

**MMWR****MORBIDITY AND MORTALITY WEEKLY REPORT**

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**The Great American Smokeout – November 21, 1991**

Since 1977, the American Cancer Society (ACS) has sponsored the Great American Smokeout to promote communitywide antismoking activities that encourage smokers to refrain from smoking cigarettes for at least 24 hours. Local activities for this national event have included provision of materials to businesses, hospitals, schools, and other organizations that wish to conduct antismoking activities; requests by local ACS offices that stores not sell cigarettes for the day; media coverage of prominent local citizens who have stopped smoking; and participation by restaurants and other public places in a smoke-free day. In 1990, nearly 19 million persons—almost 40% of all smokers in the United States—participated in the Smokeout (1), an increase of 1 million participants from 1989 (2).

During the 1990 Smokeout, approximately 7.4 million (15%) of the nation's smokers refrained from smoking, and 11.5 million (23%) reduced the number of cigarettes smoked. Approximately 4.9 million (10%) smokers were not smoking 1–3 days later. More whites (85%) had heard about the Smokeout than had blacks and Hispanics (65%); however, 25% of black and Hispanic smokers and 14% of white smokers refrained from smoking on the day of the Smokeout. About 14% of black and Hispanic smokers and 9% of white smokers were not smoking 1–3 days later (1).

This year, the Smokeout will be on Thursday, November 21. The goal is to help at least 20% of smokers give up smoking for the 24-hour period. Additional information is available from local offices of the ACS; for telephone numbers of the local offices, telephone (800) 227-2345.

*Reported by: L Hurt, American Cancer Society, Atlanta. Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.*

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## Current Trends

### Differences in the Age of Smoking Initiation Between Blacks and Whites – United States

In 1988, an estimated 434,175 premature deaths in the United States were attributed to cigarette smoking; for blacks, the rate of years of potential life lost before age 65 (YPLL) attributed to smoking (2471.8 YPLL per 100,000 population) was twice that for whites (1224.7 YPLL per 100,000 population) (1). In the United States, black adolescents are less likely than white adolescents to smoke (2,3); however, black adults are more likely than white adults to begin smoking after adolescence (4). This report summarizes trends in the age at initiation of regular cigarette smoking by race\* and sex, through analyses by birth cohort from 1910 through 1959; the report is based on data from CDC's National Health Interview Surveys (NHISs) for 1987 and 1988.

The NHIS interviews persons aged  $\geq 18$  years selected from representative national samples of the U.S. civilian, noninstitutionalized population. Approximately 88,000 persons (44,000 each year) were interviewed during 1987 and 1988. In 1987, persons who had smoked at least 100 cigarettes were asked, "How old were you when you first started smoking cigarettes fairly regularly?"; in 1988, persons were asked, "About how old were you when you first started smoking cigarettes fairly regularly?" Those who said they had never smoked regularly were excluded. Responses from 38,906 (44%) ever regular smokers were used in this report. The data were weighted to provide national estimates. Ninety-five percent confidence intervals were calculated using SESUDAAN (5).

The overall proportion of persons who became regular smokers before ages 16, 18, 21, 25, and 30 years increased across successive birth cohorts (Table 1); however, among blacks, increases occurred only before ages 21, 25, and 30. More than 80% of smokers born after 1930 began smoking regularly by age 21.

The overall average age at which smokers began smoking cigarettes regularly decreased from 19.7 years among persons born from 1910 through 1919 to 17.4 years among those born from 1950 through 1959 (Table 2). Among the successive birth cohorts in this study, the average age at smoking initiation decreased 2.4 years for whites and 1.3 years for blacks. The average age at initiation decreased substantially for white and black women (5.4 and 4.6 years, respectively), decreased slightly for white men (0.5 years), and increased slightly for black men (0.7 years).

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**Editorial Note:** The findings in this analysis are consistent with previous reports that indicate smokers in the United States are smoking regularly at an earlier age (6,7); in addition, the secular patterns of age at which smoking begins have changed substantially over time by both sex and race.

One potential limitation of this analysis is that respondents were asked to recall an event (i.e., age at onset of regular smoking) that may have occurred decades earlier. In addition, since mortality is higher for smokers who begin smoking regularly at

\*Numbers from racial groups other than white and black were too small to provide separate estimates.

## Smoking Initiation — Continued

**TABLE 1. Percentage of ever smokers\* who began smoking cigarettes regularly† before 16, 18, 21, 25, and 30 years of age, by birth cohort and race‡ — United States**

Age (yrs) at smoking initiation/Race	Birth cohort									
	1910–1919		1920–1929		1930–1939		1940–1949		1950–1959 <sup>e</sup>	
	%	(95% CI)**	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>&lt;16</b>										
White	23.0	(±1.5)	23.1	(±1.4)	24.9	(±1.3)	25.4	(±1.2)	28.0	(±1.1)
Black	26.0	(±4.5)	22.5	(±3.7)	24.7	(±3.6)	20.0	(±3.8)	21.8	(±2.5)
<b>Total</b>	<b>23.2</b>	<b>(±1.4)</b>	<b>23.2</b>	<b>(±1.3)</b>	<b>24.9</b>	<b>(±1.3)</b>	<b>24.7</b>	<b>(±1.1)</b>	<b>27.2</b>	<b>(±1.0)</b>
<b>&lt;18</b>										
White	42.4	(±1.8)	44.7	(±1.6)	48.0	(±1.6)	49.9	(±1.5)	57.5	(±1.2)
Black	45.1	(±5.3)	39.0	(±4.1)	45.6	(±4.5)	42.4	(±4.8)	45.0	(±2.6)
<b>Total</b>	<b>42.4</b>	<b>(±1.7)</b>	<b>44.3</b>	<b>(±1.5)</b>	<b>47.5</b>	<b>(±1.5)</b>	<b>48.8</b>	<b>(±1.4)</b>	<b>55.6</b>	<b>(±1.2)</b>
<b>&lt;21</b>										
White	70.4	(±1.6)	76.1	(±1.4)	80.5	(±1.3)	83.8	(±0.9)	87.4	(±0.8)
Black	67.7	(±5.1)	71.2	(±3.6)	74.3	(±4.0)	76.5	(±3.3)	77.5	(±2.5)
<b>Total</b>	<b>70.0</b>	<b>(±1.5)</b>	<b>75.6</b>	<b>(±1.3)</b>	<b>79.6</b>	<b>(±1.3)</b>	<b>82.9</b>	<b>(±0.8)</b>	<b>86.1</b>	<b>(±0.8)</b>
<b>&lt;25</b>										
White	82.6	(±1.3)	88.4	(±1.0)	91.8	(±0.9)	94.2	(±0.6)	95.9	(±0.5)
Black	80.0	(±5.1)	83.8	(±3.0)	84.9	(±3.4)	90.2	(±2.0)	92.5	(±1.6)
<b>Total</b>	<b>82.4</b>	<b>(±1.2)</b>	<b>87.9</b>	<b>(±0.9)</b>	<b>90.8</b>	<b>(±0.9)</b>	<b>93.7</b>	<b>(±0.6)</b>	<b>95.5</b>	<b>(±0.5)</b>
<b>&lt;30</b>										
White	90.8	(±0.9)	94.0	(±0.7)	97.2	(±0.5)	97.8	(±0.4)		
Black	89.5	(±3.7)	93.1	(±2.2)	91.3	(±3.0)	97.1	(±1.2)		
<b>Total</b>	<b>90.6</b>	<b>(±0.9)</b>	<b>93.8</b>	<b>(±0.7)</b>	<b>96.5</b>	<b>(±0.6)</b>	<b>97.6</b>	<b>(±0.4)</b>		

\*Persons born during 1910–1959 who reported having ever smoked at least 100 cigarettes.

†Regular was self-defined.

‡Numbers from racial groups other than white and black were too small to provide separate estimates; however, the totals do include all races.

§No data reported for &lt;30 age group because some respondents had not reached the age of 30 years when surveyed.

\*\*Confidence interval.

**TABLE 2. Average age at initiation of regular\* smoking among adults by race,† sex, and birth cohort — United States**

Race/Sex	Birth cohort									
	1910–1919		1920–1929		1930–1939		1940–1949		1950–1959	
	Age (yrs)	(95% CI) <sup>§</sup>	Age (yrs)	(95% CI)						
<b>White</b>										
Men	17.5	(±0.3)	17.2	(±0.2)	17.1	(±0.2)	17.0	(±0.1)	17.0	(±0.1)
Women	22.9	(±0.5)	21.0	(±0.3)	19.4	(±0.2)	18.7	(±0.2)	17.5	(±0.1)
<b>Total</b>	<b>19.6</b>	<b>(±0.2)</b>	<b>18.8</b>	<b>(±0.2)</b>	<b>18.1</b>	<b>(±0.2)</b>	<b>17.8</b>	<b>(±0.1)</b>	<b>17.2</b>	<b>(±0.1)</b>
<b>Black</b>										
Men	17.4	(±0.6)	17.4	(±0.4)	18.4	(±0.9)	17.7	(±0.5)	18.1	(±0.4)
Women	23.0	(±1.8)	21.8	(±0.9)	20.4	(±0.9)	19.5	(±0.4)	18.4	(±0.3)
<b>Total</b>	<b>19.6</b>	<b>(±0.8)</b>	<b>19.3</b>	<b>(±0.4)</b>	<b>19.3</b>	<b>(±0.6)</b>	<b>18.6</b>	<b>(±0.3)</b>	<b>18.3</b>	<b>(±0.2)</b>
<b>Total</b>	<b>19.7</b>	<b>(±0.2)</b>	<b>18.8</b>	<b>(±0.2)</b>	<b>18.2</b>	<b>(±0.2)</b>	<b>17.9</b>	<b>(±0.1)</b>	<b>17.4</b>	<b>(±0.1)</b>

\*Regular was self-defined.

†Numbers from racial groups other than white and black were too small to provide separate estimates; however, the total does include all races.

§Confidence interval.

*Smoking Initiation – Continued*

earlier ages, the average age at initiation among persons born in the earlier cohorts may be artificially inflated (1). However, the overall trend of decreasing age at initiation is evident even among those born since 1930.

Since 1976, the prevalence of cigarette smoking has decreased markedly among black high school seniors (6; J.G. Bachman, L.D. Johnston, P.M. O'Malley, University of Michigan, unpublished data, 1990)—possibly because blacks begin smoking at older ages than whites. Although the findings from NHIS are consistent with this trend, current differences in adolescent smoking by race suggest the prevalence of smoking among black adolescents as they mature will not attain the same prevalence as that among whites of the same age group. Additional efforts are needed to determine the factors that affect cigarette smoking initiation by race and sex.

Monitoring trends in age at smoking initiation and in smoking prevalence of current adolescents as they mature may enable their smoking behavior patterns in later adult life to be understood more clearly. In 1974, 38.6% of whites and 47.1% of blacks aged 20–24 years were current smokers (6); however, by 1988, the proportions of whites and blacks in this age group who were current smokers had decreased to 28.5% and 24.8%, respectively (CDC, unpublished data), with black smokers decreasing at a higher rate (22.3 percentage points) than white smokers (10.1 percentage points). Although this trend suggests smoking-related morbidity and mortality could decline among blacks, the greater likelihood of relapse among black smokers indicates that smoking-cessation efforts targeted toward black smokers need to be intensified (8).

The successive birth cohort data in this report suggest that the average age at which women begin smoking is continuing to decline for both blacks and whites. Persons who begin smoking at younger ages are more likely to become heavier smokers (9) and are at increased risk for smoking-attributed illness or death (6).

One of the national health objectives for the year 2000 is to reduce the initiation of cigarette smoking by children and youth so that no more than 15% have become regular smokers by age 20 years (objective 3.5). To decrease initiation of smoking among younger age groups, the following measures should be considered: 1) implementation of health education programs on tobacco use in schools (objective 3.10); 2) establishment of tobacco-free environments in schools (objective 3.10); 3) enactment and enforcement of laws prohibiting the sale and distribution of tobacco products to minors (objective 3.13); 4) elimination or restriction of tobacco product advertising to which youth are likely to be exposed (objective 3.15); and 5) increasing to 50 the number of states with plans to reduce tobacco use, especially among youth (objective 3.14) (10).

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*Smoking Initiation – Continued*

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### **Cigarette Smoking Among Adults – United States, 1988**

In 1964, the first Surgeon General's report on smoking focused on the health hazards associated with cigarette smoking (1). From 1965 through 1987, the overall prevalence of cigarette smoking among adults in the United States declined by approximately 0.5 percentage points per year (1,2). To determine the prevalence of smoking among adults in the United States in 1988, the Occupational Health Supplement (OHS) of CDC's National Health Interview Survey collected information on cigarette smoking from a representative sample of the U.S. civilian, noninstitutionalized population aged  $\geq 18$  years.

For 1988, the OHS included the following questions on smoking behavior: "Have you smoked at least 100 cigarettes in your entire life?" and "Do you smoke cigarettes now?" Among persons who reported smoking at least 100 cigarettes, current smokers were defined as those who reported being a smoker at the time of the interview, and former smokers, as those who were not current smokers. Both current and former smokers were classified as ever smokers. The proportion of persons who had stopped smoking was defined as the number of former smokers divided by the number of ever smokers. Current smokers were asked, "On the average, about how many cigarettes a day do you smoke?" Data were available on cigarette smoking status for approximately 44,000 persons aged  $\geq 18$  years and were weighted to provide national estimates. Ninety-five percent confidence intervals (CIs) were calculated using SESUDAAN (3).

Based on the survey, in 1988 an estimated 91.1 million (51.9%) adults in the United States were ever smokers, and 49.4 million (28.1%) were current smokers. Current smokers included 30.8% of all men (25.6 million) and 25.7% of all women (23.7 million). In all age groups except 18–24-year-olds, the prevalence of smoking was higher among men than women; smoking was most prevalent among persons 25–64 years of age (Table 1). The overall prevalence of smoking was higher among blacks (31.7%) than whites (27.8%), and lowest among persons of other races (23.8%). The overall prevalence also was higher among non-Hispanics (28.4%) than Hispanics (23.5%). The prevalence of smoking was highest among persons with less than a high school education (34.0%) and with only a high school education (32.0%) (Table 1).

*Adult Smoking – Continued*

The prevalence of smoking was significantly higher among separated and divorced persons (42.6% [95% CI = 41.3%–44.0%]) than among persons in other marital categories: married (27.4% [95% CI = 26.7%–28.1%]), never married (26.5% [95% CI = 25.2%–27.7%]), and widowed (19.5% [95% CI = 18.3%–20.6%]).

In 1988, 41.8 million (45.8%) ever smokers were former smokers. The proportion of men (49.0% [95% CI = 47.8%–50.1%]) who had stopped smoking was higher than that of women (42.0% [95% CI = 40.8%–43.1%]), and the proportion of whites (47.6% [95% CI = 46.8%–48.4%]) who had stopped smoking was higher than that of blacks (32.4% [95% CI = 30.2%–34.6%]). The proportion of Hispanics who had stopped smoking (44.9% [95% CI = 41.7%–48.1%]) was similar to that for non-Hispanics (45.9% [95% CI = 45.1%–46.7%]). The proportions of adults with less than a high school education who had stopped smoking (41.1% [95% CI = 39.6%–42.7%]) and of adult high school graduates who had stopped smoking (41.3% [95% CI = 40.0%–42.6%]) were lower than those for persons with some college education (47.7% [95% CI = 46.1%–49.3%]) and for college graduates (63.1% [95% CI = 61.3%–64.9%]).

Overall, the mean number of cigarettes smoked per day by current smokers in 1988 was 21.3 (Table 2). In general, the mean number of cigarettes smoked by men was higher than the number smoked by women. Whites smoked more cigarettes per day than did blacks and persons of other races, and non-Hispanics smoked more cigarettes per day than did Hispanics. In 1988, 27.0% (95% CI = 26.0%–27.9%) of smokers smoked 25 or more cigarettes per day.

**TABLE 1. Percentage of adults who were current cigarette smokers,\* by sex, age, race, Hispanic origin, and level of education – United States, 1988**

Category	Men		Women		Total	
	%	(95% CI) <sup>†</sup>	%	(95% CI)	%	(95% CI)
<b>Age (yrs)</b>						
18–24	25.5	(23.1–27.8)	26.3	(24.3–28.2)	<b>25.9</b>	<b>(24.3–27.4)</b>
25–44	36.3	(35.1–37.5)	29.7	(28.6–30.8)	<b>32.9</b>	<b>(32.1–33.8)</b>
45–64	31.3	(29.7–32.9)	27.7	(26.3–29.1)	<b>29.4</b>	<b>(28.4–30.4)</b>
65–74	21.4	(19.5–23.4)	16.7	(15.3–18.2)	<b>18.8</b>	<b>(17.6–20.1)</b>
≥75	11.4	( 9.0–13.7)	7.3	( 6.2– 8.3)	<b>8.8</b>	<b>( 7.7– 9.8)</b>
<b>Race</b>						
White	30.1	(29.2–31.0)	25.7	(25.0–26.4)	<b>27.8</b>	<b>(27.2–28.4)</b>
Black	36.5	(34.0–38.9)	27.8	(25.9–29.8)	<b>31.7</b>	<b>(30.1–33.2)</b>
Other	31.1	(25.9–36.3)	16.7	(13.7–19.6)	<b>23.8</b>	<b>(20.5–27.1)</b>
<b>Hispanic origin</b>						
Hispanic	29.1	(26.4–31.9)	18.7	(16.8–20.7)	<b>23.5</b>	<b>(22.1–25.0)</b>
Non-Hispanic	30.9	(30.1–31.8)	26.2	(25.4–26.9)	<b>28.4</b>	<b>(27.9–29.0)</b>
<b>Education</b>						
Less than high school diploma	39.9	(38.3–41.5)	28.9	(27.6–30.3)	<b>34.0</b>	<b>(32.9–35.1)</b>
High school diploma	35.4	(34.0–36.8)	29.4	(28.3–30.4)	<b>32.0</b>	<b>(31.1–32.9)</b>
Some college	27.5	(26.0–29.1)	23.5	(22.3–24.8)	<b>25.4</b>	<b>(24.5–26.4)</b>
College degree	16.9	(15.7–18.1)	14.6	(13.3–15.9)	<b>15.9</b>	<b>(15.0–16.7)</b>
<b>Total</b>	<b>30.8</b>	<b>(30.0–31.6)</b>	<b>25.7</b>	<b>(25.0–26.3)</b>	<b>28.1</b>	<b>(27.6–28.6)</b>

\*Persons ≥18 years of age who reported having smoked at least 100 cigarettes and who were currently smoking.

<sup>†</sup>Confidence interval.

*Adult Smoking – Continued*

Reported by: Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion; Div of Health Interview Statistics, National Center for Health Statistics; Surveillance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health, CDC.

**Editorial Note:** The findings in this report indicate that, from 1987 to 1988, the overall prevalence of smoking among adults  $\geq 18$  years of age declined from 28.8% (2) to 28.1%—approximately 0.7 percentage points. In addition, in 1988, the proportion of ever smokers who were former smokers was 45.8%, compared with 44.2% in 1987 (4).

The higher rates of cigarette smoking among separated and divorced persons appear to reflect higher rates of smoking initiation before the usual age of marriage (5). In addition, separated and divorced persons were less likely to have quit smoking than married persons (5). Social support provided in marriage may increase the probability of cessation (5), while stress (which has been associated with difficulty in quitting [6]) from marital discord may decrease the likelihood of quitting.

Cigarette smoking is the single most important preventable cause of death in the United States (7). One of the national health objectives for the year 2000 (objective 3.4) is to reduce the prevalence of cigarette smoking among adults to no more than 15% (8). To achieve this goal, the current rate of decline must be doubled.

(Continued on page 765)

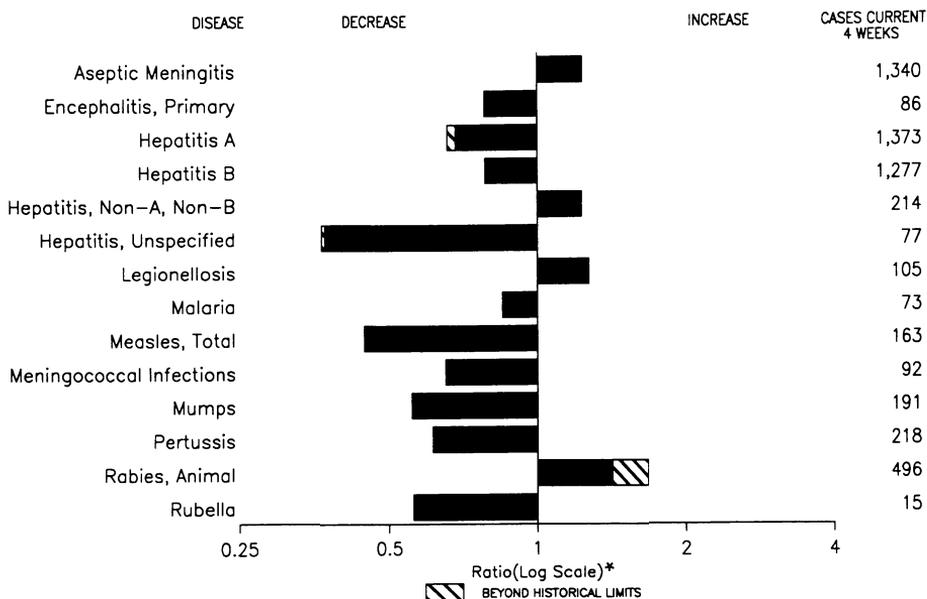
**TABLE 2. Mean number of cigarettes smoked daily by current smokers,\* by sex, age, race, Hispanic origin, and level of education – United States, 1988**

Category	Men		Women		Total	
	No.	(95% CI) <sup>†</sup>	No.	(95% CI)	No.	(95% CI)
<b>Age (yrs)</b>						
18–24	18.5	(17.2–19.8)	16.9	(15.5–18.2)	17.7	(16.7–18.6)
25–44	23.3	(22.6–24.0)	19.9	(19.3–20.6)	21.7	(21.3–22.2)
45–64	25.2	(24.2–26.2)	20.8	(20.0–21.6)	23.0	(22.4–23.7)
65–74	20.5	(19.0–22.0)	18.4	(17.1–19.8)	19.5	(18.4–20.5)
$\geq 75$	16.3	(13.6–18.9)	15.4	(12.7–18.1)	15.8	(13.9–17.7)
<b>Race</b>						
White	23.9	(23.3–24.5)	20.2	(19.8–20.7)	22.1	(21.8–22.5)
Black	17.5	(16.1–19.0)	14.7	(13.6–15.8)	16.1	(15.2–17.1)
Other	17.8	(15.1–20.6)	18.5	(13.2–23.8)	18.1	(15.3–20.8)
<b>Hispanic origin</b>						
Hispanic	16.1	(14.0–18.1)	15.2	(12.4–17.9)	15.7	(14.0–17.3)
Non-Hispanic	23.4	(22.8–23.9)	19.7	(19.3–20.2)	21.6	(21.2–22.0)
<b>Education</b>						
Less than high school diploma	22.9	(22.0–23.8)	20.4	(19.6–21.2)	21.8	(21.2–22.3)
High school diploma	22.8	(22.0–23.6)	19.7	(19.1–20.3)	21.2	(20.7–21.7)
Some college	23.6	(22.2–25.0)	18.9	(17.7–20.0)	21.3	(20.4–22.1)
College degree	22.3	(20.8–23.8)	17.6	(16.3–18.9)	20.4	(19.3–21.4)
<b>Total</b>	<b>22.9</b>	<b>(22.4–23.4)</b>	<b>19.5</b>	<b>(19.1–19.9)</b>	<b>21.3</b>	<b>(20.9–21.6)</b>

\*Persons  $\geq 18$  years of age who reported having smoked at least 100 cigarettes and who were currently smoking.

<sup>†</sup>Confidence interval.

**FIGURE I. Notifiable disease reports, comparison of 4-week totals ending November 2, 1991, with historical data — United States**



\*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending November 2, 1991 (44th Week)**

	Cum. 1991		Cum. 1991
AIDS	37,508	Measles: imported	201
Anthrax	-	indigenous	8,666
Botulism: Foodborne	17	Plague	8
Infant	66	Poliomyelitis, Paralytic*	-
Other	2	Psittacosis	72
Brucellosis	69	Rabies, human	3
Cholera	21	Syphilis, primary & secondary	35,101
Congenital rubella syndrome	17	Syphilis, congenital, age < 1 year†	1,537
Diphtheria	2	Tetanus	41
Encephalitis, post-infectious	67	Toxic shock syndrome	245
Gonorrhea	503,293	Trichinosis	61
<i>Haemophilus influenzae</i> (invasive disease)	2,319	Tuberculosis	19,228
Hansen Disease	118	Tularemia	171
Leptospirosis	50	Typhoid fever	388
Lyme Disease	7,728	Typhus fever, tickborne (RMSF)	597

\*Four suspected cases of poliomyelitis have been reported in 1991; none of the 8 suspected cases in 1990 have been confirmed to date. Five of 13 suspected cases in 1989 were confirmed and all were vaccine associated.

†Includes updates for first two quarters of 1991.

**TABLE II. Cases of selected notifiable diseases, United States, weeks ending November 2, 1991, and November 3, 1990 (44th week)**

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionellosis	Lyme Disease
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
			Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991		
UNITED STATES	37,508	12,350	794	67	503,293	572,171	19,652	14,215	2,558	1,002	1,031	7,728
NEW ENGLAND	1,476	1,402	29	1	12,390	15,631	489	707	60	27	73	1,392
Maine	51	151	3	-	139	185	19	23	4	-	3	-
N.H.	36	162	5	-	167	240	30	30	7	-	8	35
Vt.	18	224	5	-	49	46	23	15	7	1	4	7
Mass.	799	478	13	1	5,259	6,555	233	491	29	23	53	253
R.I.	78	380	1	-	1,061	1,005	89	22	11	3	5	122
Conn.	494	7	2	-	5,715	7,600	95	126	2	-	-	975
MID. ATLANTIC	10,248	2,379	59	11	58,952	75,076	2,040	1,433	304	18	287	4,688
Upstate N.Y.	1,292	1,202	31	7	11,479	12,398	763	506	170	10	99	3,077
N.Y. City	5,842	337	1	-	21,514	30,620	723	228	8	-	48	-
N.J.	2,057	-	-	-	9,798	12,725	231	333	83	-	30	765
Pa.	1,057	840	27	4	16,161	19,333	323	366	43	8	110	846
E.N. CENTRAL	2,761	2,408	233	7	94,005	110,472	2,546	1,650	395	61	205	285
Ohio	476	915	82	2	29,891	33,223	326	349	156	19	100	147
Ind.	278	176	21	1	10,122	9,707	335	184	1	1	17	10
Ill.	1,343	410	74	4	28,101	34,234	1,087	244	62	7	18	24
Mich.	491	792	51	-	20,363	25,734	256	535	116	34	39	104
Wis.	173	115	5	-	5,528	7,574	542	338	60	-	31	-
W.N. CENTRAL	1,000	618	57	7	24,929	29,480	1,985	616	255	23	55	289
Minn.	200	123	35	-	2,615	3,542	357	67	11	2	12	80
Iowa	91	139	-	4	1,714	2,020	47	39	9	4	11	18
Mo.	575	245	12	3	15,296	17,771	544	415	224	12	14	171
N. Dak.	4	9	2	-	49	120	39	4	5	1	1	1
S. Dak.	3	11	4	-	309	255	732	7	1	-	3	1
Nebr.	44	25	2	-	1,524	1,583	188	36	1	-	9	-
Kans.	83	66	2	-	3,422	4,189	78	48	4	4	5	18
S. ATLANTIC	8,907	2,211	155	29	149,706	162,204	1,562	2,970	326	197	164	605
Del.	67	65	2	-	2,459	2,742	7	43	5	2	2	56
Md.	803	277	22	1	16,845	20,020	248	333	43	13	34	248
D.C.	572	70	2	-	7,795	11,125	66	137	1	1	7	2
Va.	598	384	38	3	15,422	15,697	161	191	27	127	14	128
W. Va.	53	42	29	-	1,077	1,134	21	59	2	15	3	39
N.C.	473	305	29	-	30,482	25,013	151	475	104	-	19	75
S.C.	276	40	-	-	12,477	12,929	37	603	16	3	35	10
Ga.	1,273	292	9	2	32,857	35,094	196	455	66	-	15	27
Fla.	4,792	736	24	23	30,292	38,450	675	674	62	36	35	20
E.S. CENTRAL	903	733	38	1	50,567	49,258	219	1,177	348	3	51	98
Ky.	132	179	13	-	5,131	5,532	52	150	7	2	17	40
Tenn.	296	208	17	-	17,008	15,294	122	874	315	-	17	43
Ala.	301	276	8	1	16,210	16,218	35	141	22	1	16	15
Miss.	174	70	-	-	12,218	12,214	10	12	4	-	1	-
W.S. CENTRAL	3,646	1,212	103	4	57,091	62,464	2,527	1,859	107	193	43	72
Ark.	162	59	32	-	6,619	7,380	238	114	3	6	7	27
La.	610	125	17	-	13,173	11,521	112	273	6	8	8	3
Okla.	161	4	8	3	5,993	5,494	246	184	44	16	18	31
Tex.	2,713	1,024	46	1	31,306	38,069	1,931	1,288	54	163	10	11
MOUNTAIN	1,058	236	18	2	10,126	11,924	3,053	842	169	130	73	17
Mont.	25	18	1	-	84	182	74	65	5	5	5	-
Idaho	20	-	-	-	134	126	84	66	3	1	4	2
Wyo.	15	-	-	-	84	147	102	11	3	-	-	8
Colo.	373	94	8	1	2,844	3,442	541	125	83	24	14	-
N. Mex.	95	20	-	-	879	1,060	742	198	16	29	3	-
Ariz.	215	55	9	1	3,783	4,508	970	148	18	56	29	-
Utah	105	17	-	-	276	331	252	64	14	14	7	1
Nev.	210	32	-	-	2,042	2,128	288	165	27	1	11	6
PACIFIC	7,509	1,151	102	5	45,527	55,662	5,231	2,961	594	350	80	282
Wash.	454	-	9	1	3,891	4,824	458	379	124	19	8	3
Oreg.	229	-	-	-	1,739	2,146	341	257	110	8	3	-
Calif.	6,642	1,062	91	4	38,492	47,119	4,301	2,250	343	322	67	279
Alaska	19	45	2	-	764	1,033	87	34	13	1	-	-
Hawaii	165	44	-	-	641	540	44	41	4	-	2	-
Guam	2	-	-	-	-	260	-	-	-	-	-	-
P.R.	1,483	214	2	3	461	653	121	445	153	45	-	-
V.I.	13	-	-	-	309	389	1	9	-	-	-	-
Amer. Samoa	-	-	-	-	-	73	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	171	-	-	-	-	-	-

N: Not notifiable

U: Unavailable

C.N.M.I.: Commonwealth of the Northern Mariana Islands

**TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending November 2, 1991, and November 3, 1990 (44th Week)**

Reporting Area	Malaria		Measles (Rubeola)				Meningococcal Infections	Mumps		Pertussis			Rubella		
	Cum. 1991	Indigenous		Imported*		Cum. 1990		1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	1991	Cum. 1991	Cum. 1990
		1991	Cum. 1991	1991	Cum. 1991										
UNITED STATES	1,011	17	8,666	3	201	24,143	1,700	73	3,339	44	2,226	3,650	3	1,287	1,032
NEW ENGLAND	66	-	62	-	17	293	134	1	26	7	257	361	-	4	8
Maine	1	-	7	-	-	30	11	-	-	-	52	16	-	-	1
N.H.	2	-	-	-	-	9	13	-	4	-	18	54	-	1	1
Vt.	4	-	5	-	-	14	14	-	4	-	4	7	-	-	-
Mass.	31	-	26	-	11	30	76	1	2	7	160	252	-	2	2
R.I.	7	-	3	-	1	30	1	-	4	-	-	7	-	1	1
Conn.	21	-	21	-	5	193	19	-	12	-	23	25	-	1	3
MID. ATLANTIC	187	2	4,483	-	7	1,534	184	4	258	8	185	478	-	561	11
Upstate N.Y.	44	-	334	-	4	318	95	2	94	1	119	310	-	539	10
N.Y. City	78	-	1,750	-	-	443	13	-	-	-	7	-	-	-	-
N.J.	51	-	858	-	2	388	37	-	58	-	1	35	-	-	-
Pa.	14	2	1,541	-	1	385	39	2	106	7	58	133	-	22	1
E.N. CENTRAL	78	-	75	-	20	3,539	287	4	339	-	359	931	-	317	162
Ohio	19	-	4	-	7	539	87	3	84	-	100	198	-	283	131
Ind.	3	-	1	-	5	418	35	-	8	-	69	124	-	2	-
Ill.	28	-	25	-	1	1,357	79	-	122	-	57	343	-	6	19
Mich.	25	-	43	-	-	473	63	1	100	-	37	78	-	25	9
Wis.	3	-	2	-	7	752	23	-	25	-	96	188	-	1	3
W.N. CENTRAL	35	-	39	-	16	866	99	-	108	-	174	195	-	18	40
Minn.	11	-	12	-	15	380	20	-	20	-	69	40	-	6	34
Iowa	6	-	17	-	-	26	13	-	20	-	20	18	-	6	4
Mo.	8	-	-	-	1	101	32	-	33	-	58	105	-	5	-
N. Dak.	1	-	-	-	-	-	1	-	-	-	3	3	-	1	1
S. Dak.	2	-	-	-	-	23	3	-	2	-	4	1	-	-	-
Nebr.	1	-	1	-	-	106	8	-	6	-	9	7	-	-	1
Kans.	6	-	9	-	-	230	22	-	25	-	11	21	-	-	-
S. ATLANTIC	208	13	494	-	23	1,302	304	46	1,207	9	225	296	-	9	20
Del.	2	-	21	-	-	11	2	-	6	-	-	8	-	-	-
Md.	57	-	173	-	3	212	31	3	229	1	55	61	-	1	2
D.C.	13	-	-	-	-	23	13	1	24	-	1	14	-	1	1
Va.	47	-	25	-	5	86	31	6	59	4	22	24	-	-	1
W. Va.	3	-	-	-	-	6	13	-	25	-	9	29	-	-	-
N.C.	13	-	40	-	4	30	51	-	239	4	38	72	-	2	-
S.C.	10	-	13	-	-	4	29	-	358	-	12	5	-	-	-
Ga.	19	-	10	-	5	358	61	31	71	-	42	35	-	-	1
Fla.	44	13	212	-	6	572	73	5	196	-	46	48	-	5	15
E.S. CENTRAL	20	-	30	-	3	199	107	2	172	3	93	145	-	100	4
Ky.	2	-	23	-	1	43	37	-	-	-	-	-	-	-	1
Tenn.	11	-	6	-	1	104	36	1	139	1	39	72	-	100	3
Ala.	7	-	1	-	1	25	32	1	13	2	52	65	-	-	-
Miss.	-	-	-	-	-	27	2	-	20	-	2	8	-	-	-
W.S. CENTRAL	63	-	186	-	14	4,274	117	6	290	2	140	184	-	7	66
Ark.	9	-	-	-	5	48	20	-	43	2	11	21	-	1	3
La.	17	-	-	-	-	10	32	-	29	-	16	31	-	-	-
Okla.	7	-	-	-	-	174	13	1	16	-	39	52	-	-	1
Tex.	30	-	186	-	9	4,042	52	5	202	-	74	80	-	6	62
MOUNTAIN	43	-	1,254	-	19	944	64	4	278	4	304	303	3	29	109
Mont.	1	-	-	-	-	1	10	-	-	-	4	35	3	3	14
Idaho	3	-	444	-	2	26	7	-	8	-	27	56	-	-	49
Wyo.	-	-	1	-	2	15	1	-	4	-	3	-	-	-	-
Colo.	12	-	1	-	5	138	12	4	131	2	124	106	-	2	4
N. Mex.	6	-	117	-	5	93	8	N	N	2	45	18	-	4	-
Ariz.	15	-	453	-	-	312	20	-	109	-	62	53	-	2	32
Utah	5	-	220	-	4	128	-	-	13	-	37	31	-	11	2
Nev.	1	-	18	-	1	231	6	-	13	-	2	4	-	7	8
PACIFIC	311	2	2,043	3	82	11,192	404	6	661	11	489	757	-	242	612
Wash.	21	-	46	-	15	254	54	1	167	1	128	197	-	8	-
Oreg.	11	-	52	3†	41	212	50	N	N	2	66	96	-	4	74
Calif.	275	2	1,935	-	14	10,612	289	5	457	8	228	366	-	224	522
Alaska	-	-	2	-	3	80	9	-	12	-	13	7	-	1	-
Hawaii	4	-	8	-	9	34	2	-	25	-	54	91	-	5	16
Guam	-	U	-	U	-	1	-	U	-	U	-	1	U	-	-
P.R.	1	-	93	-	1	1,657	18	-	10	1	52	12	-	1	-
V.I.	2	U	-	U	2	24	-	U	9	U	-	-	U	-	-
Amer. Samoa	-	U	-	U	-	566	-	U	-	U	-	-	U	-	-
C.N.M.I.	-	U	-	U	-	38	-	U	-	U	-	4	U	-	-

\*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International ‡Out-of-state

**TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending November 2, 1991, and November 3, 1990 (44th Week)**

Reporting Area	Syphilis (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991
UNITED STATES	35,101	41,633	245	19,228	19,681	171	388	597	5,526
NEW ENGLAND	877	1,436	13	562	476	5	32	9	105
Maine	3	7	4	33	18	-	1	-	-
N.H.	12	48	2	5	3	-	1	-	2
Vt.	2	1	-	9	8	-	-	-	-
Mass.	415	578	7	306	243	5	27	8	14
R.I.	45	19	-	69	62	-	-	-	-
Conn.	400	783	-	140	142	-	3	1	89
MID. ATLANTIC	5,940	7,955	39	4,414	4,694	2	93	23	1,908
Upstate N.Y.	126	800	18	276	324	1	18	12	746
N.Y. City	3,330	3,774	2	2,765	2,933	-	52	1	-
N.J.	1,082	1,288	-	774	809	1	17	6	868
Pa.	1,402	2,093	19	599	628	-	6	4	294
E.N. CENTRAL	4,232	3,059	47	1,904	1,911	8	30	41	159
Ohio	569	468	21	300	335	2	3	24	18
Ind.	148	84	-	194	187	-	-	10	26
Ill.	2,013	1,242	15	977	963	4	10	4	34
Mich.	1,026	921	11	348	359	2	12	3	33
Wis.	476	344	-	85	67	-	5	-	48
W.N. CENTRAL	694	453	38	434	521	48	6	38	749
Minn.	60	79	8	86	101	1	2	-	264
Iowa	63	68	7	55	53	-	-	1	145
Mo.	465	238	13	193	267	38	1	26	20
N. Dak.	-	1	-	6	17	-	-	-	86
S. Dak.	1	3	1	30	12	5	-	1	165
Nebr.	15	14	1	16	16	1	3	5	17
Kans.	90	50	8	48	55	3	-	5	52
S. ATLANTIC	10,320	13,345	23	3,615	3,619	4	66	273	1,296
Del.	150	159	1	29	33	-	-	-	152
Md.	832	1,025	1	334	283	-	10	27	488
D.C.	619	979	1	161	135	-	2	-	16
Va.	749	791	5	284	319	-	9	18	222
W. Va.	26	18	-	60	64	-	1	4	47
N.C.	1,700	1,499	10	462	499	1	4	151	20
S.C.	1,318	917	2	353	404	1	4	35	95
Ga.	2,503	3,365	-	700	597	1	5	35	228
Fla.	2,423	4,592	3	1,232	1,285	1	31	3	28
E.S. CENTRAL	3,791	3,835	11	1,338	1,445	19	2	94	138
Ky.	91	99	4	295	318	4	2	25	40
Tenn.	1,267	1,580	5	447	417	14	-	53	29
Ala.	1,356	1,176	2	320	421	1	-	16	69
Miss.	1,077	980	-	276	289	-	-	-	-
W.S. CENTRAL	6,404	7,181	14	2,314	2,343	52	25	108	527
Ark.	578	447	3	195	288	39	-	27	39
La.	2,375	2,262	-	197	251	-	5	-	5
Okla.	175	224	4	146	175	12	3	79	156
Tex.	3,276	4,248	7	1,776	1,629	1	17	2	327
MOUNTAIN	524	765	30	533	475	28	12	8	229
Mont.	6	-	1	6	22	9	-	6	38
Idaho	4	6	-	9	11	-	-	-	6
Wyo.	9	3	-	4	5	1	-	-	82
Colo.	74	44	5	56	45	9	2	2	25
N. Mex.	28	40	7	62	92	2	2	-	5
Ariz.	317	546	5	270	207	2	7	-	44
Utah	6	17	12	40	37	5	-	-	18
Nev.	80	109	-	86	56	-	1	-	11
PACIFIC	2,319	3,604	30	4,114	4,197	5	122	3	415
Wash.	139	337	4	258	239	2	6	2	1
Oreg.	78	119	-	106	109	2	5	1	5
Calif.	2,091	3,113	26	3,534	3,644	1	102	-	405
Alaska	4	17	-	50	55	-	-	-	3
Hawaii	7	18	-	166	150	-	9	-	1
Guam	-	2	-	-	37	-	-	-	-
P.R.	366	296	-	203	102	-	9	-	59
V.I.	85	12	-	2	4	-	-	-	-
Amer. Samoa	-	-	-	-	15	-	-	-	-
C.N.M.I.	-	4	-	-	49	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,\* week ending  
November 2, 1991 (44th Week)

Reporting Area	All Causes, By Age (Years)					P&I†	Total	Reporting Area	All Causes, By Age (Years)					P&I†	Total
	All Ages	≥65	45-64	25-44	1-24				All Ages	≥65	45-64	25-44	1-24		
NEW ENGLAND	578	408	96	46	17	11	27	S. ATLANTIC	1,327	804	280	155	55	31	54
Boston, Mass.	159	98	27	21	8	5	12	Atlanta, Ga.	203	122	50	24	5	2	9
Bridgeport, Conn.	46	32	11	1	1	1	-	Baltimore, Md.	248	151	50	31	10	6	12
Cambridge, Mass.	16	14	1	-	-	1	-	Charlotte, N.C.	88	53	13	11	4	7	2
Fall River, Mass.	15	13	2	-	-	-	-	Jacksonville, Fla.	131	89	20	15	4	3	12
Hartford, Conn.	71	51	13	5	-	2	2	Miami, Fla.	107	49	34	17	6	1	1
Lowell, Mass.	32	26	2	3	1	-	-	Norfolk, Va.	59	41	12	3	2	1	1
Lynn, Mass.	20	12	6	2	-	-	-	Richmond, Va.	80	50	17	9	3	1	2
New Bedford, Mass.	18	14	2	1	1	-	1	Savannah, Ga.	69	48	14	6	1	-	5
New Haven, Conn.	44	28	6	4	2	2	1	St. Petersburg, Fla.	89	66	13	7	1	2	-
Providence, R.I.	42	32	7	2	3	-	-	Tampa, Fla.	118	73	28	8	4	3	8
Somerville, Mass.	5	3	1	1	-	-	-	Washington, D.C.	106	41	25	23	13	4	2
Springfield, Mass.	32	23	7	2	-	-	3	Wilmington, Del.	29	21	4	1	2	1	-
Waterbury, Conn.	17	15	2	-	-	-	1	E.S. CENTRAL	746	500	148	51	29	18	42
Worcester, Mass.	61	47	9	4	1	-	6	Birmingham, Ala.	99	64	15	9	4	7	4
MID. ATLANTIC	2,898	1,817	604	321	68	88	136	Chattanooga, Tenn.	51	38	7	4	2	-	1
Albany, N.Y.	39	28	8	1	-	2	6	Knoxville, Tenn.	65	51	8	3	1	2	6
Allentown, Pa.	24	16	6	2	-	-	-	Louisville, Ky.	89	62	21	3	2	1	3
Buffalo, N.Y.	100	55	23	16	3	3	3	Memphis, Tenn.	182	119	37	16	9	1	12
Camden, N.J.	44	23	10	4	1	6	-	Mobile, Ala.	59	36	18	3	1	1	4
Elizabeth, N.J.	16	8	6	2	-	-	-	Montgomery, Ala.	52	34	9	3	2	4	1
Erie, Pa.§	51	42	5	2	1	1	3	Nashville, Tenn.	149	96	33	10	8	2	11
Jersey City, N.J.	43	31	7	3	1	1	2	W.S. CENTRAL	1,069	692	193	107	48	29	44
New York City, N.Y.	1,625	970	353	216	45	41	64	Austin, Tex.	40	26	11	3	-	-	1
Newark, N.J.	85	39	21	18	5	2	2	Baton Rouge, La.	56	30	11	7	8	-	1
Paterson, N.J.	23	14	8	1	-	-	2	Corpus Christi, Tex.	52	33	10	5	2	2	3
Philadelphia, Pa.	391	249	82	39	3	18	18	Dallas, Tex.	226	147	33	29	9	8	11
Pittsburgh, Pa.§	67	52	10	4	-	1	7	El Paso, Tex.	68	47	11	4	3	3	2
Reading, Pa.	45	36	6	-	2	1	7	Fr. Worth, Tex.	101	66	18	9	8	-	1
Rochester, N.Y.	124	82	23	7	4	8	10	Houston, Tex.	U	U	U	U	U	U	U
Schenectady, N.Y.	27	23	3	-	1	-	1	Little Rock, Ark.	70	46	11	7	5	1	6
Scranton, Pa.§	33	28	4	-	1	-	1	New Orleans, La.	99	64	21	13	-	1	-
Syracuse, N.Y.	78	59	13	4	-	2	6	San Antonio, Tex.	206	128	37	19	11	11	8
Trenton, N.J.	28	21	6	1	-	-	1	Shreveport, La.	56	39	10	4	1	2	2
Utica, N.Y.	25	18	5	-	1	1	1	Tulsa, Okla.	95	66	20	7	1	1	9
Yonkers, N.Y.	30	23	5	1	-	1	2	MOUNTAIN	738	447	159	70	35	27	39
E.N. CENTRAL	2,119	1,375	380	186	111	67	124	Albuquerque, N.M.	106	77	18	6	3	2	5
Akron, Ohio	38	24	8	2	-	4	-	Colo. Springs, Colo.	40	27	10	1	1	1	2
Canton, Ohio	46	33	10	2	-	1	5	Denver, Colo.	110	65	19	16	4	6	6
Chicago, Ill.	425	198	80	70	66	11	17	Las Vegas, Nev.	115	64	39	9	3	-	3
Cincinnati, Ohio	153	100	35	7	4	7	7	Ogden, Utah	30	20	6	-	3	1	4
Cleveland, Ohio	132	82	30	12	4	4	2	Phoenix, Ariz.	143	55	32	27	20	9	3
Columbus, Ohio	170	111	40	10	3	6	3	Pueblo, Colo.	28	25	2	1	-	-	4
Dayton, Ohio	112	83	16	8	5	-	13	Salt Lake City, Utah	47	31	11	-	1	4	2
Detroit, Mich.	257	163	47	24	9	14	6	Tucson, Ariz.	119	83	22	10	-	4	10
Evansville, Ind.	40	36	3	-	1	4	7	PACIFIC	1,839	1,204	340	194	59	37	90
Fort Wayne, Ind.	65	50	6	5	3	1	7	Berkeley, Calif.	16	13	-	3	-	-	3
Gary, Ind.	7	5	-	2	-	-	-	Fresno, Calif.	80	50	14	6	5	5	4
Grand Rapids, Mich.	54	46	3	2	-	3	8	Glendale, Calif.	26	22	3	1	-	-	3
Indianapolis, Ind.	150	97	26	17	6	4	16	Honolulu, Hawaii	85	48	19	15	2	1	7
Madison, Wis.	34	21	6	5	1	1	2	Long Beach, Calif.	U	U	U	U	U	U	U
Milwaukee, Wis.	156	115	29	6	3	3	10	Los Angeles, Calif.	587	360	122	70	26	4	16
Peoria, Ill.	51	36	12	2	-	1	4	Oakland, Calif.	U	U	U	U	U	U	U
Rockford, Ill.	36	26	2	2	4	2	5	Pasadena, Calif.	21	17	3	1	-	-	-
South Bend, Ind.	38	33	3	2	-	-	7	Portland, Ore.	112	78	23	6	2	3	1
Toledo, Ohio	97	73	14	5	2	3	4	Sacramento, Calif.	146	104	17	15	5	5	11
Youngstown, Ohio	58	43	10	3	1	1	4	San Diego, Calif.	170	112	27	18	9	4	16
W.N. CENTRAL	855	609	142	52	28	24	47	San Francisco, Calif.	165	101	33	28	-	3	6
Des Moines, Iowa	69	48	16	3	2	-	4	San Jose, Calif.	156	95	38	14	2	7	12
Duluth, Minn.	27	20	7	-	-	-	1	Seattle, Wash.	137	101	19	8	8	1	1
Kansas City, Kans.	50	26	12	7	2	3	1	Spokane, Wash.	46	40	4	2	-	-	5
Kansas City, Mo.	123	88	15	13	5	2	5	Tacoma, Wash.	92	63	18	7	-	4	5
Lincoln, Nebr.	36	33	2	-	1	-	5	TOTAL	12,169†	7,856	2,342	1,182	450	332	603
Minneapolis, Minn.	257	189	41	19	5	3	20								
Omaha, Nebr.	69	48	17	2	-	2	6								
St. Louis, Mo.	113	80	15	5	5	8	6								
St. Paul, Minn.	39	28	6	1	1	3	2								
Wichita, Kans.	72	49	11	2	7	3	3								

\*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

U: Unavailable

*Adult Smoking – Continued*

Health-care providers and public health agencies must increase efforts to prevent the initiation of smoking and, for smokers, to support attempts to quit and maintain cessation. Persons with less than a high school education and in low socioeconomic groups are at especially high risk for becoming smokers (1,9). In addition to directing interventions toward these groups, smoking control and prevention efforts will require intensified public health education, increased emphasis on school health education, and enactment and enforcement of effective health-promoting policies and laws.

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*Epidemiologic Notes and Reports***Human Rabies – Texas, Arkansas, and Georgia, 1991**

From August through October 1991, three persons, one each in Texas, Arkansas, and Georgia, died from rabies. Including these three cases, 16 cases of human rabies have been reported to CDC from 1980 through 1991; seven of these are believed to have been acquired in the United States (1). This report summarizes epidemiologic and clinical information regarding the three recent cases.

**Patient 1.** During August 7–9, a woman from Starr County, Texas, had increasing nervousness, shortness of breath, and difficulty swallowing. On August 9, she was admitted to a local hospital with a diagnosis of panic disorder. During the first 3 hospital days, her temperature fluctuated from 97 F (36 C) to 106 F (41 C). On August 12, rabies was first considered in the differential diagnosis because of aerophobia, hydrophobia, agitation, and incoherence alternating with periods of coherence; a skin biopsy and saliva, serum, and cerebrospinal fluid (CSF) specimens were obtained from the patient. An ascending paresis developed, and on August 16 she was transferred to another hospital for a computerized axial tomographic scan of

*Human Rabies – Continued*

the head; only an old infarct in the left cerebellum was found. After the scan, she had a respiratory arrest that progressed to cardiac arrest; she was resuscitated but did not regain consciousness and died on August 20.

The serum and CSF specimens obtained on August 12 were negative for rabies antibody; in addition, the skin biopsy from the nape of the neck, tested at CDC, was negative for rabies by the direct immunofluorescent antibody (DFA) test. However, on August 17, rabies virus was detected in cell culture of the saliva specimen at CDC. Monoclonal antibody typing showed the rabies virus isolate to be identical to the virus strain found in dogs in Mexico and along the border of Mexico and Texas. A second skin biopsy from the nape of the neck, obtained on August 19, was positive by DFA.

The woman had no known exposure to rabies. She was a native of Texas and had resided all her life in Starr County, where rabies is endemic in dogs and coyotes. She occasionally visited relatives in northern Mexico but had last been there more than 1 year before onset of illness. She had a history of a dog bite at 9 years of age but had no other known animal bites.

As a result of possible exposure to this patient, 43 persons received postexposure prophylaxis. At the first hospital, 30 members of the staff who provided care for the patient—before isolation precautions were instituted on August 12—were treated because of concern about possible exposure to saliva. At the second hospital, postexposure treatment was given to seven persons who assisted in the resuscitation that followed the patient's respiratory arrest and who were unaware of the suspected diagnosis. All six members of the patient's household also received rabies prophylaxis.

**Patient 2.** On August 17, a man from Clark County, Arkansas, had onset of a sore throat and headache. On August 19, he visited his doctor because of difficulty swallowing and sore throat. On examination, his temperature was 99 F (37 C); he appeared agitated and tremulous and had pharyngitis. He was treated parenterally and orally with antibiotics and sent home. That evening, family members found him pacing and spitting frequently; he appeared anxious and fearful, and his facial muscles were twitching. He was taken to the local emergency room and later was transferred to a tertiary-care hospital, where he complained of headache, generalized itching, difficulty swallowing, and a gagging sensation; he was alert and oriented but tremulous, agitated, and photophobic. Differential diagnosis included drug overdose, viral encephalitis, and tetanus; although rabies was considered, he had no history of animal bites.

On August 20, he required intubation because of frequent vomiting and obtundation. He developed rhabdomyolysis, and his temperature was intermittently as high as 106 F (41 C). On August 23, he had a cardiac arrest and was resuscitated but thereafter had no sign of brain stem function. He died on August 25.

Postmortem samples of brain tissue were positive for rabies by DFA testing at the Arkansas Department of Health, and monoclonal antibody typing at CDC suggested a rabies variant commonly found in the silver-haired bat (*Lasiurus noctivagans*).

The man was a native of Arkansas and had never traveled outside the southwestern region of the state. He had lived in a previously abandoned, rural house. A friend reported that one night in early July a bat had landed on the man's mouth; the patient killed and disposed of it. Although the friend had detected no bites or scratches on the man's face, other friends and co-workers whom the patient had told about the incident recalled bites on his thumb or scratches on his chest.

*Human Rabies – Continued*

A total of 99 persons identified as having possible exposures to the patient—from 2 weeks before onset of his symptoms through the time of his death—received postexposure prophylaxis. Of these persons, 32 were community contacts, which included one sex partner, eight family members, 14 health-care personnel who had been near the patient's saliva and vomitus, and nine friends and co-workers who had had recent contact with the patient's saliva through shared utensils. The other contacts included a mortician and 66 (44%) of the 150 hospital staff involved in care of this patient and concerned about their contact with his saliva or vomitus.

**Patient 3.** On October 2, a woman from Walker County, Georgia, (on the Tennessee-Georgia border) developed sore throat, headache, and fever. She was treated at a local emergency room with parenteral antibiotics and discharged. On October 4, she developed additional symptoms including difficult and painful swallowing, agitation, and a fever of 104 F (40 C). She was admitted to a local hospital; later that day she was transferred to a referral hospital, where rabies and other viral encephalitides were considered in the differential diagnosis. Her condition continued to deteriorate, with progressive obtundation; on October 8, she died of cardiac arrest. Rabies was diagnosed postmortem by demonstration of Negri bodies in brain tissue and confirmed by DFA at the Tennessee State Department of Health Laboratory and at CDC. Monoclonal antibody typing at CDC suggested the involvement of the same rabies variant as that isolated from patient 2.

The patient had moved to Walker County, Georgia, from Hamilton County, Tennessee, 8 months before her illness. Extensive interviews with the patient's family and friends in Georgia and Tennessee did not reveal any known animal exposure. She had never traveled outside the United States and had not engaged in outdoor activities.

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**Editorial Note:** Although rabies is enzootic among many species of wild animals, human rabies is rarely acquired in the United States. The last reported case in the United States occurred in June 1990 in Texas (2), in a county adjacent to that in which patient 1 resided. The last reported cases of human rabies in Arkansas and Georgia occurred in 1956 and 1960, respectively.

A definite bite by an animal was not established as a clear exposure for any of the three patients in this report. A bite by a proven or presumed rabid animal was identified in all 15 of the cases reported in the 1960s and in 18 (78%) of the 23 reported in the 1970s, but only four (40%) of the 10 reported in the 1980s. Because many patients with rabies have died or are severely ill at the time rabies is diagnosed, it is sometimes not possible to determine an exposure. In some cases, however, failure to

*Human Rabies – Continued*

establish a clear exposure may reflect the possibility that exposure occurred many years before onset of symptoms (3). Patient 1 may have been exposed when she was bitten as a child, but it is more likely she incurred a recent unreported or unrecognized exposure associated with the rabies epizootic ongoing since 1987 among dogs and coyotes in her county of residence (1). Canine rabies is a long-standing problem along the U.S.–Mexican border, although human rabies of canine origin acquired in the United States has not been documented since 1979 (4).

Bat rabies is endemic in most states (1,5,6), and bats have accounted for five of the seven indigenously acquired human rabies cases reported since 1980 (2,7,8). Although patient 2 had close contact with a bat, no bite was identified, and the patient did not seek postexposure treatment. Patient 3 had no known exposure to rabies but was infected with the same strain as patient 2, suggesting possible exposure to a silver-haired bat.

The earliest manifestations of rabies are commonly nonspecific constitutional complaints. The disease then progresses to one of two distinct presentations: the more common furious form (characterized by hydrophobia, aerophobia, or episodic agitation and anxiety) or the less common paralytic form. Rabies should be considered in any patient with a rapidly progressive encephalitis of unknown etiology (9), particularly in patients who have lived in an area with endemic canine rabies or who have had an exposure or other close contact with a recognized reservoir of the disease. One hallmark of rabies is its rapid progression to death; no survivors have been reported since 1977.

Rabies postexposure prophylaxis is recommended for all persons bitten or scratched by wild or domestic animals that may be carrying the disease. Exposures other than bites or scratches rarely result in infection. However, postexposure treatment is recommended for persons who report having an open wound or mucous membrane contaminated with saliva or other potentially infectious material (e.g., brain tissue) from a rabid animal. Since the size of bites by bats may be small in comparison to those inflicted by terrestrial animals (6), it may be prudent to consider postexposure treatment for physical contact with bats when a bite or mucous membrane exposure cannot be excluded. Treatment should always be initiated as soon as possible after bites or scratches by known or suspected rabid animals occur.

Postexposure prophylaxis also is recommended for persons who report a possibly infectious exposure (e.g., bite, scratch, or open wound or mucous membrane contaminated with saliva or other infectious material) to a human with rabies. However, exposure to a human with rabies has never been implicated as a means of rabies transmission except following cornea transplantation from donors who died of unsuspected rabies encephalitis (10). Casual contact with an infected patient (e.g., touching the patient) or contact with noninfectious fluids or tissues (e.g., blood, urine, or feces) does not alone constitute an exposure and is not an indication for prophylaxis (10).

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*Notice to Readers***Report on Impairments Caused by Injuries**

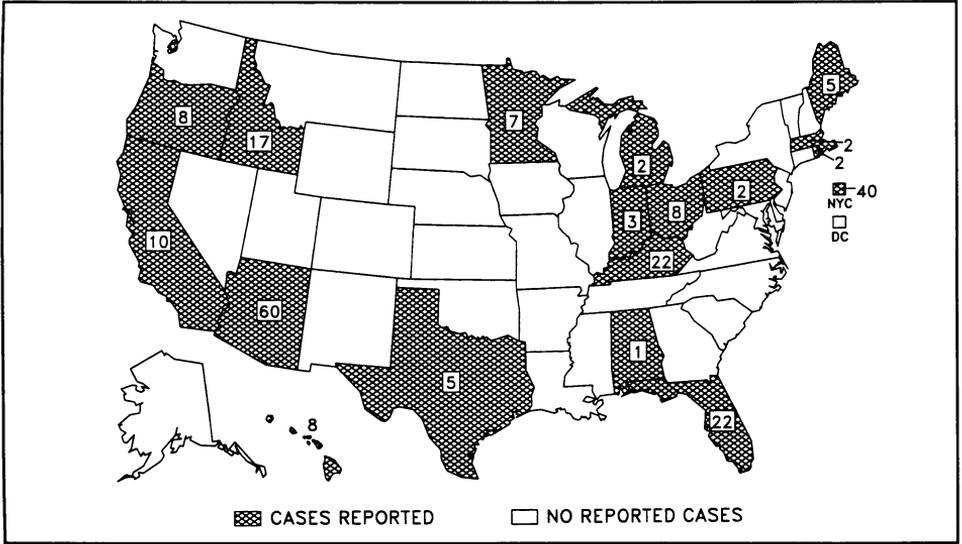
CDC's National Center for Health Statistics has released data on the prevalence of impairments caused by injuries. Statistics on the number and rate of impairments from injuries by class of accident and place of accident are included. Data on limitation of activity, restricted-activity days, and disability restricting a person to bed more than half a day are also presented in the report.

Statistics in the report are based on data collected through the National Health Interview Survey in 1985, 1986, and 1987. Copies of the report, *Impairments Due to Injuries: United States, 1985–87 (1)*, are available through the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 783-3238; stock no. 017-022-01141-7; price \$3.25.

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Reported cases of measles, by state – United States, weeks 39–43, 1991





The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and is available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 783-3238.

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