influenza and pneumonia (down 20.7 percent). The other causes for which age-adjusted rates were lower in 1977 than they were in 1976 were Diseases of heart; Cerebrovascular diseases; Diabetes mellitus; Cirrhosis of liver; Arteriosclerosis; Nephritis and nephrosis; and Bronchitis, emphysema, and asthma. The decrease in the rate for Bronchitis, emphysema, and asthma may be associated with changes in medical classification rather than with reductions in the risk of dying from this cause.

The age-adjusted rates were higher for 5 of the 13 leading causes for 1977 than they were for 1976. These causes were Malignant neoplasms, Accidents (including both Motor vehicle accidents and All other accidents), Suicide, Homicide, and Septicemia.

*Diseases of heart.*—There were an estimated 717,320 deaths from Diseases of heart (the leading cause of death in the United States) in 1977, which accounted for 37.8 percent of all deaths. The provisional age-adjusted death rate for 1977 (209.8 deaths per 100,000 population) was 3.2

percent lower than the final rate for 1976 (216.7). Age-specific death rates declined for every age group except for persons aged 25-34 years (table G).

During 1968-77 the age-adjusted rate for Diseases of heart declined 21.9 percent with decreases occurring between each year.

*Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues.*—In 1977 there were an estimated 387,430 deaths (20.4 percent of all deaths) from Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues, the second leading cause of death. The provisional age-adjusted rate for 1977 (132.9 deaths per 100,000 population) was 0.5 percent higher than the final rate for 1976 (132.3).

By age, between 1976 and 1977 death rates for this cause were unchanged for infants. The rates decreased for persons in the age span 1-54 years and increased for those in the span 55 years and over (table G). A similar pattern prevailed during 1968-77.

*Cerebrovascular diseases.*—An estimated 182,840 persons died from Cerebrovascular

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Table G. AGE-SPECIFIC AND AGE-ADJUSTED DEATH RATES FOR SPECIFIED CAUSES: UNITED STATES, 1976 AND 1977  
 [For 1977, based on a 10-percent sample of deaths; and for 1976 based on final data. Rates per 100,000 population in specified group]

Cause of death and year	All ages	Under 1 year	1-14 years	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75-84 years	85 years and over	Age-adjusted rate <sup>1</sup>
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140-209):												
1977.....	179.1	3.2	4.7	6.4	13.1	51.1	179.5	443.6	794.5	1,270.8	1,488.2	132.9
1976.....	175.8	3.2	5.1	6.5	14.5	51.5	182.0	438.4	786.3	1,248.6	1,441.5	132.3
Malignant neoplasms of digestive organs and peritoneum (150-159):												
1977.....	47.4	-	0.1	0.3	1.6	8.7	37.8	104.0	214.4	403.6	521.9	33.2
1976.....	47.4	0.3	0.1	0.3	1.7	8.8	36.9	105.0	221.0	407.6	518.9	33.6
Malignant neoplasms of respiratory system (160-163):												
1977.....	43.4	0.0	0.0	0.1	0.6	11.6	51.1	139.8	216.9	226.0	163.1	33.8
1976.....	42.5	0.0	0.0	0.1	0.9	10.7	53.4	135.6	212.5	226.2	152.5	33.5
Malignant neoplasm of breast (174):												
1977.....	16.0	-	-	0.1	1.7	8.7	27.1	45.5	57.2	81.0	119.8	12.9
1976.....	15.6	-	0.0	0.0	1.6	8.9	26.5	43.6	56.6	82.0	112.6	12.6
Malignant neoplasms of genital organs (180-187):												
1977.....	21.0	-	0.1	0.9	1.8	5.0	14.5	40.3	91.1	194.7	244.8	14.6
1976.....	20.7	-	0.1	0.7	2.0	5.7	16.4	39.9	90.1	189.3	237.0	14.7
Diabetes mellitus (250):												
1977.....	15.5	-	0.1	0.4	1.5	3.0	9.9	27.4	69.5	145.8	199.1	10.6
1976.....	16.1	0.3	0.1	0.4	1.8	3.9	9.8	28.4	70.0	155.8	219.2	11.1
Major cardiovascular diseases (390-448):												
1977.....	443.8	25.3	1.4	3.7	13.1	59.8	226.5	636.4	1,596.7	4,478.6	10,442.5	273.4
1976.....	454.0	28.5	1.8	4.2	12.8	64.8	239.4	666.2	1,656.3	4,583.4	10,982.3	284.4
Diseases of heart (390-398,402,404,410-429):												
1977.....	331.6	21.2	0.8	2.3	9.0	47.5	190.2	532.2	1,255.6	3,201.9	7,034.6	209.8
1976.....	337.2	23.1	1.1	2.6	8.5	50.8	199.8	552.4	1,286.9	3,263.7	7,384.3	216.7
Cerebrovascular diseases (430-438):												
1977.....	84.5	3.2	0.5	1.1	3.2	9.7	28.9	78.5	260.6	987.1	2,428.1	48.4
1976.....	87.9	4.4	0.6	1.2	3.4	11.5	31.4	85.8	280.1	1,014.0	2,586.8	51.4
Cerebral hemorrhage (431):												
1977.....	10.7	1.6	0.2	0.4	1.2	2.9	9.0	17.1	40.3	97.6	178.5	7.3
1976.....	11.6	2.0	0.1	0.4	1.1	3.6	9.8	19.8	44.2	104.8	191.1	8.0
Cerebral thrombosis (433):												
1977.....	19.4	-	0.0	0.0	0.2	0.8	3.3	13.8	55.5	250.0	623.4	10.4
1976.....	20.9	0.2	0.0	0.1	0.1	0.7	3.5	15.0	64.7	262.3	700.0	11.4
Arteriosclerosis (440):												
1977.....	13.4	-	-	-	0.0	0.2	1.1	4.4	24.1	143.6	696.5	6.1
1976.....	13.7	0.0	0.0	0.0	0.0	0.2	0.9	5.2	25.8	152.5	714.3	6.4
Influenza and pneumonia (470-474,480-486):												
1977.....	23.1	50.6	1.4	1.4	1.8	4.3	8.7	20.5	60.4	233.9	695.0	13.8
1976.....	28.8	64.8	1.7	1.5	2.4	5.4	11.6	26.3	70.1	289.3	959.2	17.4
Bronchitis, emphysema, and asthma (490-493):												
1977.....	10.3	2.5	0.2	0.2	0.3	1.5	5.3	20.6	54.4	91.6	90.9	7.1
1976.....	11.4	2.3	0.2	0.2	0.5	1.3	6.0	23.0	60.7	101.4	108.5	7.9
Cirrhosis of liver (571):												
1977.....	14.5	0.6	0.1	0.3	4.1	15.6	33.6	46.8	42.4	30.7	14.9	13.3
1976.....	14.7	1.1	0.1	0.3	3.7	16.9	35.0	47.6	42.6	29.3	18.0	13.6
Accidents (E800-E949):												
1977.....	48.5	36.1	22.5	64.7	45.9	36.6	41.1	46.3	60.8	131.2	277.5	44.7
1976.....	46.9	41.4	19.7	59.9	43.5	37.1	39.9	47.7	62.2	134.5	306.7	43.2
Motor vehicle accidents (E810-E823):												
1977.....	23.3	7.0	9.4	44.6	27.3	19.0	18.3	19.0	21.4	30.0	24.5	22.8
1976.....	21.9	8.0	9.0	41.0	24.7	18.4	17.4	18.2	21.7	32.3	26.0	21.5
All other accidents (E800-E807, E825-E949):												
1977.....	25.3	29.1	13.0	20.1	18.6	17.7	22.8	27.3	39.4	101.2	253.0	21.9
1976.....	25.0	33.4	10.7	18.9	18.8	18.7	22.5	29.5	40.4	102.2	280.7	21.7
Suicide (E950-E959):												
1977.....	13.1	...	0.4	13.1	17.8	16.5	19.1	18.4	20.5	22.3	17.3	12.8
1976.....	12.5	...	0.3	11.7	15.9	16.3	19.2	20.0	19.5	20.8	18.9	12.3
Homicide (E960-E978):												
1977.....	9.7	6.3	1.3	13.1	17.1	16.0	10.7	8.2	6.1	4.5	4.3	10.1
1976.....	9.1	5.6	1.4	12.4	16.5	14.3	10.0	7.3	5.3	5.3	4.9	9.5

<sup>1</sup>The age-adjusted rates were computed by the direct method: age-specific death rates for a particular cause were applied to the standard population. The total population as enumerated in 1940, distributed by the same age groups shown in this table, was selected as the standard for 1977; for 1976 the same standard population and age distribution was used, except that the age group 1-14 years was divided into 1-4 and 5-14 years.

diseases in 1977. This third leading cause of death accounted for 9.6 percent of all deaths. The age-adjusted rate dropped 5.8 percent between 1976 and 1977, from 51.4 deaths per 100,000 population to 48.4, reaching the lowest level ever recorded for the United States. In addition, death rates for every age group declined between 1976 and 1977 (table G).

During 1968-77 the age-adjusted rate decreased each year, for a total reduction in mortality from this cause of 32.1 percent for the period.

*Accidents.*—There were an estimated 105,020 deaths from Accidents (the fourth leading cause of death) in 1977, including 50,380 from Motor vehicle accidents and 54,640 for All other accidents. Deaths from Accidents comprised 5.5 percent of the deaths from all causes. The age-adjusted death rate for Accidents increased 3.5 percent between 1976 and 1977, with Motor vehicle accidents increasing 6.0 percent and All other accidents increasing 0.9 percent.

During 1968-75 the age-adjusted rate for Motor vehicle accidents declined from 28.4 deaths per 100,000 population to 21.3. This includes a sharp reduction from 26.4 for 1973 to 21.8 for 1974, when there were serious gasoline shortages and new legislation went into effect establishing a maximum speed limit of 55 miles per hour on the Nation's highways. Between 1975 and 1977, however, there appears to have been an upturn in mortality. The age-adjusted rate increased 7.0 percent, from 21.3 for 1975 to 22.8 for 1977.

For All other accidents the age-adjusted rates fluctuated during 1968-77, but the general trend was downward. The provisional age-adjusted rate for 1977 (21.9 deaths per 100,000 population) was 18.0 percent lower than the final rate for 1968 (26.7).

*Influenza and pneumonia.*—There were an estimated 49,960 deaths in 1977 for Influenza and pneumonia, the fifth leading cause of death. Since there was no influenza epidemic in 1977 and there was one in 1976, the age-adjusted rate for Influenza and pneumonia dropped considerably (20.7 percent) between the 2 years, from the final rate of 17.4 in 1976 to the provisional rate of 13.8 in 1977. The 1977 rate of 13.8 was

the lowest ever recorded for these causes in the United States.

For the 10-year period 1968-77 there were seven outbreaks of influenza. The age-adjusted rates for Influenza for these epidemic years ranged from 1.2 to 2.5 deaths per 100,000 population. For the nonepidemic years the age-adjusted rates were 0.5 for 1971, 0.6 for 1974, and 0.3 for 1977.

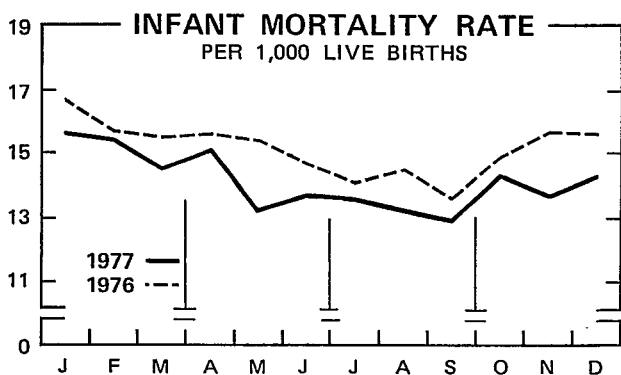
*Diabetes mellitus.*—In 1977 an estimated 33,570 persons died from Diabetes mellitus, the sixth leading cause of death. The age-adjusted rate for Diabetes mellitus declined 4.5 percent between 1976 and 1977. The death rate decreased for each age group 25 years and over except the age group 45-54 years (table G). During 1968-77 the age-adjusted rate for this cause declined 27.4 percent.

*Cirrhosis of liver.*—About 31,260 persons died from Cirrhosis of liver (the seventh leading cause of death) in 1977. The age-adjusted rate declined 2.2 percent between 1976 and 1977. During 1968-73 the age-adjusted rate increased 7.9 percent, from 13.9 deaths per 100,000 population to 15.0. During 1973-77, however, the rate has declined 11.3 percent, from 15.0 to an estimated 13.3.

*Arteriosclerosis.*—There were an estimated 29,040 deaths from Arteriosclerosis, the eighth leading cause of death. The provisional age-adjusted rate for 1977 (6.1 deaths per 100,000 population) was 4.7 percent lower than the final rate for 1976 (6.4). The rate of 6.1 was the lowest ever recorded for Arteriosclerosis in this country. During 1968-77 the rate declined 36.5 percent.

*Suicide.*—Suicide ranked as the ninth leading cause of death in this country. An estimated 28,390 persons committed suicide in 1977, about 1,558 more than in 1976. The provisional age-adjusted rate for 1977 (12.8 deaths per 100,000 population) was 4.1 percent higher than the final rate for 1976 (12.3). Between 1968 and 1977 age-adjusted rates for suicide fluctuated, but the general trend showed an increase of 17.4 percent during the period.

*Certain causes of mortality in early infancy.*—An estimated 23,310 deaths occurred for Certain causes of mortality in early infancy, the 10th leading cause of death. Since nearly all



of the deaths from this cause occurred among children under 1 year of age, mortality change was measured for this cause using the infant mortality rate per 100,000 live births. On this basis the provisional mortality rate from Certain causes of mortality in early infancy in 1977 (703.3 per 100,000 live births) was 10.0 percent lower than the final rate for 1976 (781.8). During 1968-77 the rate from this cause declined 43.7 percent. The rate for 1968 was 1,248.2 per 100,000 live births.

*Bronchitis, emphysema, and asthma.*—The decrease of 10.1 percent between 1976 and 1977 in the age-adjusted death rate for Bronchitis, emphysema, and asthma (ICDA Nos. 490-493), from 7.9 to 7.1 deaths per 100,000, is misleading. A possible increase in mortality from these causes between 1976 and 1977 may be obscured by the increasing frequency with which medical certifiers are entering the generalized term “Chronic obstructive lung disease” on certificates instead of a more specific diagnosis of “Emphysema,” “Bronchitis,” or “Asthma.” Chronic obstructive lung disease is, by international rules, assigned to the category “Other diseases of lung” (ICDA No. 519.2). Beginning with data year 1969, the United States established a separate category (denoted by \*519.3) to identify deaths assigned to Chronic obstructive lung disease. Effective with data for 1972 the title was changed to Chronic obstructive lung disease without mention of asthma, bronchitis, or emphysema.

The following table shows age-adjusted rates for each year of the period 1969-76 for these complementary categories and for their com-

binations. Provisional data for 1977 are not shown since data for category \*519.3 are not available. For the combination categories, the age-adjusted rate increased by 14.7 percent during the period 1969-76.

Year	Bronchitis, emphysema, and asthma (490-493)	Chronic obstructive lung disease without mention of asthma, bronchitis, or emphysema (*519.3)	Combination of 490-493 and *519.3
Rate per 100,000 population			
1976.....	7.9	6.8	14.8
1975.....	8.6	5.7	14.3
1974.....	9.2	4.8	14.0
1973.....	10.4	3.9	14.3
1972.....	11.0	2.9	13.9
1971.....	11.1	2.3	13.3
1970.....	11.6	1.7	13.2
1969.....	11.9	1.0	12.9

*Homicide.*—Homicide was the 12th leading cause of death with an estimated 21,090 deaths occurring in 1977. The provisional age-adjusted rate of 10.1 deaths per 100,000 population for 1977 was 6.3 percent higher than the final rate for 1976 (9.5) but below the 1974 rate of 10.8. During 1968-77 the age-adjusted rate increased by 21.7 percent.

*Congenital anomalies.*—In 1977 an estimated 12,540 deaths occurred from Congenital anomalies, making this cause the 13th leading cause of death in the United States. Since about 65 percent of these deaths (8,110) were to children under 1 year of age, the number of deaths to children under 1 year per 100,000 live births was used as an index of the change in the risk of dying. This provisional infant mortality rate from Congenital anomalies declined from 263.4 in 1976 to 244.8 in 1977, a reduction of 7.1 percent. During 1968-77 the rate declined by 22.4 percent. The rate in 1968 was 315.6 deaths per 100,000 live births.

*Nephritis and nephrosis.*—The 14th leading cause of death in 1977 was Nephritis and nephrosis with an estimated 8,130 deaths. The provisional age-adjusted rate for 1977 (2.6 deaths per 100,000 population) was about 7.1 percent lower than the final rate for 1976 (2.8). During 1968-77 the rate declined 33.3 percent.

*Septicemia.*—With 7,330 deaths, Septicemia was the 15th leading cause of death in 1977. The age-adjusted rate for 1977 (2.5 deaths per 100,000 population) was about 8.7 percent higher than the final rate for 1976 (2.3). During 1968-77 the rate has more than doubled.

9.4 per 100,000 live births in 1977 is less than half the rate in 1968, 24.5. Maternal mortality rates for 1950 and each of the last 18 years are as follows:

1977 (est.) .....	9.4	1967 .....	28.0
1976 .....	12.3	1966 .....	29.1
1975 .....	12.8	1965 .....	31.6
1974 .....	14.6	1964 .....	33.3
1973 .....	15.2	1963 .....	35.8
1972 .....	18.8	1962 .....	35.2
1971 .....	18.8	1961 .....	36.9
1970 .....	21.5	1960 .....	37.1
1969 .....	22.2	1950 .....	83.3
1968 .....	24.5		

## Maternal and Infant Mortality

In 1977 the deaths of an estimated 310 women were assigned to Complications of pregnancy, childbirth, and the puerperium compared with a figure of 390 (final data) in the previous year. The provisional maternal mortality rate of

In 1977 there were approximately 46,500 infant deaths, resulting in an estimated infant mortality rate of 14.0 per 1,000 live births. This was the lowest annual rate ever recorded in the United States. The 1977 rate decreased 7.9 percent from the final rate of 15.2 for 1976 (table H). Record low rates were attained for both white and all other infants. Both the neonatal

Table H. INFANT MORTALITY RATES BY AGE AND COLOR: UNITED STATES, 1950 AND 1960-77

[For 1977, based on a 10-percent sample of deaths; for all other years, based on final data. Rates per 1,000 live births]

Year	Total			White			All other		
	Under 1 year	Under 28 days	28 days to 11 months	Under 1 year	Under 28 days	28 days to 11 months	Under 1 year	Under 28 days	28 days to 11 months
1977 (est.) .....	14.0	9.8	4.2	12.4	8.7	3.7	21.0	14.5	6.5
1976 .....	15.2	10.9	4.3	13.3	9.7	3.6	23.5	16.3	7.2
1975 .....	16.1	11.6	4.5	14.2	10.4	3.8	24.2	16.8	7.5
1974 .....	16.7	12.3	4.4	14.8	11.1	3.7	24.9	17.2	7.7
1973 .....	17.7	13.0	4.8	15.8	11.8	3.9	26.2	17.9	8.3
1972 <sup>1</sup> .....	18.5	13.6	4.8	16.4	12.4	4.0	27.7	19.2	8.5
1971 .....	19.1	14.2	4.9	17.1	13.0	4.0	28.5	19.6	8.9
1970 .....	20.0	15.1	4.9	17.8	13.8	4.0	30.9	21.4	9.5
1969 .....	20.9	15.6	5.3	18.4	14.2	4.2	32.9	22.5	10.4
1968 .....	21.8	16.1	5.7	19.2	14.7	4.5	34.5	23.0	11.6
1967 .....	22.4	16.5	5.9	19.7	15.0	4.7	35.9	23.8	12.1
1966 .....	23.7	17.2	6.5	20.6	15.6	5.0	38.8	24.8	13.9
1965 .....	24.7	17.7	7.0	21.5	16.1	5.4	40.3	25.4	14.9
1964 .....	24.8	17.9	6.9	21.6	16.2	5.4	41.1	26.5	14.6
1963 <sup>2</sup> .....	25.2	18.2	7.0	22.2	16.7	5.5	41.5	26.1	15.4
1962 <sup>2</sup> .....	25.3	18.3	7.0	22.3	16.9	5.5	41.4	26.1	15.3
1961 .....	25.3	18.4	6.9	22.4	16.9	5.5	40.7	26.2	14.5
1960 .....	26.0	18.7	7.3	22.9	17.2	5.7	43.2	26.9	16.4
1950 .....	29.2	20.5	8.7	26.8	19.4	7.4	44.5	27.5	16.9

<sup>1</sup>Based on a 50-percent sample of deaths.

<sup>2</sup>Figures by color exclude data for residents of New Jersey.

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Table J. INFANT MORTALITY RATES, BY AGE AND SELECTED CAUSES: UNITED STATES, 1973-77

[For 1977, based on a 10-percent sample of deaths; for all other years, based on final data. Rates per 1,000 live births]

Age and cause of death	1977 (est.)	1976	1975	1974	1973
Total, under 1 year.....	14.0	15.2	16.1	16.7	17.7
Under 28 days.....	9.8	10.9	11.6	12.3	13.0
28 days to 11 months.....	4.2	4.3	4.5	4.4	4.8
Certain gastrointestinal diseases.....004,006-009,535,561,563	0.2	0.2	0.3	0.2	0.2
Influenza and pneumonia.....470-474,480-486	0.5	0.6	0.7	0.8	1.1
Congenital anomalies.....740-759	2.4	2.6	2.7	2.7	2.9
Birth injuries.....764-768(0-3),772	0.4	0.6	0.6	0.6	0.6
Asphyxia of newborn, unspecified.....776.9	0.9	1.1	1.3	1.5	1.7
Immaturity, unqualified.....777	1.2	1.3	1.4	1.5	1.7
Other diseases of early infancy.....Remainder of 760-778	4.5	4.9	5.2	5.5	5.6
All other causes.....Residual	3.9	3.9	3.9	3.8	3.8

Table K. DEATHS UNDER 1 YEAR AND INFANT MORTALITY RATES, BY MONTH: UNITED STATES, 1976 AND 1977

[Rates on an annual basis per 1,000 live births. Monthly rates adjusted for changing number of births. Data are provisional unless otherwise specified]

Month	Number			Rate		
	1977	1976	1976 (final)	1977	1976	1976 (final)
Total.....	46,500	47,800	48,265	14.0	15.1	15.2
January.....	4,200	4,300	4,200	15.6	16.7	16.3
February.....	3,900	3,800	3,938	15.4	15.7	16.2
March.....	4,000	4,100	4,033	14.5	15.5	15.6
April.....	3,900	3,800	3,949	15.1	15.6	16.2
May.....	3,600	3,900	4,014	13.2	15.4	16.0
June.....	3,700	3,700	3,897	13.7	14.7	15.2
July.....	4,000	3,900	3,910	13.6	14.1	14.1
August.....	3,900	4,000	3,976	13.2	14.5	14.1
September.....	3,700	3,800	3,876	12.9	13.6	13.7
October.....	4,000	4,100	4,117	14.3	14.9	14.8
November.....	3,600	4,100	4,115	13.7	15.7	15.6
December.....	4,000	4,200	4,240	14.3	15.6	15.5

(under 28 days) and the postneonatal (28 days to 11 months) mortality rates declined between 1976 and 1977 (tables H and J).

MARRIAGES

According to provisional reports, both the number of marriages and the marriage rate

increased slightly in 1977. For the United States, a total of 2,176,000 marriages was reported for 1977, representing an increase of 21,000 (or 1 percent) over the final marriage total for 1976 (table L). Over the 16-year period from 1958 to 1973, the annual number of marriages increased steadily from 1,451,000 to 2,284,108. There was a decline in the final total

## MONTHLY VITAL STATISTICS REPORT

Table L. MARRIAGES AND MARRIAGE RATES, BY MONTH: UNITED STATES, 1976 AND 1977

[Rates on an annual basis per 1,000 population. Data are provisional unless otherwise specified]

Month	Number			Rate				
	1977	1976	1976 (final)	Unadjusted for seasonal variation			Adjusted for seasonal variation	
				1977	1976	1976 (final)	1977	1976
Total .....	2,176,000	2,133,000	2,154,807	10.1	9.9	10.0	...	...
January .....	113,000	115,000	121,950	6.2	6.3	6.7	8.6	8.8
February .....	129,000	129,000	138,777	7.8	7.6	8.2	10.1	9.8
March .....	156,000	147,000	136,198	8.5	8.1	7.5	10.7	10.2
April .....	159,000	156,000	158,139	9.0	8.9	9.0	10.4	10.3
May .....	198,000	187,000	199,627	10.8	10.3	11.0	11.5	11.0
June .....	279,000	253,000	243,097	15.7	14.4	13.8	10.3	9.5
July .....	197,000	208,000	218,705	10.7	11.4	12.0	10.2	10.9
August .....	239,000	236,000	225,699	13.0	13.0	12.4	9.9	9.8
September .....	190,000	181,000	184,926	10.7	10.3	10.5	9.9	9.5
October .....	167,000	174,000	186,006	9.1	9.6	10.2	9.6	10.1
November .....	174,000	163,000	161,894	9.7	9.2	9.2	9.7	9.2
December .....	176,000	183,000	179,789	9.5	10.0	9.9	9.5	10.0

Table M. MARRIAGES, DIVORCES, AND RATES:  
UNITED STATES, 1958-77

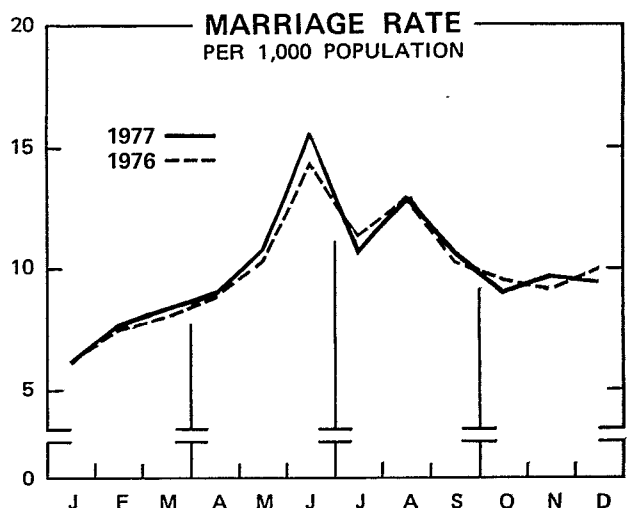
[Rates on an annual basis per 1,000 population. Data refer only to events occurring in the United States. Alaska included beginning with 1959 and Hawaii with 1960]

Year	Marriage		Divorce	
	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>
1977 <sup>2</sup> .....	2,176,000	10.1	1,090,000	5.0
1976.....	2,154,807	10.0	1,083,000	5.0
1975.....	2,152,662	10.1	1,036,000	4.9
1974.....	2,229,667	10.5	977,000	4.6
1973.....	2,284,108	10.9	915,000	4.4
1972.....	2,282,154	11.0	845,000	4.1
1971.....	2,190,481	10.6	773,000	3.7
1970.....	2,158,802	10.6	708,000	3.5
1969.....	2,145,000	10.6	639,000	3.2
1968.....	2,069,000	10.4	584,000	2.9
1967.....	1,927,000	9.7	523,000	2.6
1966.....	1,857,000	9.5	499,000	2.5
1965.....	1,800,000	9.3	479,000	2.5
1964.....	1,725,000	9.0	450,000	2.4
1963.....	1,654,000	8.8	428,000	2.3
1962.....	1,577,000	8.5	413,000	2.2
1961.....	1,548,000	8.5	414,000	2.3
1960.....	1,523,000	8.5	393,000	2.2
1959.....	1,494,000	8.5	395,000	2.2
1958.....	1,451,000	8.4	368,000	2.1

<sup>1</sup>Rates are based on population enumerated as of April 1 for 1960 and 1970 and estimated as of July 1 for all other years.<sup>2</sup>Provisional.

for 1974 and again for 1975, followed by a slight increase in 1976 (table M).

The provisional marriage rate for 1977 was 10.1 per 1,000 population, up 1 percent over the final rate of 10.0 in 1976. This represented the first annual increase in the marriage rate since 1972. The rate had peaked at 11.0 in 1972, ending a gradual 14-year rise that began with a level of 8.4 in 1958.



Small increases in the number of marriages were reported in seven of the nine geographic divisions. The largest increase (2.1 percent) occurred in the South Atlantic Division compared with a 2.0-percent decline in marriages in the Middle Atlantic Division.

## DIVORCES

An estimated 1,090,000 divorces were granted in the United States during 1977. This provisional total was 7,000 higher than the final number of divorces reported for 1976 (1,083,000), indicating a marked slowdown in the growth of the annual divorce total. The number of divorces in the United States increased rapidly after 1967 and more than doubled over the decade from 1967 to 1976.

The provisional divorce rate of 1977 was 5.0 per 1,000 population, the same as the final rate for 1976. This marked the first time since 1966 that there has been no increase in the annual divorce rate. The rise in the divorce rate has slowed in recent years, following a period of rapid growth between 1967 and 1973 when the average annual rate of increase was 11.5 percent.

In comparison with 1976 final divorce totals and rates, the provisional data by State for 1977 indicate that the number of divorces declined in 18 States and the District of Columbia, while the divorce rate declined in 20 States and the District of Columbia. The pattern of wide variation in the divorce rate among States continued to prevail in 1977. Nevada had the highest 1977 provisional divorce rate at 16.3 per 1,000 population, showing a decline from a final rate of 16.9 for 1976. All the other States reporting in 1977 had divorce rates between 2.7 (New Jersey) and 9.3 (Alaska).

## EXPLANATORY NOTES

### Nature and Sources of Data

All data for 1977 in this report are provisional. Data for the United States as a whole refer to events occurring within the United

States; other data refer to events within the reporting areas shown.

Beginning with 1970, final birth and mortality statistics except those by place of occurrence exclude data for births and deaths to nonresidents of the United States. Data for nonresidents are included in provisional data for 1976 and 1977.

Provisional or estimated figures for births, marriages, divorces, and deaths, except data estimated from the Current Mortality Sample, summarize data from monthly reports of the numbers of birth, marriage, divorce, and death certificates received in registration offices between two dates a month apart regardless of when the events occurred. Final figures are counts of events occurring in the specified year. Monthly estimates of births and marriages for the entire United States are based on the monthly reports adjusted for observed differences from final monthly figures. State figures are not adjusted in this manner. All mortality figures exclude fetal deaths.

Provisional marriage data by State are shown in table 1. For most States, data represent marriages reported. The following areas reported marriage licenses issued in some or all months of 1977: Alabama, Arizona, Arkansas, Connecticut, Florida, Georgia, Maryland, Nevada, New Mexico, New York City, Oregon, South Carolina, and Tennessee.

Seasonal adjustment factors used for marriages were modified for monthly variation in the number of specified days of the week (Sundays, Mondays, and so forth) because marriages are more likely on some days than on others.

Provisional divorce data including reported annulments are shown in table 3 for the areas reporting divorce data monthly. Divorce figures for the United States are estimated from a summary of monthly reports from 44 States and the District of Columbia. These areas contain over 90 percent of the population of the United States as enumerated in 1970.

### Current Mortality Sample

The Current Mortality Sample is a 10-percent systematic sample of death certificates received each month in State vital statistics



offices. Deaths and death rates for 1977 by cause, age, color, and sex were estimated from this sample.

The sample was taken from death certificates received monthly during 1977 in the vital statistics offices in the 50 States, the District of Columbia, and the independent registration area of New York City. The sample for each of these areas consists of one-tenth of the death certificates received in the office between a given date and the same date of the following month. All death certificates received during the 1-month period are sampled regardless of the month or year in which the death occurred. As a result, the monthly sample is not strictly comparable to a sample on a month-of-occurrence basis. The proportion of death certificates received in the samples for each month of 1977 representing deaths occurring in the current month and those occurring in other months are shown in the following table:

Month	Deaths occurring in—		
	Same month	Previous month	All other months
January.....	75.7	17.7	6.6
February.....	71.9	21.2	6.9
March.....	76.0	16.6	7.4
April.....	76.1	18.5	5.4
May.....	75.8	18.0	6.2
June.....	73.7	19.3	7.0
July.....	75.8	17.9	6.2
August.....	75.4	18.8	5.9
September.....	73.1	19.0	7.9
October.....	76.7	17.0	6.2
November.....	75.5	17.5	7.1
December.....	76.5	16.9	6.6

Because of the way in which death certificates are processed in California, this State contributes a high proportion of the certificates for deaths not occurring in the sample month. For the sample exclusive of California, the percent of the sample deaths occurring in the current month constitutes about 82 percent of the total as opposed to 75 percent of the entire sample. As for the year of occurrence, 97.3 percent of the 188,851 transcripts in the 1977 sample were for deaths occurring in 1977 and 2.7 percent for deaths occurring in 1976.

## Correction for Bias and Adjustments to Provisional Counts

The Current Mortality Sample is selected at a specified time each month. Complete information concerning the underlying cause of death is sometimes not available in the State offices when the sample is drawn but is available later when copies of the final death certificates are submitted to the National Center for Health Statistics. As a result, estimates based on sample counts for certain causes are recurrently biased estimates of final counts. Comparisons of sample and final counts for previous years have shown that these biases are primarily associated with certain cause-of-death groups.

Cause of death	Adjusted weight (all ages)
Malignant neoplasms of genital organs .....180-187	10.18
Benign neoplasms and neoplasms of unspecified nature .....210-239	9.29
Acute myocardial infarction .....410	9.92
All other forms of heart disease.....420-423,425-427,429	10.20
Other complications of pregnancy, childbirth, and the puerperium.....630-639,650-678	7.69
Congenital anomalies .....740-759	9.63
Birth injury, difficult labor, and other anoxic and hypoxic conditions ...764-768,772,776	9.70
Other causes of mortality in early infancy..... Remainder of 760-778	10.53
Symptoms and ill-defined conditions .....780-796	7.93
Motor vehicle accidents .....E810-E823	10.43
All other accidents .....E800-E807,E825-E949	10.30
Suicide.....E950-E959	10.45
Homicide .....E960-E978	10.76

The sample data in this report are adjusted for such deficiencies based on the experience of the 3 years—1974, 1975, and 1976. If for a given cause the sample count for these years departs from one-tenth of the final count by more than would be expected on the basis of sampling variability alone, the sample deaths for this cause are corrected by multiplying the sample frequency by an adjusted weight. The adjusted weight used is the ratio of the number of deaths from the given cause in the final count of deaths for the 3 years to the number of deaths from this cause in the sample returns for

the same years, multiplied by 10 times the 3-year average sampling fraction for all causes. Such adjustments have been necessary for relatively few causes. The adjusted weights which were applied to the 1977 sample for all ages are shown in the table above.

The same list of causes that was tested for bias for "all ages" was also tested for bias at ages under 1 year. For those causes found to need correction for bias at ages under 1 year, the adjusted weight used is the ratio of the number of deaths under 1 year of age from the given cause in the final count of deaths for the 3 years to the number of deaths under 1 year of age from this cause in the sample returns for the same years, multiplied by 10 times the 3-year average sampling fraction for all causes at ages under 1 year. The adjusted weights which were applied to the 1977 sample for under 1 year of age are listed in the table below.

Cause of death	Adjusted weight (under 1 year)
Active rheumatic fever and chronic rheumatic heart disease .....390-398	12.00
Hypertensive heart disease .....402	12.00
Hypertensive heart and renal disease.....404	12.00
Acute myocardial infarction .....410	12.00
Other acute and subacute forms of heart disease.....411	12.00
Chronic ischemic heart disease .....412	12.00
Angina pectoris .....413	12.00
Chronic disease of endocardium and other myocardial insufficiency .....424,428	12.00
All other forms of heart disease.....420-423,425-427,429	12.00
Congenital anomalies .....740-759	9.55
Birth injury, difficult labor, and other anoxic and hypoxic conditions .....764-768,772,776	9.70
Other causes of mortality in early infancy..... Remainder of 760-778	10.53

The number of deaths for all ages for each of the 13 causes to be corrected for bias is multiplied by the adjusted weights for all ages, to obtain the preliminary estimates of the number of deaths from these causes. The preliminary estimates of the number of deaths (all ages) for

each of the remaining causes are obtained by multiplying by 10 the numbers in the sample from these causes.

Similarly the number of deaths at ages under 1 year for each of the 12 causes to be corrected for bias is multiplied by the adjusted weights for under 1 year, to obtain the preliminary estimates of the number of deaths at ages under 1 year from these causes. The preliminary estimates of the number of deaths at ages under 1 year for each of the remaining causes are obtained by multiplying by 10 the numbers in the sample from these causes at ages under 1 year.

The preliminary estimate of the number of deaths at ages 1 year and over is obtained for each cause by subtracting the preliminary estimate of the number of deaths from the cause at ages under 1 year from the preliminary estimate of all deaths from the particular cause. Then for each cause the final estimate of the number of deaths at ages under 1 year was obtained by adjusting the preliminary estimate proportionately to the provisional count of deaths at ages under 1 year; and for each cause the final estimate of the number of deaths at ages 1 year and over was obtained by adjusting the preliminary estimate proportionately to the provisional count of deaths at ages 1 year and over.

For each cause the final estimate of the number of deaths for all ages was taken to be the sum of the estimates at ages under 1 year and at 1 year and over.

These two sets of adjustments resulted in final weights which were assigned to the sample records and are reflected in estimates for color-sex groups and the age groups as well as cause groups.

## Cause-of-Death Ranking

Cause-of-death ranking is based on the List of 69 Selected Causes of Death, adapted from one of the special lists for mortality tabulations recommended by the World Health Organization for use with the Eighth Revision of the International Classification of Diseases. Two group titles—Major cardiovascular diseases and Symptoms and ill-defined conditions—are not

ranked. In addition, category titles that begin with the words "other" or "all other" are not ranked. The remaining titles are ranked to determine the leading causes of death. When one of the titles that represents a subtotal is ranked (e.g., Tuberculosis, all forms), its component parts (in this case, Tuberculosis of respiratory system and Tuberculosis, other forms) are not ranked.

### Cause-of-Death Classification

The mortality statistics presented here are compiled in accordance with the World Health Organization Regulations, which specify that member nations classify causes of death in accordance with the current revision of the International Statistical Classification of Diseases, Injuries, and Causes of Death.<sup>1</sup>

An adaption of the Eighth Revision of the Classification—*Eighth Revision International Classification of Diseases, Adapted for Use in the United States*<sup>2</sup>—was used beginning with 1968. The Seventh Revision was used for 1958 through 1967.

The introduction of a new revision has led to a break in the comparability of data by cause of death. The comparability ratio is a measure that estimates the degree of comparability by cause.

For information about comparability ratios between the Seventh and Eighth Revisions, see *Vital and Health Statistics*, Series 2, No. 66.<sup>3</sup>

<sup>1</sup>World Health Organization: *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death*, based on the Recommendations of the Eighth Revision Conference, 1965. Geneva. World Health Organization, 1967.

<sup>2</sup>National Center for Health Statistics: *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*. PHS Pub. No. 1693. Public Health Service. Washington. U.S. Government Printing Office, 1967.

<sup>3</sup>National Center for Health Statistics: *Comparability of mortality statistics for the Seventh and Eighth Revisions of the International Classification of Diseases, United States*, by A. Joan Klebba and Alice B. Dolman. *Vital and Health Statistics*. Series 2-No. 66. DHEW Pub. No. (HRA) 76-1340. Health Resources Administration. Washington. U.S. Government Printing Office, Oct. 1975.

For a list of other reports on the effects of revisions of the International Lists on mortality statistics tabulated by cause, see *Vital Statistics—Special Reports*, Vol. 51, No. 4, March 1965, p. 248.

Besides specifying the Classification, the World Health Organization regulations outline the form of medical certification and the coding procedures to be used. In general when more than one cause of death is reported, the cause designated by the certifying physician as the underlying cause of death is the cause tabulated.

Causes of death for data presented in this publication were coded by procedures outlined in issues of Part 2a of NCHS *Instruction Manual*, Vital Statistics, Instructions for Classifying the Underlying Cause of Death.

### Population Bases for Computing Rates

The populations used for computing rates shown in this report represent the population residing in the specified area. They were published by the U.S. Bureau of the Census in the following issues of *Current Population Reports*, Series P-25:

1. No. 721. "Population Estimates and Projections," 1978.
2. No. 727. "Population Estimates and Projections," 1978.

Infant mortality rates are based on live births. For an explanation of the method used in computing infant mortality rates adjusted for the changing numbers of births, see "Effect of Changing Birth Rates Upon Infant Mortality Rates," *Vital Statistics—Special Reports*, Vol. 19. No. 21. Nov. 1944 (U.S. Bureau of the Census).

### Age-Adjusted Rates

The age-adjusted rates presented in this report were computed by the direct method, that is, by applying the age-specific death rates for a given cause of death to the standard population distributed by age. The total population as enumerated in 1940 was selected as the standard.

### Sampling Variability

Since the estimates of deaths and death rates presented in this report (with the exceptions of total deaths and deaths under 1 year) are based on a sample of the death certificates, they are subject to sampling variability. The estimated percent error shown in this report 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 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 error shown. The chances are about 19 out of 20 that the percent difference is less than twice the percent error.

Two methods are used for estimating percent errors—one for the ratio estimates for the causes of death corrected for bias and the other for estimates for the remaining causes of death or for given age-color-sex groups. The percent error of a ratio estimate for a given cause of death corrected for bias for all ages is computed as follows:

$$V = 300 \sqrt{\frac{1}{10} \left( \frac{1}{x} - \frac{1}{D} \right) + \left( \frac{1}{Y} - \frac{1}{M} \right)}$$

where

- $V$  = percent error of the estimate  $X$
- $X$  = the estimated number of deaths (or estimated death rate) in a given cause or age-color-sex group
- $x$  = the number of deaths in the sample from the given cause
- $D$  = 188,851, the total number of death certificates in the sample for 1977

- $Y$  = the final number of deaths from the given cause in the 3 years—1974, 1975, and 1976 combined
- $M$  = 5,736,707, the final count of all deaths occurring in the 3 years—1974, 1975, and 1976 combined.

The percent errors for the remaining estimates for given causes of death not requiring a correction for bias or for a given age-color-sex group are computed as follows:

$$V = 300 \sqrt{\frac{1}{X} - \frac{1}{N}}$$

where

- $V$  = the percent error of the estimate  $X$
- $X$  = the estimated number of deaths from a given cause or age-color-sex group
- $N$  = 1,898,000, the provisional number of registered deaths in 1977.

The percent error due to sampling may be obtained by using the above formula where  $X$  is the estimated number of deaths in a given group. For easy reference, the percent errors ascribable to sampling for estimates based on several levels in the number of deaths are

50 .....	42.4	1,000 .....	9.5
100 .....	30.0	2,000 .....	6.7
200 .....	21.2	5,000 .....	4.2
300 .....	17.3	10,000 .....	3.0
400 .....	15.0	20,000 .....	2.1
500 .....	13.4	50,000 .....	1.3
600 .....	12.2	100,000 .....	0.9
700 .....	11.3	200,000 .....	0.6
800 .....	10.6	500,000 .....	0.4
900 .....	10.0	1,000,000 .....	0.2

## MONTHLY VITAL STATISTICS REPORT

Table 1. LIVE BIRTHS, MARRIAGES, AND RATES: EACH REPORTING AREA, 1976 AND 1977

[ By place of occurrence. Rates per 1,000 population in specified area. Data are provisional unless otherwise specified ]

Area	Live births					Marriages <sup>1</sup>				
	Number		Rate			Number		Rate		
	1977	1976 (final)	1977	1976	1976 (final)	1977	1976 (final)	1977	1976	1976 (final)
New England.....	153,218	146,242	12.5	11.9	12.0	94,818	95,596	7.7	7.7	7.8
Maine.....	15,695	14,519	14.5	13.6	13.6	11,526	11,302	10.6	10.6	10.6
New Hampshire.....	12,064	11,087	14.2	13.7	13.5	8,792	8,550	10.4	10.2	10.4
Vermont.....	6,413	6,444	13.3	13.9	13.5	4,825	4,396	10.0	9.0	9.2
Massachusetts.....	71,049	67,668	12.3	11.5	11.6	39,728	41,501	6.9	7.0	7.1
Rhode Island.....	11,932	11,102	12.8	12.0	12.0	7,096	6,905	7.6	7.5	7.4
Connecticut.....	36,065	35,422	11.6	11.2	11.4	22,851	22,942	7.4	7.3	7.4
Middle Atlantic.....	482,529	474,136	13.0	12.7	12.7	273,009	278,701	7.4	7.4	7.5
New York.....	237,894	237,040	13.3	13.0	13.1	131,611	136,968	7.3	7.6	7.6
New Jersey.....	90,981	87,778	12.4	11.9	12.0	50,016	51,291	6.8	7.1	7.0
Pennsylvania.....	153,654	149,318	13.0	12.6	12.6	91,382	90,442	7.8	7.5	7.6
East North Central.....	627,849	598,800	15.3	14.6	14.6	385,203	382,099	9.4	9.4	9.3
Ohio.....	162,353	155,546	15.2	14.4	14.6	97,358	96,776	9.1	9.2	9.1
Indiana.....	85,425	80,620	16.0	15.1	15.2	56,290	55,699	10.6	10.6	10.5
Illinois.....	173,945	167,679	15.5	14.9	14.9	108,051	110,847	9.6	9.9	9.9
Michigan.....	137,565	130,259	15.1	14.3	14.3	86,221	82,753	9.4	9.1	9.1
Wisconsin.....	68,561	64,696	14.7	14.1	14.0	37,283	36,024	8.0	7.8	7.8
West North Central.....	261,881	250,832	15.5	14.8	14.9	162,659	162,252	9.6	9.3	9.7
Minnesota.....	60,145	56,939	15.1	14.2	14.4	31,593	32,034	7.9	8.4	8.1
Iowa.....	45,270	42,131	15.7	14.3	14.7	26,422	25,727	9.2	8.9	9.0
Missouri.....	72,361	71,319	15.1	14.8	14.9	52,138	51,070	10.9	9.4	10.7
North Dakota.....	12,228	11,398	18.7	17.7	17.7	5,672	5,650	8.7	8.8	8.8
South Dakota.....	11,917	11,488	17.3	16.6	16.7	10,300	10,781	14.9	15.7	15.7
Nebraska.....	25,140	24,019	16.1	15.5	15.5	12,978	13,431	8.3	8.6	8.6
Kansas.....	34,820	33,538	15.0	14.6	14.5	23,556	23,559	10.1	10.1	10.2
South Atlantic.....	508,487	481,102	14.8	14.1	14.2	379,818	372,134	11.1	10.8	10.9
Delaware.....	8,771	8,300	15.1	14.2	14.3	3,999	3,943	6.9	6.8	6.8
Maryland.....	47,909	45,514	11.6	11.0	11.0	44,973	44,616	10.9	10.8	10.8
District of Columbia.....	20,648	19,908	29.9	27.0	28.4	4,601	4,611	6.7	6.7	6.6
Virginia.....	71,298	67,247	13.9	13.3	13.4	57,832	56,469	11.3	11.2	11.2
West Virginia.....	30,118	28,583	16.2	15.6	15.7	17,522	17,229	9.4	9.4	9.5
North Carolina.....	84,772	80,583	15.3	14.7	14.7	43,400	42,475	7.9	7.8	7.8
South Carolina.....	48,419	46,082	16.8	16.3	16.2	51,157	50,698	17.8	17.6	17.8
Georgia.....	85,138	80,880	16.9	16.1	16.3	67,192	65,950	13.3	12.1	13.3
Florida.....	111,414	104,005	13.2	12.4	12.4	89,142	86,143	10.5	10.2	10.2
East South Central.....	236,900	222,578	17.1	16.3	16.3	161,232	159,488	11.7	11.9	11.7
Kentucky.....	60,532	56,964	17.5	16.6	16.6	34,030	32,931	9.8	10.2	9.6
Tennessee.....	70,032	65,653	16.3	15.5	15.6	55,327	53,270	12.9	12.7	12.6
Alabama.....	60,917	57,283	16.5	15.7	15.6	45,394	46,515	12.3	13.0	12.7
Mississippi.....	45,419	42,678	19.0	18.0	18.1	26,481	26,772	11.1	11.2	11.4
West South Central.....	390,253	372,974	18.0	17.5	17.6	265,152	261,215	12.2	12.2	12.3
Arkansas.....	34,502	33,294	16.1	15.7	15.8	24,038	24,913	11.2	10.7	11.8
Louisiana.....	76,155	70,002	19.4	18.1	18.2	38,343	37,999	9.8	10.2	9.9
Oklahoma.....	43,805	42,269	15.6	15.3	15.3	41,440	40,983	14.7	14.7	14.8
Texas.....	235,791	227,409	18.4	18.1	18.2	161,331	157,320	12.6	12.5	12.6
Mountain.....	194,613	184,939	19.4	18.8	18.8	220,111	216,208	21.9	21.2	22.0
Montana.....	13,004	12,360	17.1	16.5	16.4	7,532	7,390	9.9	9.7	9.8
Idaho.....	18,242	16,884	21.3	20.2	20.3	13,439	13,104	15.7	15.8	15.8
Wyoming.....	7,530	6,890	18.5	17.4	17.7	5,789	5,862	14.3	14.8	15.0
Colorado.....	43,424	41,345	16.6	16.0	16.0	29,435	28,601	11.2	10.5	11.1
New Mexico.....	22,433	21,666	18.9	18.9	18.5	12,445	15,616	10.5	10.6	13.4
Arizona.....	41,591	40,044	18.1	17.7	17.6	28,270	26,534	12.3	12.5	11.7
Utah.....	38,237	36,220	30.2	29.3	29.5	15,188	14,693	12.0	11.6	12.0
Nevada.....	10,152	9,530	16.0	15.8	15.6	108,013	104,408	170.6	163.5	171.2
Pacific.....	457,555	444,873	15.7	15.4	15.5	228,870	227,114	7.8	7.8	7.9
Washington.....	55,038	52,804	15.0	13.8	14.6	41,308	41,986	11.3	11.3	11.6
Oregon.....	38,398	35,613	16.2	15.3	15.3	20,850	19,182	8.8	8.4	8.2
California.....	338,716	332,238	15.5	15.4	15.4	151,346	151,284	6.9	7.0	7.0
Alaska.....	8,379	7,816	20.6	21.0	20.5	5,092	4,893	12.5	12.8	12.8
Hawaii.....	17,024	16,402	19.0	18.4	18.5	10,274	9,769	11.5	11.0	11.0

<sup>1</sup>Data are either marriages reported or marriage licenses issued; see Explanatory Notes.

# MONTHLY VITAL STATISTICS REPORT

Table 2. DEATHS, INFANT DEATHS, AND RATES: EACH REPORTING AREA, 1976 AND 1977

[By place of occurrence. Rates for deaths at all ages are per 1,000 population. Infant mortality rates are deaths under 1 year per 1,000 live births. Data are provisional unless otherwise specified]

Area	Deaths (all ages)					Infant deaths (under 1 year)				
	Number		Rate			Number		Rate		
	1977	1976 (final)	1977	1976	1976 (final)	1977	1976 (final)	1977	1976	1976 (final)
New England.....	109,266	111,984	8.9	9.2	9.2	1,630	1,853	10.6	12.2	12.7
Maine.....	10,176	10,401	9.4	10.1	9.7	135	151	8.6	10.1	10.4
New Hampshire.....	7,139	7,327	8.4	9.3	8.9	109	111	9.0	9.4	10.0
Vermont.....	4,345	4,373	9.0	9.0	9.2	64	81	10.0	13.2	12.6
Massachusetts.....	52,623	54,387	9.1	9.2	9.4	683	828	9.6	11.4	12.2
Rhode Island.....	9,208	9,315	9.8	10.1	10.0	175	175	14.7	16.3	15.8
Connecticut.....	25,775	26,181	8.3	8.4	8.4	464	507	12.9	14.2	14.3
Middle Atlantic.....	349,951	356,510	9.4	9.6	9.6	7,259	7,406	15.0	15.5	15.6
New York.....	165,923	171,952	9.3	9.5	9.5	3,914	3,814	16.5	16.2	16.1
New Jersey.....	64,339	63,742	8.8	8.7	8.7	1,209	1,181	13.3	13.2	13.5
Pennsylvania.....	119,689	120,816	10.2	10.2	10.2	2,136	2,411	13.9	15.7	16.1
East North Central.....	356,513	358,896	8.7	8.8	8.8	8,761	8,965	14.0	14.8	15.0
Ohio.....	96,238	95,814	9.0	8.9	9.0	2,270	2,315	14.0	14.5	14.9
Indiana.....	46,852	46,781	8.8	8.8	8.8	1,122	1,122	13.1	14.2	13.9
Illinois.....	100,998	101,221	9.0	9.0	9.0	2,748	2,750	15.8	16.3	16.4
Michigan.....	73,124	74,959	8.0	8.2	8.2	1,880	1,985	13.7	14.9	15.2
Wisconsin.....	39,301	40,121	8.5	8.7	8.7	741	793	10.8	12.2	12.3
West North Central.....	154,604	159,316	9.2	9.4	9.5	3,441	3,738	13.1	14.7	14.9
Minnesota.....	32,216	33,458	8.1	8.4	8.4	678	840	11.3	14.2	14.8
Iowa.....	26,355	27,572	9.2	9.6	9.6	543	563	12.0	13.9	13.4
Missouri.....	49,270	50,076	10.3	10.3	10.5	1,162	1,213	16.1	16.7	17.0
North Dakota.....	5,492	5,751	8.4	9.0	8.9	162	156	13.2	13.7	13.7
South Dakota.....	6,220	6,575	9.0	9.6	9.6	184	184	15.4	15.9	16.0
Nebraska.....	14,390	14,690	9.2	9.4	9.5	295	360	11.7	14.5	15.0
Kansas.....	20,661	21,194	8.9	9.2	9.2	417	422	12.0	12.6	12.6
South Atlantic.....	310,082	307,772	9.0	9.0	9.1	7,893	8,130	15.5	17.0	16.9
Delaware.....	4,884	4,970	8.4	8.5	8.5	103	103	11.7	12.1	12.4
Maryland.....	31,338	31,706	7.6	7.6	7.7	594	748	12.4	14.4	16.4
District of Columbia.....	7,460	9,180	10.8	13.0	13.1	474	478	23.0	25.4	24.0
Virginia.....	39,444	39,590	7.7	7.9	7.9	1,091	1,098	15.3	16.1	16.3
West Virginia.....	19,349	19,731	10.4	10.8	10.8	438	487	14.5	17.5	17.0
North Carolina.....	46,701	46,115	8.5	8.4	8.4	1,426	1,448	16.8	19.2	18.0
South Carolina.....	23,916	23,027	8.3	8.2	8.1	854	890	17.6	19.7	19.3
Georgia.....	43,431	42,196	8.6	8.4	8.5	1,211	1,282	14.2	15.5	15.9
Florida.....	93,559	91,257	11.1	10.9	10.8	1,702	1,596	15.3	15.6	15.3
East South Central.....	132,424	130,352	9.6	9.5	9.5	3,672	3,966	15.5	17.9	17.8
Kentucky.....	34,035	32,165	9.8	9.4	9.4	812	803	13.4	14.3	14.1
Tennessee.....	41,128	41,324	9.6	9.8	9.8	1,158	1,140	16.5	17.4	17.4
Alabama.....	34,366	34,058	9.3	9.3	9.3	1,043	1,134	17.1	20.3	19.8
Mississippi.....	22,895	22,805	9.6	9.6	9.7	659	889	14.5	20.2	20.8
West South Central.....	184,011	184,737	8.5	8.7	8.7	5,960	6,016	15.3	16.4	16.1
Arkansas.....	20,986	21,129	9.8	10.1	10.0	480	480	13.9	18.0	14.4
Louisiana.....	34,837	34,782	8.9	9.0	9.1	1,390	1,242	18.3	17.7	17.7
Oklahoma.....	26,006	26,412	9.3	9.6	9.5	620	695	14.2	16.6	16.4
Texas.....	102,182	102,414	8.0	8.2	8.2	3,470	3,599	14.7	15.8	15.8
Mountain.....	73,856	73,460	7.4	7.5	7.5	2,488	2,597	12.8	13.9	14.0
Montana.....	6,304	6,632	8.3	8.8	8.8	163	192	12.5	15.3	15.5
Idaho.....	6,146	6,323	7.2	7.6	7.6	164	169	9.0	10.4	10.0
Wyoming.....	2,953	3,109	7.3	7.9	8.0	79	98	10.5	14.3	14.2
Colorado.....	18,494	18,668	7.1	7.3	7.2	577	592	13.3	14.0	14.3
New Mexico.....	8,193	8,118	6.9	7.1	7.0	309	325	13.8	15.2	15.0
Arizona.....	18,459	17,881	8.0	7.8	7.9	610	620	14.7	15.0	15.5
Utah.....	7,976	7,808	6.3	6.3	6.4	453	463	11.8	12.8	12.8
Nevada.....	5,331	4,921	8.4	8.2	8.1	133	138	13.1	14.7	14.5
Pacific.....	226,852	228,880	7.8	8.0	8.0	5,464	5,677	11.9	12.7	12.8
Washington.....	30,074	30,565	8.2	8.3	8.5	649	781	11.8	14.5	14.8
Oregon.....	20,710	20,493	8.7	8.8	8.8	480	464	12.5	13.0	13.0
California.....	169,657	171,454	7.7	8.0	8.0	4,008	4,131	11.8	12.4	12.4
Alaska.....	1,688	1,649	4.1	4.4	4.3	119	117	14.2	16.9	15.0
Hawaii.....	4,723	4,719	5.3	5.3	5.3	208	184	12.2	11.3	11.2

## MONTHLY VITAL STATISTICS REPORT

Table 3. DIVORCES AND DIVORCE RATES: UNITED STATES AND EACH REPORTING AREA, 1976 AND 1977

[By place of occurrence. Rates per 1,000 population in specified area. Data are provisional unless otherwise specified]

Area	Number		Rate		
	1977	1976 (final)	1977	1976	1976 (final)
United States <sup>1</sup> .....	1,090,000	1,083,000	5.0	5.0	5.0
Total, 47 areas <sup>2</sup> .....	1,013,781	1,018,179	5.0	5.0	5.0
Alabama.....	23,505	24,056	6.4	6.6	6.6
Alaska.....	3,805	3,210	9.3	8.4	8.4
Arkansas.....	18,366	18,365	8.6	8.2	8.7
California.....	132,888	133,824	6.1	6.2	6.2
Colorado.....	20,250	17,520	7.7	6.7	6.8
Connecticut.....	11,859	11,705	3.8	3.4	3.8
Delaware.....	3,044	3,233	5.2	5.6	5.6
District of Columbia.....	2,935	3,092	4.3	4.0	4.4
Florida.....	63,326	63,223	7.5	7.4	7.5
Georgia.....	30,096	31,156	6.0	5.8	6.3
Hawaii.....	4,653	4,712	5.2	5.3	5.3
Idaho.....	5,841	5,699	6.8	6.9	6.9
Illinois.....	50,553	51,810	4.5	4.5	4.6
Iowa.....	10,938	10,817	3.8	3.8	3.8
Kansas.....	12,652	12,833	5.4	5.6	5.6
Kentucky.....	16,156	16,027	4.7	4.9	4.7
Maine.....	5,751	5,540	5.3	5.1	5.2
Maryland.....	15,701	16,101	3.8	3.8	3.9
Massachusetts.....	16,040	16,974	2.8	2.8	2.9
Michigan.....	42,081	43,101	4.6	4.7	4.7
Minnesota.....	13,896	13,822	3.5	3.5	3.5
Mississippi.....	12,828	12,243	5.4	5.1	5.2
Missouri.....	25,621	25,414	5.3	5.3	5.3
Montana.....	4,841	4,850	6.4	6.4	6.4
Nebraska.....	6,258	5,862	4.0	3.8	3.8
Nevada.....	10,301	10,298	16.3	16.6	16.9
New Hampshire.....	4,256	4,322	5.0	5.8	5.3
New Jersey.....	20,027	21,816	2.7	2.4	3.0
New Mexico.....	6,880	9,118	5.8	6.1	7.8
New York.....	50,171	54,229	2.8	3.0	3.0
North Carolina.....	25,065	24,327	4.5	4.5	4.4
North Dakota.....	1,982	1,861	3.0	2.9	2.9
Ohio.....	55,552	59,251	5.2	5.7	5.5
Oklahoma.....	21,450	21,489	7.6	7.9	7.8
Oregon.....	16,623	16,070	7.0	6.9	6.9
Pennsylvania.....	37,675	36,531	3.2	3.0	3.1
Rhode Island.....	3,414	3,276	3.7	3.5	3.5
South Carolina.....	11,428	10,641	4.0	3.5	3.7
South Dakota.....	---	2,350	---	3.4	3.4
Tennessee.....	28,227	27,002	6.6	6.6	6.4
Texas.....	83,215	79,905	6.5	6.4	6.4
Utah.....	6,901	6,170	5.4	5.0	5.0
Vermont.....	1,938	1,905	4.0	3.9	4.0
Virginia.....	21,577	21,381	4.2	4.3	4.2
Washington.....	25,646	27,072	7.0	7.4	7.5
West Virginia.....	9,552	8,893	5.1	5.0	4.9
Wisconsin.....	14,932	14,583	3.2	3.1	3.2
Wyoming.....	3,085	2,850	7.6	7.2	7.3

<sup>1</sup> Estimated.<sup>2</sup> Excludes figures for South Dakota.

# MONTHLY VITAL STATISTICS REPORT

**Table 4. ABRIDGED LIFE TABLE FOR THE TOTAL POPULATION: UNITED STATES, 1977**

[For explanation of the columns of the life table, see Section 5 of *Vital Statistics of the United States, 1974*, Volume II, Part A]

Age interval	Proportion dying	Of 100,000 born alive		Stationary population		Average remaining lifetime
Period of life between two exact ages stated in years	Proportion of persons alive at beginning of age interval dying during interval	Number living at beginning of age interval	Number dying during age interval	In the age interval	In this and all subsequent age intervals	Average number of years of life remaining at beginning of age interval
(1)	(2)	(3)	(4)	(5)	(6)	(7)
$x$ to $x + n$	${}_nq_x$	$l_x$	${}_n d_x$	${}_n L_x$	$T_x$	$e_x$
0-1 .....	0.0141	100,000	1,407	98,659	7,315,927	73.2
1-5 .....	0.0028	98,593	278	393,726	7,217,268	73.2
5-10 .....	0.0018	98,315	174	491,107	6,823,542	69.4
10-15 .....	0.0019	98,141	185	490,315	6,332,435	64.5
15-20 .....	0.0053	97,956	522	488,596	5,842,120	59.6
20-25 .....	0.0067	97,434	648	485,571	5,353,524	54.9
25-30 .....	0.0068	96,786	658	482,285	4,867,953	50.3
30-35 .....	0.0071	96,128	682	479,009	4,385,668	45.6
35-40 .....	0.0096	95,446	917	475,085	3,906,659	40.9
40-45 .....	0.0151	94,529	1,432	469,301	3,431,574	36.3
45-50 .....	0.0237	93,097	2,204	460,319	2,962,273	31.8
50-55 .....	0.0368	90,893	3,343	446,627	2,501,954	27.5
55-60 .....	0.0557	87,550	4,872	426,227	2,055,327	23.5
60-65 .....	0.0854	82,678	7,060	396,554	1,629,100	19.7
65-70 .....	0.1156	75,618	8,738	357,096	1,232,546	16.3
70-75 .....	0.1787	66,880	11,953	305,464	875,450	13.1
75-80 .....	0.2648	54,927	14,544	238,783	569,986	10.4
80-85 .....	0.3608	40,383	14,571	164,897	331,203	8.2
85 and over .....	1.0000	25,812	25,812	166,306	166,306	6.4



## MONTHLY VITAL STATISTICS REPORT

Table 5. DEATH RATES BY MONTH: UNITED STATES, 1964-77

[For 1977, based on provisional figures; for all other years, based on final data. Rates on an annual basis per 1,000 population]

Month	1977	1976	1975	1974	1973	1972 <sup>1</sup>	1971	1970	1969	1968	1967	1966	1965	1964
Annual.....	8.8	8.9	8.9	9.2	9.4	9.4	9.3	9.5	9.5	9.7	9.4	9.5	9.4	9.4
January.....	9.5	9.3	10.1	9.6	10.8	11.0	10.0	10.6	10.9	11.6	9.8	10.1	10.1	10.1
February.....	9.7	10.2	9.9	9.6	10.2	10.3	10.0	10.4	9.8	10.0	9.8	10.1	10.4	9.8
March.....	9.0	9.9	9.1	9.6	9.3	9.3	9.6	9.5	9.8	9.6	9.6	9.9	10.1	9.7
April.....	8.8	9.0	8.8	9.5	9.3	9.2	9.5	9.3	9.4	9.2	9.3	9.9	9.5	9.3
May.....	8.5	8.5	8.6	8.9	9.2	9.1	9.2	9.1	9.3	9.1	9.3	9.4	9.2	9.2
June.....	8.5	8.4	8.5	8.8	9.1	8.9	9.2	9.0	9.2	9.2	9.1	9.3	9.1	9.3
July.....	8.6	8.3	8.5	8.9	9.0	9.3	8.9	9.1	9.2	9.1	8.9	9.6	8.9	9.2
August.....	8.1	8.1	8.4	8.5	8.9	8.9	8.8	8.8	8.9	9.0	8.7	8.7	8.7	8.8
September.....	8.3	8.2	8.4	8.7	9.0	8.8	8.8	8.8	8.8	8.8	8.9	8.8	8.8	8.7
October.....	8.6	8.6	8.6	9.0	9.1	9.2	9.1	9.2	9.2	9.1	9.2	9.3	9.3	9.3
November.....	8.6	8.9	8.6	9.0	9.4	9.4	9.4	9.5	9.6	9.7	9.5	9.3	9.5	9.4
December.....	9.1	9.2	9.1	9.6	9.7	10.0	9.9	9.7	10.0	11.3	10.2	9.8	9.9	9.9

<sup>1</sup>Based on a 50-percent sample of deaths.

# MONTHLY VITAL STATISTICS REPORT

**Table 6. DEATH RATES BY AGE, COLOR, AND SEX: UNITED STATES, 1950, 1960, AND 1970-77**

[ For 1977, based on a 10-percent sample of deaths; for all other years, based on final data. Rates per 1,000 population in specified group ]

Color, sex, and year	All ages <sup>1</sup>	Under 1 year	1-4 years	5-14 years	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75-84 years	85 years and over
<b>TOTAL</b>												
1977 (est.).....	8.8	14.7	0.7	0.4	1.2	1.4	2.5	6.2	14.3	30.6	71.8	146.4
1976.....	8.9	16.0	0.7	0.3	1.1	1.4	2.5	6.3	14.8	31.3	73.3	154.9
1975.....	8.9	16.4	0.7	0.4	1.2	1.4	2.7	6.5	15.0	31.9	73.6	151.9
1974.....	9.2	17.6	0.7	0.4	1.2	1.5	2.8	6.8	15.5	33.3	76.5	165.3
1973.....	9.4	18.1	0.8	0.4	1.3	1.5	3.0	7.0	16.1	34.4	79.3	174.3
1972 <sup>2</sup> .....	9.4	18.3	0.8	0.4	1.3	1.5	3.0	7.1	16.3	35.3	79.7	173.5
1971.....	9.3	19.0	0.8	0.4	1.3	1.6	3.1	7.1	16.2	34.9	78.7	174.3
1970.....	9.5	21.4	0.8	0.4	1.3	1.6	3.1	7.3	16.6	35.8	80.0	163.4
1960.....	9.5	27.0	1.1	0.5	1.1	1.5	3.0	7.6	17.4	38.2	87.5	198.6
1950.....	9.6	33.0	1.4	0.6	1.3	1.8	3.6	8.5	<sup>3</sup> 19.0	<sup>3</sup> 41.0	93.3	202.0
<b>MALE</b>												
1977 (est.).....	10.0	16.6	0.8	0.5	1.8	2.0	3.2	8.1	19.2	42.4	94.1	170.9
1976.....	10.1	17.6	0.8	0.4	1.7	1.9	3.3	8.3	20.0	43.4	95.1	179.8
1975.....	10.1	18.3	0.8	0.4	1.8	2.0	3.5	8.6	20.3	44.1	95.2	175.7
1974.....	10.4	19.7	0.8	0.5	1.8	2.1	3.6	8.9	21.1	45.8	97.9	188.8
1973.....	10.7	20.3	0.9	0.5	1.9	2.1	3.8	9.2	22.1	47.3	101.1	198.1
1972 <sup>2</sup> .....	10.8	20.6	0.9	0.5	1.9	2.1	3.9	9.4	22.5	48.2	101.2	196.0
1971.....	10.7	21.4	0.9	0.5	1.9	2.1	3.9	9.3	22.3	47.6	99.2	197.5
1970.....	10.9	24.1	0.9	0.5	1.9	2.2	4.0	9.6	22.8	48.7	100.1	178.2
1960.....	11.0	30.6	1.2	0.6	1.5	1.9	3.7	9.9	23.1	49.1	101.8	211.9
1950.....	11.1	37.3	1.5	0.7	1.7	2.2	4.3	10.7	24.0	49.3	104.3	216.4
<b>FEMALE</b>												
1977 (est.).....	7.7	12.8	0.6	0.3	0.6	0.8	1.7	4.3	9.9	21.5	58.3	135.2
1976.....	7.8	14.2	0.6	0.3	0.6	0.8	1.8	4.5	10.1	22.0	60.0	143.1
1975.....	7.7	14.4	0.6	0.3	0.6	0.9	1.9	4.6	10.1	22.5	60.3	140.3
1974.....	8.0	15.3	0.7	0.3	0.6	0.9	2.0	4.7	10.5	23.6	63.3	153.9
1973.....	8.1	15.7	0.7	0.3	0.7	0.9	2.2	4.9	10.8	24.5	65.6	162.3
1972 <sup>2</sup> .....	8.1	15.9	0.7	0.3	0.7	1.0	2.2	5.0	10.8	25.3	65.8	162.0
1971.....	8.0	16.6	0.7	0.3	0.7	1.0	2.3	5.0	10.8	25.0	65.3	162.2
1970.....	8.1	18.6	0.8	0.3	0.7	1.0	2.3	5.2	11.0	25.8	66.8	155.2
1960.....	8.1	23.2	1.0	0.4	0.6	1.1	2.3	5.3	12.0	28.7	76.3	190.1
1950.....	8.2	28.5	1.3	0.5	0.9	1.4	2.9	6.4	14.0	33.3	84.0	191.9
<b>WHITE</b>												
1977 (est.).....	8.9	12.6	0.7	0.3	1.1	1.2	2.1	5.7	13.7	29.9	71.8	152.5
1976.....	9.0	13.6	0.6	0.3	1.1	1.2	2.2	5.8	14.0	30.5	73.4	160.7
1975.....	9.0	14.1	0.6	0.3	1.1	1.2	2.3	6.0	14.2	31.0	73.8	157.1
1974.....	9.2	15.2	0.7	0.4	1.1	1.2	2.4	6.2	14.7	32.3	77.0	170.6
1973.....	9.4	15.7	0.7	0.4	1.2	1.3	2.5	6.3	15.3	33.4	79.8	179.3
1972 <sup>2</sup> .....	9.5	15.8	0.7	0.4	1.2	1.3	2.6	6.5	15.5	34.3	80.2	178.6
1971.....	9.4	16.6	0.7	0.4	1.1	1.3	2.6	6.5	15.4	33.9	79.1	179.1
1970.....	9.5	18.7	0.8	0.4	1.2	1.3	2.7	6.7	15.8	34.9	80.4	168.7
1960.....	9.5	23.6	1.0	0.4	1.0	1.2	2.6	6.9	16.3	37.4	88.3	203.5
1950.....	9.5	29.9	1.2	0.6	1.1	1.5	3.1	7.7	18.0	40.2	94.2	206.8
<b>WHITE, MALE</b>												
1977 (est.).....	10.0	14.4	0.8	0.5	1.7	1.7	2.8	7.5	18.5	41.9	94.6	178.9
1976.....	10.1	15.1	0.7	0.4	1.6	1.6	2.8	7.7	19.2	42.8	96.0	187.7
1975.....	10.2	15.9	0.7	0.4	1.7	1.7	3.0	7.9	19.5	43.6	96.1	182.6
1974.....	10.4	17.3	0.8	0.5	1.7	1.7	3.1	8.2	20.3	45.1	99.0	195.4
1973.....	10.7	17.8	0.8	0.5	1.8	1.8	3.2	8.4	21.2	46.5	102.1	204.4
1972 <sup>2</sup> .....	10.8	18.0	0.8	0.5	1.7	1.7	3.3	8.6	21.6	47.5	102.3	202.7
1971.....	10.7	18.8	0.8	0.5	1.7	1.7	3.3	8.6	21.5	47.0	100.3	204.2
1970.....	10.9	21.1	0.8	0.5	1.7	1.8	3.4	8.8	22.0	48.1	101.0	185.5
1960.....	11.0	26.9	1.0	0.5	1.4	1.6	3.3	9.3	22.3	48.5	103.0	217.5
1950.....	10.9	34.0	1.4	0.7	1.5	1.9	3.8	9.8	23.0	48.6	105.3	221.2

See footnotes at end of table.

## MONTHLY VITAL STATISTICS REPORT

Table 6. DEATH RATES BY AGE, COLOR, AND SEX: UNITED STATES, 1950, 1960, AND 1970-77—Con.

[For 1977, based on a 10-percent sample of deaths; for all other years, based on final data. Rates per 1,000 population in specified group]

Color, sex, and year	All ages <sup>1</sup>	Under 1 year	1-4 years	5-14 years	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75-84 years	85 years and over
<b>WHITE, FEMALE</b>												
1977 (est.).....	7.8	10.8	0.5	0.2	0.6	0.7	1.5	3.9	9.4	20.7	58.1	140.5
1976.....	7.9	11.9	0.6	0.3	0.5	0.7	1.6	4.1	9.4	21.1	59.8	148.2
1975.....	7.8	12.2	0.6	0.3	0.6	0.7	1.6	4.1	9.4	21.5	60.3	144.9
1974.....	8.1	13.1	0.6	0.3	0.6	0.8	1.7	4.3	9.7	22.5	63.5	158.5
1973.....	8.2	13.4	0.6	0.3	0.6	0.8	1.8	4.4	10.0	23.2	65.8	166.9
1972 <sup>2</sup> .....	8.2	13.4	0.6	0.3	0.6	0.8	1.9	4.4	10.0	24.2	66.2	166.6
1971.....	8.1	14.2	0.7	0.3	0.6	0.8	1.9	4.5	10.0	23.9	65.6	166.3
1970.....	8.1	16.1	0.7	0.3	0.6	0.8	1.9	4.6	10.1	24.7	67.0	169.8
1960.....	8.0	20.1	0.9	0.3	0.5	0.9	1.9	4.6	10.8	27.8	77.0	194.8
1950.....	8.0	25.7	1.1	0.5	0.7	1.1	2.4	5.5	12.9	32.4	84.8	196.8
<b>ALL OTHER</b>												
1977 (est.).....	7.9	24.7	0.9	0.4	1.4	2.5	4.8	9.9	20.2	36.7	72.1	91.2
1976.....	8.2	27.8	1.0	0.4	1.5	2.7	5.0	10.7	21.5	38.3	72.4	100.2
1975.....	8.3	27.7	1.0	0.5	1.6	3.0	5.3	10.8	21.8	39.7	70.8	101.0
1974.....	8.7	29.2	1.1	0.5	1.7	3.1	5.7	11.5	22.9	42.7	70.8	112.5
1973.....	9.1	30.2	1.2	0.5	1.9	3.3	6.1	12.4	24.0	44.7	74.2	121.4
1972 <sup>2</sup> .....	9.2	31.3	1.2	0.5	2.0	3.5	6.4	12.6	24.1	44.9	73.4	118.5
1971.....	9.2	32.5	1.3	0.5	2.1	3.6	6.5	12.4	23.8	44.1	72.7	119.9
1970.....	9.4	36.0	1.3	0.5	2.0	3.5	6.6	12.9	24.3	44.9	75.1	107.5
1960.....	10.1	46.3	1.9	0.6	1.6	3.2	6.3	13.4	27.7	47.8	76.3	139.1
1950.....	11.2	53.7	2.5	0.9	2.5	4.4	8.1	17.1	<sup>3</sup> 31.3	<sup>3</sup> 52.1	80.4	144.7
<b>ALL OTHER, MALE</b>												
1977 (est.).....	9.5	27.1	1.0	0.6	2.3	3.9	6.8	12.6	26.2	46.2	88.6	106.1
1976.....	9.8	30.1	1.1	0.5	2.2	4.1	6.9	14.0	28.1	48.5	86.5	115.2
1975.....	10.0	30.0	1.1	0.6	2.4	4.5	7.4	14.2	28.1	49.7	86.0	116.9
1974.....	10.4	32.1	1.2	0.6	2.6	4.7	7.7	15.0	29.4	52.9	85.6	127.8
1973.....	10.8	33.4	1.4	0.7	2.8	5.0	8.2	15.9	30.7	54.6	89.7	136.1
1972 <sup>2</sup> .....	11.0	34.4	1.3	0.6	3.0	5.1	8.7	16.4	30.7	54.9	89.4	133.3
1971.....	10.9	36.1	1.4	0.7	3.1	5.2	8.5	15.7	30.1	53.8	87.5	133.5
1970.....	11.2	40.2	1.4	0.7	3.0	5.0	8.7	16.5	30.5	54.7	89.8	114.1
1960.....	11.5	51.9	2.1	0.8	2.1	3.9	7.3	15.5	31.5	56.6	86.6	152.4
1950.....	12.5	59.9	2.7	1.0	2.9	5.0	8.6	18.6	34.8	57.9	90.3	160.2
<b>ALL OTHER, FEMALE</b>												
1977 (est.).....	6.5	22.3	0.8	0.3	0.7	1.4	3.2	7.5	15.0	29.1	60.2	83.0
1976.....	6.8	25.4	0.9	0.3	0.8	1.6	3.4	7.7	15.9	30.1	62.2	91.8
1975.....	6.8	25.2	0.9	0.3	0.9	1.6	3.6	7.8	16.4	31.7	59.8	91.8
1974.....	7.2	26.1	1.0	0.4	0.9	1.8	4.0	8.5	17.2	34.4	60.2	103.4
1973.....	7.6	27.0	1.1	0.4	1.0	1.9	4.4	9.3	18.2	36.6	62.9	111.2
1972 <sup>2</sup> .....	7.6	28.2	1.1	0.4	1.0	2.1	4.6	9.3	18.3	36.8	61.8	109.4
1971.....	7.6	29.0	1.1	0.4	1.1	2.2	4.8	9.5	18.3	36.3	62.0	112.7
1970.....	7.8	31.7	1.2	0.4	1.1	2.2	4.9	9.8	18.9	36.8	63.9	102.9
1960.....	8.7	40.7	1.7	0.5	1.1	2.6	5.5	11.4	24.1	39.8	67.1	128.7
1950.....	9.9	47.5	2.3	0.8	2.2	3.9	7.5	15.5	27.6	46.1	70.6	133.7

<sup>1</sup> Figures for age not stated included in "All ages" but not distributed among age groups.<sup>2</sup> Based on a 50-percent sample of deaths.<sup>3</sup> For 1950, rates for "Total" and "All other" based on enumerated population adjusted for age bias in the "All other" population at ages 55-69 years.

# MONTHLY VITAL STATISTICS REPORT

**Table 7. DEATHS AND DEATH RATES, BY AGE, COLOR, AND SEX: UNITED STATES, 1977**

[Based on a 10-percent sample of deaths. Rates per 1,000 population in specified group. Due to rounding estimates of deaths, figures may not add to totals]

Age	Total			White			All other		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
<b>NUMBER</b>									
All ages.....	1,898,000	1,047,070	851,150	1,669,190	916,400	752,790	229,030	130,670	98,360
Under 1 year.....	46,500	26,820	19,680	33,120	19,380	13,740	13,380	7,440	5,940
1-4 years.....	8,610	5,140	3,470	6,680	4,060	2,620	1,930	1,080	850
5-14 years.....	13,270	8,780	4,490	10,590	7,080	3,510	2,680	1,700	980
15-24 years.....	48,900	36,630	12,290	40,080	29,870	10,210	8,840	6,760	2,080
25-34 years.....	45,830	32,530	13,340	35,050	24,950	10,100	10,820	7,580	3,240
35-44 years.....	57,910	37,080	20,880	43,470	27,850	15,620	14,490	9,230	5,260
45-54 years.....	143,770	91,530	52,290	117,510	75,950	41,560	26,310	15,580	10,730
55-59 years.....	125,910	79,840	46,070	107,100	68,450	38,650	18,810	11,390	7,420
60-64 years.....	166,310	105,600	60,710	145,260	93,090	52,170	21,050	12,510	8,540
65-69 years.....	206,220	127,330	78,890	181,260	113,140	68,120	24,960	14,190	10,770
70-74 years.....	239,590	141,010	98,580	212,650	126,200	86,450	26,940	14,810	12,130
75-79 years.....	247,140	131,600	115,540	223,330	118,880	104,450	23,810	12,720	11,090
80-84 years.....	243,260	111,050	132,210	226,920	103,040	123,880	16,340	8,010	8,330
85 years and over.....	304,440	111,940	192,520	285,860	104,300	181,560	18,600	7,640	10,960
Not stated.....	510	260	270	390	210	180	140	50	90
<b>RATE</b>									
All ages <sup>1</sup> .....	8.8	10.0	7.7	8.9	10.0	7.8	7.9	9.5	6.5
Under 1 year.....	14.7	16.6	12.8	12.6	14.4	10.8	24.7	27.1	22.3
1-4 years.....	0.7	0.8	0.6	0.7	0.8	0.5	0.9	1.0	0.8
5-14 years.....	0.4	0.5	0.3	0.3	0.5	0.2	0.4	0.6	0.3
15-24 years.....	1.2	1.8	0.6	1.1	1.7	0.6	1.4	2.3	0.7
25-34 years.....	1.4	2.0	0.8	1.2	1.7	0.7	2.5	3.9	1.4
35-44 years.....	2.5	3.2	1.7	2.1	2.8	1.5	4.8	6.8	3.2
45-54 years.....	6.2	8.1	4.3	5.7	7.5	3.9	9.9	12.6	7.5
55-59 years.....	11.4	15.2	8.0	10.8	14.4	7.5	17.2	22.3	12.7
60-64 years.....	17.8	24.1	12.2	17.1	23.4	11.6	23.9	31.2	17.8
65-69 years.....	24.4	34.1	16.8	24.0	33.9	16.2	27.6	35.8	21.2
70-74 years.....	39.0	54.3	27.8	37.8	53.4	26.5	52.5	63.8	43.2
75-79 years.....	60.8	82.8	46.6	59.7	82.1	45.5	73.5	90.2	60.6
80-84 years.....	88.0	112.3	74.5	89.7	114.9	75.9	70.1	86.1	59.5
85 years and over.....	146.4	170.9	135.2	152.5	178.9	140.5	91.2	106.1	83.0

<sup>1</sup> Figures for age not stated included in "All ages" but not distributed among age groups.

## MONTHLY VITAL STATISTICS REPORT

Table 8. DEATHS FOR SELECTED CAUSES: UNITED STATES, 1972-77

[For 1977, based on a 10-percent sample of deaths; for all other years, based on final data]

Cause of death	Number					
	1977 (est.)	1976	1975	1974	1973	1972 <sup>1</sup>
All causes.....	1,898,000	1,909,440	1,892,879	1,934,388	1,973,003	1,963,944
Bacillary dysentery and amebiasis..... 004,006	30	55	62	57	64	90
Enteritis and other diarrheal diseases..... 008,009	1,510	1,939	2,010	2,255	2,322	2,286
Tuberculosis, all forms..... 010-019	2,960	3,130	3,333	3,513	3,875	4,376
Tuberculosis of respiratory system..... 010-012	2,270	2,419	2,576	2,775	3,009	3,474
Tuberculosis, other forms..... 013-019	690	711	757	738	866	902
Whooping cough..... 033	30	7	8	14	5	6
Streptococcal sore throat and scarlet fever..... 034	20	14	15	22	20	16
Meningococcal infections..... 036	280	330	308	305	330	350
Septicemia..... 038	7,330	6,401	5,584	5,243	4,560	4,214
Acute poliomyelitis..... 040-043	30	16	9	3	10	2
Measles..... 055	10	12	20	20	23	24
Infectious hepatitis..... 070	540	567	612	630	656	778
Syphilis and its sequelae..... 090-097	130	225	272	300	393	344
Other infective and parasitic diseases..... Remainder of 000-136	3,840	3,857	3,697	3,360	3,411	3,132
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues...140-209	387,430	377,312	365,693	360,472	351,055	345,618
Malignant neoplasms of buccal cavity and pharynx.....140-149	8,370	8,114	8,135	7,968	7,822	7,482
Malignant neoplasms of digestive organs and peritoneum.....150-159	102,480	101,729	99,629	98,913	96,549	95,808
Malignant neoplasms of respiratory system.....160-163	93,940	91,131	86,675	83,475	79,335	76,998
Malignant neoplasm of breast.....174	34,620	33,403	32,435	32,424	32,143	31,460
Malignant neoplasms of genital organs.....180-187	45,460	44,461	42,994	43,111	42,591	42,366
Malignant neoplasms of urinary organs.....188,189	17,230	16,980	16,533	16,457	15,877	15,738
Malignant neoplasms of all other and unspecified sites.....170-173,190-199	48,830	45,975	44,585	43,620	42,693	41,724
Leukemia.....204-207	15,330	15,056	14,754	14,575	14,478	14,402
Other neoplasms of lymphatic and hematopoietic tissues.....200-203,208,209	21,170	20,463	19,953	19,929	19,567	19,640
Benign neoplasms and neoplasms of unspecified nature.....210-239	4,850	4,719	4,947	5,060	5,013	4,956
Diabetes mellitus.....250	33,570	34,508	35,230	37,329	38,208	38,674
Avitaminoses and other nutritional deficiencies.....260-269	2,500	2,619	2,615	2,527	2,576	2,538
Anemias.....280-285	3,300	3,182	3,195	3,312	3,318	3,426
Meningitis.....320	1,620	1,589	1,630	1,539	1,523	1,482
Major cardiovascular diseases.....390-448	960,090	974,429	971,047	1,010,926	1,037,492	1,035,146
Diseases of heart.....390-398,402,404,410-429	717,320	723,878	716,215	738,171	757,075	755,864
Active rheumatic fever and chronic rheumatic heart disease.....390-398	12,560	13,110	12,930	13,302	13,739	14,118
Hypertensive heart disease.....402	6,660	6,670	6,693	7,167	7,268	7,760
Hypertensive heart and renal disease.....404	3,700	4,020	4,334	4,916	5,515	5,778
Ischemic heart disease.....410-413	637,670	646,073	642,719	664,854	684,066	684,424
Acute myocardial infarction.....410	305,460	319,477	324,652	334,196	351,662	357,844
Other acute and subacute forms of ischemic heart disease.....411	3,900	4,028	4,069	4,418	4,503	4,528
Chronic ischemic heart disease.....412	328,150	322,382	313,847	326,065	327,722	321,884
Angina pectoris.....413	160	186	151	175	179	168
Chronic disease of endocardium and other myocardial insufficiency.....424,428	3,930	4,195	4,411	4,895	5,137	5,612
All other forms of heart disease.....420-423,425-427,429	52,800	49,810	45,128	43,037	41,350	38,172
Hypertension.....400,401,403	5,310	6,130	6,300	6,894	7,428	7,764
Cerebrovascular diseases.....430-438	182,840	188,623	194,038	207,424	214,313	213,344
Cerebral hemorrhage.....431	23,220	24,845	26,862	30,515	33,909	36,748
Cerebral thrombosis.....433	41,990	44,803	48,457	53,542	56,648	57,482
Cerebral embolism.....434	710	826	811	910	967	976
All other cerebrovascular diseases.....430,432,435-438	116,920	118,149	117,908	122,457	122,789	118,138
Arteriosclerosis.....440	29,040	29,366	28,887	32,239	32,617	32,486
Other diseases of arteries, arterioles, and capillaries.....441-448	25,580	26,432	25,607	26,198	26,059	25,898
Acute bronchitis and bronchiolitis.....466	680	854	737	750	905	1,146
Influenza and pneumonia.....470-474,480-486	49,960	61,866	55,664	54,777	62,559	62,580
Influenza.....470-474	1,060	7,877	4,277	2,201	5,131	4,986
Pneumonia.....480-486	48,900	53,989	51,387	52,576	57,428	57,594

<sup>1</sup>Based on a 50-percent sample of deaths.

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Table 8. DEATHS FOR SELECTED CAUSES: UNITED STATES, 1972-77—Con.

[ For 1977, based on a 10-percent sample of deaths; for all other years, based on final data ]

Cause of death	Number					
	1977 (est.)	1976	1975	1974	1973	1972 <sup>1</sup>
Bronchitis, emphysema, and asthma.....490-493	22,220	24,410	25,468	26,880	29,708	30,768
Chronic and unqualified bronchitis.....490-491	4,310	4,639	4,712	5,097	5,547	5,862
Emphysema.....492	16,320	17,796	18,795	19,907	22,249	22,580
Asthma.....493	1,590	1,975	1,961	1,876	1,912	2,326
Peptic ulcer.....531-533	6,320	6,428	6,743	7,069	7,688	7,916
Appendicitis.....540-543	750	752	822	864	1,066	1,206
Hernia and intestinal obstruction.....550-553,560	5,660	5,919	6,178	6,506	6,746	6,790
Cirrhosis of liver.....571	31,260	31,453	31,623	33,319	33,350	32,576
Cholelithiasis, cholecystitis and cholangitis.....574,575	2,770	2,956	3,004	3,194	3,422	3,666
Nephritis and nephrosis.....580-584	8,130	8,541	8,072	8,068	8,336	8,548
Acute nephritis and nephrotic syndrome.....580-581	1,820	1,759	1,585	1,541	1,536	1,466
Chronic and unqualified nephritis and renal sclerosis.....582-584	6,310	6,782	6,487	6,527	6,800	7,082
Infections of kidney.....590	3,650	4,017	4,502	5,451	6,134	6,946
Hyperplasia of prostate.....600	910	1,077	1,221	1,377	1,589	1,862
Complications of pregnancy, childbirth, and the puerperium.....630-678	310	390	403	462	477	612
Abortions.....640-645	-	16	27	27	36	70
Other complications of pregnancy, childbirth, and the puerperium.....630-639,650-678	310	374	376	435	441	542
Congenital anomalies.....740-759	12,540	13,002	13,245	13,526	14,062	14,698
Certain causes of mortality in early infancy.....760-769,2,769,4-772,774-778	23,310	24,809	26,616	28,786	30,503	33,798
Birth injury, difficult labor, and other anoxic and hypoxic conditions.....764-768,772,776	12,380	13,432	14,593	15,974	16,933	18,704
Other causes of mortality in early infancy.....Remainder of 760-778	10,930	11,377	12,023	12,812	13,570	15,094
Symptoms and ill-defined conditions.....780-796	32,150	30,802	31,768	31,145	30,399	27,500
All other diseases.....Residual	128,620	125,340	120,263	118,396	114,751	110,710
Accidents.....E800-E949	105,020	100,761	103,030	104,622	115,821	115,448
Motor vehicle accidents.....E810-E823	50,380	47,038	45,853	46,402	55,511	56,278
All other accidents.....E800-E807,E825-E949	54,640	53,723	57,177	58,220	60,310	59,170
Suicide.....E950-E959	28,390	26,832	27,063	25,683	25,118	25,004
Homicide.....E960-E978	21,090	19,554	21,310	21,465	20,465	19,638
Other external causes.....E980-E999	4,230	4,766	4,860	5,161	5,050	5,074

<sup>1</sup> Based on a 50-percent sample of deaths.

## MONTHLY VITAL STATISTICS REPORT

Table 9. DEATH RATES FOR SELECTED CAUSES: UNITED STATES, 1972-77

[ For 1977, based on a 10-percent sample of deaths; for all other years, based on final data ]

Cause of death	Rate					
	1977 (est.)	1976	1975	1974	1973	1972 <sup>1</sup>
All causes .....	877.4	889.6	888.5	915.1	940.2	943.2
Bacillary dysentery and amebiasis.....004-006	0.0	0.0	0.0	0.0	0.0	0.0
Enteritis and other diarrheal diseases.....008,009	0.7	0.9	0.9	1.1	1.1	1.1
Tuberculosis, all forms.....010-019	1.4	1.5	1.6	1.7	1.8	2.1
Tuberculosis of respiratory system.....010-012	1.0	1.1	1.2	1.3	1.4	1.7
Tuberculosis, other forms.....013-019	0.3	0.3	0.4	0.3	0.4	0.4
Whooping cough.....033	0.0	0.0	0.0	0.0	0.0	0.0
Streptococcal sore throat and scarlet fever.....034	0.0	0.0	0.0	0.0	0.0	0.0
Meningococcal infections.....036	0.1	0.2	0.1	0.1	0.2	0.2
Septicemia.....038	3.4	3.0	2.6	2.5	2.2	2.0
Acute poliomyelitis.....040-043	0.0	0.0	0.0	0.0	0.0	0.0
Measles.....055	0.0	0.0	0.0	0.0	0.0	0.0
Infectious hepatitis.....070	0.2	0.3	0.3	0.3	0.3	0.4
Syphilis and its sequelae.....090-097	0.1	0.1	0.1	0.1	0.2	0.2
Other infective and parasitic diseases.....Remainder of 000-136	1.8	1.8	1.7	1.6	1.6	1.5
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues...140-209	179.1	175.8	171.7	170.5	167.3	166.0
Malignant neoplasms of buccal cavity and pharynx.....140-149	3.9	3.8	3.8	3.8	3.7	3.6
Malignant neoplasms of digestive organs and peritoneum.....150-159	47.4	47.4	46.8	46.8	46.0	46.0
Malignant neoplasms of respiratory system.....160-163	43.4	42.5	40.7	39.5	37.8	37.0
Malignant neoplasm of breast.....174	16.0	15.6	15.2	15.3	15.3	15.1
Malignant neoplasms of genital organs.....180-187	21.0	20.7	20.2	20.4	20.3	20.3
Malignant neoplasms of urinary organs.....188,189	8.0	7.9	7.8	7.8	7.6	7.6
Malignant neoplasms of other and unspecified sites.....170-173,190-199	22.6	21.4	20.9	20.6	20.3	20.0
Leukemia.....204-207	7.1	7.0	6.9	6.9	6.9	6.9
Other neoplasms of lymphatic and hematopoietic tissues.....200-203,208,209	9.8	9.5	9.4	9.4	9.3	9.4
Benign neoplasms and neoplasms of unspecified nature.....210-239	2.2	2.2	2.3	2.4	2.4	2.4
Diabetes mellitus.....250	15.5	16.1	16.5	17.7	18.2	18.6
Avitaminoses and other nutritional deficiencies.....260-269	1.2	1.2	1.2	1.2	1.2	1.2
Anemias.....280-285	1.5	1.5	1.5	1.6	1.6	1.6
Meningitis.....320	0.7	0.7	0.8	0.7	0.7	0.7
Major cardiovascular diseases.....390-448	443.8	454.0	455.8	478.2	494.4	497.1
Diseases of heart.....390-398,402,404,410-429	331.6	337.2	336.2	349.2	360.8	363.0
Active rheumatic fever and chronic rheumatic heart disease.....390-398	5.8	6.1	6.1	6.3	6.5	6.8
Hypertensive heart disease.....402	3.1	3.1	3.1	3.4	3.5	3.7
Hypertensive heart and renal disease.....404	1.7	1.9	2.0	2.3	2.6	2.8
Ischemic heart disease.....410-413	294.8	301.0	301.7	314.5	326.0	328.7
Acute myocardial infarction.....410	141.2	148.8	152.4	158.1	167.6	171.9
Other acute and subacute forms of ischemic heart disease.....411	1.8	1.9	1.9	2.1	2.1	2.2
Chronic ischemic heart disease.....412	151.7	150.2	147.3	154.2	156.2	154.6
Angina pectoris.....413	0.1	0.1	0.1	0.1	0.1	0.1
Chronic disease of endocardium and other myocardial insufficiency.....424,428	1.8	2.0	2.1	2.3	2.4	2.7
All other forms of heart disease.....420-423,425-427,429	24.4	23.2	21.2	20.4	19.7	18.3
Hypertension.....400,401,403	2.5	2.9	3.0	3.3	3.5	3.7
Cerebrovascular diseases.....430-438	84.5	87.9	91.1	98.1	102.1	102.5
Cerebral hemorrhage.....431	10.7	11.6	12.6	14.4	16.2	17.6
Cerebral thrombosis.....433	19.4	20.9	22.7	25.3	27.0	27.6
Cerebral embolism.....434	0.3	0.4	0.4	0.4	0.5	0.5
All other cerebrovascular diseases.....430,432,435-438	54.0	55.0	55.3	57.9	58.5	56.7
Arteriosclerosis.....440	13.4	13.7	13.6	15.3	15.5	15.6
Other diseases of arteries, arterioles, and capillaries.....441-448	11.8	12.3	12.0	12.4	12.4	12.3
Acute bronchitis and bronchiolitis.....466	0.3	0.4	0.3	0.4	0.4	0.6
Influenza and pneumonia.....470-474,480-486	23.1	28.8	26.1	25.9	29.8	30.1
Influenza.....470-474	0.5	3.7	2.0	1.0	2.4	2.4
Pneumonia.....480-486	22.6	25.2	24.1	24.9	27.4	27.7

<sup>1</sup>Based on a 50-percent sample of deaths.

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**Table 9. DEATH RATES FOR SELECTED CAUSES: UNITED STATES, 1972-77—Con.**

[For 1977, based on a 10-percent sample of deaths; for all other years, based on final data]

Cause of death	Rate					
	1977 (est.)	1976	1975	1974	1973	1972 <sup>1</sup>
Bronchitis, emphysema, and asthma.....490-493	10.3	11.4	12.0	12.7	14.2	14.8
Chronic and unqualified bronchitis.....490,491	2.0	2.2	2.2	2.4	2.6	2.8
Emphysema.....492	7.5	8.3	8.8	9.4	10.6	10.8
Asthma.....493	0.7	0.9	0.9	0.9	0.9	1.1
Peptic ulcer.....531-533	2.9	3.0	3.2	3.3	3.7	3.8
Appendicitis.....540-543	0.3	0.4	0.4	0.4	0.5	0.6
Hernia and intestinal obstruction.....550-553,560	2.6	2.8	2.9	3.1	3.2	3.3
Cirrhosis of liver.....571	14.5	14.7	14.8	15.8	15.9	15.6
Cholelithiasis, cholecystitis and cholangitis.....574,575	1.3	1.4	1.4	1.5	1.6	1.8
Nephritis and nephrosis.....580-584	3.8	4.0	3.8	3.8	4.0	4.1
Acute nephritis and nephrotic syndrome.....580,581	0.8	0.8	0.7	0.7	0.7	0.7
Chronic and unqualified nephritis and renal sclerosis.....582-584	2.9	3.2	3.0	3.1	3.2	3.4
Infections of kidney.....590	1.7	1.9	2.1	2.6	2.9	3.3
Hyperplasia of prostate.....600	0.4	0.5	0.6	0.7	0.8	0.9
Complications of pregnancy, childbirth, and the puerperium.....630-678	0.1	0.2	0.2	0.2	0.2	0.3
Abortions.....640-645	-	0.0	0.0	0.0	0.0	0.0
Other complications of pregnancy, childbirth, and the puerperium.....630-639,650-678	0.1	0.2	0.2	0.2	0.2	0.3
Congenital anomalies.....740-769	5.8	6.1	6.2	6.4	6.7	7.1
Certain causes of mortality in early infancy.....760-769,2,769.4-772,774-778	10.8	11.6	12.5	13.6	14.5	16.2
Birth injury, difficult labor, and other anoxic and hypoxic conditions...764-768,772,776	5.7	6.3	6.9	7.6	8.1	9.0
Other causes of mortality in early infancy.....Remainder of 760-778	5.1	5.3	5.6	6.1	6.5	7.2
Symptoms and ill-defined conditions.....780-796	14.9	14.3	14.9	14.7	14.5	13.2
All other diseases.....Residual	59.5	58.4	56.5	56.0	54.7	53.2
Accidents.....E800-E949	48.5	46.9	48.4	49.5	55.2	55.4
Motor vehicle accidents.....E810-E823	23.3	21.9	21.5	22.0	26.5	27.0
All other accidents.....E800-E807,E825-E949	25.3	25.0	26.8	27.5	28.7	28.4
Suicide.....E950-E959	13.1	12.5	12.7	12.1	12.0	12.0
Homicide.....E960-E978	9.7	9.1	10.0	10.2	9.8	9.4
Other external causes.....E980-E999	2.0	2.2	2.3	2.4	2.4	2.4

<sup>1</sup>Based on a 50-percent sample of deaths.



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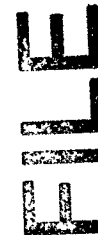
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