CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

October 10, 1997 / Vol. 46 / No. 40

MMWR™

MORBIDITY AND MORTALITY WEEKLY REPORT

National Breast Cancer Awareness Month — October 1997

October is National Breast Cancer Awareness Month (NBCAM). NBCAM is dedicated to increasing awareness of the importance of early detection of breast cancer. In 1992, the President signed official legislation establishing an annual National Mammography Day, which this year is October 17. The combined efforts of 17 national public service organizations, professional associations, and government agencies will attempt to bring NBCAM to the attention of persons across the United States.

Through the National Breast and Cervical Cancer Early Detection Program (NBCCEDP), CDC supports early detection of breast and cervical cancers by providing financial and technical assistance to health departments in all 50 states, the District of Columbia, five territories, and 15 programs serving American Indians/Alaskan Natives. CDC also collaborates with several national organizations that have breast cancer initiatives. Additional information about Breast Cancer Awareness Month and the NBCCEDP is available from CDC's Division of Cancer Prevention and Control, National Center for Chronic Disease Prevention and Health Promotion, telephone (770) 488-4751, and from the World-Wide Web site http://www.cdc.gov/nccdphp/dcpc.

Self-Reported Use of Mammography Among Women Aged ≥40 Years — United States, 1989 and 1995

In 1997, breast cancer will be diagnosed in an estimated 180,200 women, and 43,900 women will die from the disease (*1*). Early detection combined with timely and appropriate treatment can alter the progress of and reduce mortality from this disease (*2*). Effective screening procedures are available to detect breast cancer in its early stages. However, the benefits of breast cancer screening to reduce mortality in the population can be achieved only if screening guidelines are followed and a large proportion of women receive screening examinations regularly. To estimate the state-specific proportions of women aged ≥40 years who reported receiving a mammogram during the preceding 2 years, CDC analyzed data from the Behavioral Risk Factor Surveillance System (BRFSS) for 1989 and 1995. This report presents the findings, which

Self-Reported Use of Mammography — Continued

indicate that, from 1989 to 1995, the percentage of women aged ≥40 years who reported receiving a mammogram during the preceding 2 years increased in all 39 states in the survey.

In 1989 and in 1995, a total of 39 states* participated in BRFSS. Using a multistage sampling design and a random-digit–dialed telephone survey, each state conducted monthly telephone interviews of a random sample of its noninstitutionalized adult (aged ≥18 years) population to provide state-specific estimates of risk factors and the use of preventive services (*3*). Annual data are weighted to the age, sex, and race distribution of each state's adult population using the most current census or intercensal estimates. Three BRFSS questions focused on mammography use and were asked only of female respondents aged ≥40 years. Each respondent was asked, "Have you ever had a mammogram?" If the respondent answered "yes" to that question, she was asked, "How long has it been since your last mammogram?" and "Was it part of a routine checkup, because of a breast problem other than cancer, or because you had already had breast cancer?" In this analysis, estimates are age-adjusted to the age distribution of women in the 1989 BRFSS sample for participating states.

From 1989 to 1995, the overall age-adjusted proportion of women aged ≥40 years who reported having had a mammogram during the preceding 2 years increased in each of the 39 participating states (Table 1). The age-adjusted proportion varied widely among the states, from 43.8%–65.2% in 1989 to 63.0%–79.7% in 1995. The median age-adjusted proportion was 53.3% in 1989 and 69.5% in 1995. During this period, the state-specific relative percentage increase ranged from 9% in Minnesota (which, in 1989, already had a relatively high proportion of women who reported having had their most recent mammogram during the preceding 2 years) to approximately 45% in West Virginia and New York.

Reported by: Epidemiology and Statistics Br, Div of Cancer Prevention and Control; Health Care and Aging Br, Div of Adult and Community Health (proposed), National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: Mammography is the primary procedure for breast cancer screening. The U.S. Preventive Services Task Force recommends a screening mammogram every 1–2 years for women aged 50–69 years (*2*). In addition, physicians can recommend that high-risk women aged <50 years receive a screening mammogram. The National Cancer Institute's 1997 mammography guidelines recommend screening mammograms every 1–2 years for women aged ≥40 years if they are at average risk for breast cancer (*4*). Recently revised American Cancer Society guidelines recommend annual mammography for women aged ≥40 years (*5*).

The findings in this report indicate that, from 1989 to 1995, the percentage of women aged ≥40 years who reported having had a mammogram during the preceding 2 years increased in all 39 states participating in BRFSS. This finding is consistent with previous studies that indicated increasing reported use of screening mammograms. For example, based on data from the National Health Interview surveys, of women aged ≥40 years in 1987, 29% reported having had a mammogram during the preceding 2 years; in 1994, the proportion increased to 61% (*6*). Similarly, the propor-

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*Alabama, Arizona, California, Connecticut, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, and Wisconsin.

Self-Reported Use of Mammography — Continued

TABLE 1. Unadjusted and adjusted* percentage of women aged ≥40 years who reported having had a mammogram during the 2 years preceding the interview, by state — United States, Behavioral Risk Factor Surveillance System (BRFSS), 1989 and 1995†

	1989					1995				
	Sample	Undadjusted		Adjusted		Sample	Undadjusted		Adjusted	
State§	size	%	(SE¶)	%	(SE)	size	%	(SE)	%	(SE)
All women	**20,511**	**54.3**	**(0.6)**	**54.3**	**(0.6)**	**31,394**	**67.0**	**(0.4)**	**70.3**	**(0.4)**
Alabama	590	49.2	(2.2)	49.1	(2.2)	630	64.5	(2.1)	63.8	(2.1)
Arizona	455	52.2	(2.6)	52.3	(2.5)	731	71.4	(2.5)	71.2	(2.4)
California	632	57.1	(2.4)	57.9	(2.4)	1,221	74.5	(1.7)	75.3	(1.7)
Connecticut	437	63.0	(2.6)	62.7	(2.6)	625	74.8	(2.0)	74.6	(2.0)
Florida	588	53.1	(2.2)	52.7	(2.3)	1,241	74.4	(1.4)	74.0	(1.4)
Georgia	480	53.3	(2.5)	53.3	(2.5)	712	71.0	(1.9)	70.4	(1.9)
Hawaii	504	60.2	(2.5)	58.6	(2.4)	691	75.3	(2.1)	75.5	(2.1)
Idaho	597	49.8	(2.3)	50.0	(2.3)	957	63.4	(1.7)	63.9	(1.7)
Illinois	590	51.1	(2.3)	51.6	(2.3)	1,023	69.9	(1.6)	70.4	(1.6)
Indiana	720	46.7	(2.1)	46.6	(2.0)	855	64.0	(1.8)	64.6	(1.7)
Iowa	460	48.3	(2.6)	48.4	(2.6)	1,324	75.0	(1.2)	75.4	(1.1)
Kentucky	652	50.4	(2.1)	50.1	(2.1)	927	63.3	(1.7)	63.6	(1.7)
Maine	393	55.0	(2.7)	55.7	(2.6)	459	70.0	(2.4)	71.7	(2.3)
Maryland	553	60.4	(2.2)	59.5	(2.1)	1,739	75.0	(1.2)	75.4	(1.1)
Massachusetts	356	64.2	(3.0)	64.5	(3.0)	585	78.9	(1.8)	79.7	(1.8)
Michigan	718	63.9	(2.0)	63.8	(1.9)	835	77.4	(1.5)	77.5	(1.5)
Minnesota	1,013	63.6	(1.6)	64.0	(1.6)	1,280	67.7	(1.4)	69.9	(1.4)
Missouri	519	48.3	(2.4)	49.7	(2.4)	580	66.9	(2.2)	66.4	(2.2)
Montana	407	49.8	(2.7)	49.9	(2.7)	424	65.0	(2.5)	65.2	(2.5)
Nebraska	467	42.7	(2.5)	43.8	(2.5)	669	61.9	(2.1)	63.0	(2.1)
New Hampshire	412	62.4	(2.6)	61.8	(2.7)	494	72.1	(2.2)	72.5	(2.1)
New Mexico	365	56.9	(2.9)	56.5	(2.9)	434	68.6	(2.7)	68.7	(2.6)
New York	435	51.5	(2.9)	51.4	(2.8)	828	73.6	(1.8)	74.4	(1.7)
North Carolina	614	52.9	(2.4)	52.6	(2.4)	1,208	65.8	(1.5)	65.8	(1.5)
North Dakota	532	59.1	(2.3)	59.4	(2.4)	647	68.0	(2.0)	69.5	(2.0)
Ohio	482	53.8	(2.5)	53.8	(2.4)	491	68.3	(2.4)	68.1	(2.3)
Oklahoma	430	59.0	(2.6)	49.8	(2.6)	646	64.5	(2.2)	64.3	(2.2)
Oregon	608	57.3	(2.2)	57.2	(2.2)	1,021	68.8	(1.6)	71.1	(1.5)
Pennsylvania	618	52.6	(2.2)	53.4	(2.1)	1,251	62.9	(1.6)	63.1	(1.6)
Rhode Island	630	64.5	(2.2)	65.2	(2.2)	565	71.5	(2.2)	71.7	(2.1)
South Carolina	634	50.4	(2.2)	50.4	(2.1)	712	71.0	(1.9)	71.1	(1.9)
South Dakota	555	47.2	(2.3)	47.3	(2.3)	635	61.7	(2.2)	63.1	(2.2)
Tennessee	837	48.2	(1.9)	48.4	(1.8)	698	67.2	(1.9)	67.3	(1.9)
Texas	454	54.3	(2.6)	54.4	(2.6)	544	64.8	(2.3)	65.6	(2.2)
Utah	524	51.0	(2.5)	50.9	(2.5)	937	62.9	(2.2)	63.4	(2.1)
Virginia	406	58.4	(2.9)	57.0	(2.8)	585	72.4	(2.2)	72.5	(2.2)
Washington	474	56.5	(2.4)	57.2	(2.4)	1,072	70.1	(1.5)	71.3	(1.5)
West Virginia	637	45.8	(2.2)	45.2	(2.2)	1,007	65.0	(1.7)	65.3	(1.7)
Wisconsin	363	56.3	(2.8)	57.0	(2.8)	676	63.1	(2.3)	63.5	(2.3)
Range		*(42.7–64.5)*		*(43.8–65.2)*			*(61.7–78.9)*		*(63.0–79.7)*	

*Adjusted to the 1989 BRFSS age distribution for women.
†Denominator includes all female respondents aged ≥40 years.
§A total of 39 states participated in BRFSS in 1989 and in 1995.
¶Standard error.

Self-Reported Use of Mammography — Continued

tion of women who reported receiving breast cancer screening consistent with American Cancer Society guidelines increased from 31% in 1990 to 47% in 1995 (*7*).

The findings in this report are subject to at least four limitations. First, only 39 states participated in both the 1989 and 1995 BRFSSs; therefore, the results may not be generalizable to the total U.S. population of women aged ≥40 years. Second, the telephone survey excluded women living in households without a telephone. Although only 5% of U.S. households are without telephones, the proportion of persons without telephones varies by geographic region, and the characteristics of households with and without telephones are different (*8*). Thus, the differences observed in this survey may not reflect trends for women without telephones. Third, self-reported mammography use may not be consistent with reports of mammography use from other sources such as medical and imaging-center records (*9*). Finally, because approximately 15%–20% of contacted households did not respond and respondents may be different from nonrespondents, the precision of the estimates in this report may be reduced.

Regular breast cancer screening can reduce the annual rate of breast cancer deaths in the United States; the estimated potential reduction ranges from 19% to 30% for women aged 50–74 years (*2*). Federal initiatives, such as CDC's National Breast and Cervical Cancer Early Detection Program (NBCCEDP) and Medicare, encourage breast cancer screening by paying for mammograms for women eligible to participate in these programs (*10*). Since 1991, Medicare has provided insurance coverage for biannual mammograms. NBCCEDP provides states, U.S. territories, and programs serving American Indians/Alaskan Natives with resources to provide screening, follow-up, and referral services to medically underserved women. NBCCEDP outreach efforts are aimed at older women, women with low incomes, uninsured or underinsured women, and women of racial/ethnic minority groups. Initiatives to encourage women to receive an initial screening for breast cancer are essential and should emphasize rescreening.

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Self-Reported Use of Mammography — Continued

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Mortality Patterns — Preliminary Data, United States, 1996

In 1996, the estimated number of deaths in the United States totaled 2,322,265, slightly higher than the final total in 1995 of 2,312,132. Despite this slight increase in the total number of deaths in 1996, the preliminary crude death rate (875.4 per 100,000 population) declined slightly from that in 1995 and was equal to the crude death rate in 1994; in addition, in 1996 the age-adjusted death rate* (493.6 per 100,000 U.S. standard population) reached an all-time low. This report summarizes preliminary 1996 vital statistics data from CDC's National Center for Health Statistics (NCHS) (*1*) and compares these data with data from 1995 and, for life expectancy, data from 1900 to 1995. The findings indicate declines in the rates for most leading causes of death and the infant mortality rate and an increase in overall estimated life expectancy.

National mortality statistics are based on information from death certificates filed in state vital statistics offices as required by state law and are compiled by CDC into a national database. Cause-of-death statistics are based on the underlying cause of death†, which is recorded on the death certificate by the attending physician, medical examiner, or coroner in a manner specified by the World Health Organization (WHO) and endorsed by CDC. In this report, general mortality data are presented for blacks and whites only; infant mortality data are presented for non-Hispanic whites, non-Hispanic blacks, and Hispanics. For general mortality, data for smaller minority groups are not presented because of inconsistent reporting between death certificates and censuses and surveys. The findings in this report are based on 1996 data received through May 8, 1997, and represent >85% of deaths that occurred in 1996. NCHS also receives independent monthly counts of deaths registered in state vital statistics offices. To produce the estimates in this report, the sample records in the preliminary files were weighted to the independent counts of infant deaths and total deaths registered during 1996.

Preliminary age-adjusted death rates for 13 of the 15 leading causes of death declined from 1995 to 1996 (Table 1). The most substantial decline was for mortality attributed to human immunodeficiency virus (HIV) infection (approximately 26%). The age-adjusted death rates for the two leading causes of death, heart disease and cancer—which together account for more than half of all U.S. deaths—also continued to decline: heart disease mortality by 3% and cancer mortality by 1%. Preliminary age-adjusted death rates also declined for homicides (11%), suicides (4%), mortality caused by accidents§ (including motor-vehicle and all other accidents) (1%), and pneu-

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*Age-adjusted death rates adjust for differing age distributions of population groups and are more effective for comparing relative risks for mortality among groups and over time. They should be used as relative indexes rather than as actual measures of risk. The age-adjusted rates were computed using the 1940 U.S. standard population.

†Defined by the World Health Organization's *International Classification of Diseases, Ninth Revision*, as "(a) the disease or injury which initiated the train of morbid events leading directly to death, or (b) the circumstances of the accident or violence which produced the fatal injury."

§When a death occurs under "accidental" circumstances, the preferred term within the public health community is "unintentional injury."

TABLE 1. Preliminary number of deaths, death rates*, and age-adjusted death rates[†] for 1996 and percentage changes in age-adjusted death rates for the 15 leading causes of death from 1995 to 1996 — United States

Rank[§]	Causes of death (ICD-9[¶] code)	No.	Rate	Age-adjusted death rate	% Change from 1995 to 1996
1	Diseases of heart (390–398, 402, 404–429)	733,834	276.6	134.6	– 2.7
2	Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140–208)	544,278	205.2	129.1	– 0.6
3	Cerebrovascular diseases (430–438)	160,431	60.5	26.5	– 0.7
4	Chronic obstructive pulmonary diseases and allied conditions (490–496)	106,146	40.0	21.0	1.0
5	Accidents** and adverse effects (E800–E949)	93,874	35.4	30.1	– 1.3
	Motor-vehicle accidents (E810–E825)	43,449	16.4	16.2	– 0.6
	All other accidents and adverse effects (E800–E807, E826–E949)	50,425	19.0	13.9	– 2.1
6	Pneumonia and influenza (480–487)	82,579	31.1	12.6	– 2.3
7	Diabetes mellitus (250)	61,559	23.2	13.6	2.3
8	Human immunodeficiency virus infection (042–044[††])	32,655	12.3	11.6	–25.6
9	Suicide (E950–E959)	30,862	11.6	10.8	– 3.6
10	Chronic liver disease and cirrhosis (571)	25,135	9.5	7.5	– 1.3
11	Nephritis, nephrotic syndrome, and nephrosis (580–589)	24,392	9.2	4.3	0
12	Septicemia (038)	21,395	8.1	4.1	0
13	Alzheimer's disease (331.0)	21,166	8.0	2.7	0
14	Homicide and legal intervention (E960–E978)	20,738	7.8	8.4	–10.6
15	Atherosclerosis (440)	16,803	6.3	2.2	– 4.3
All other causes		346,574	130.6	75.0	**0.9**
All causes		**2,322,421**	**875.4**	**494.1**	**– 1.9**

* Per 100,000 population.
† Per 100,000 1940 U.S. standard population.
§ Based on number of deaths.
¶ *International Classification of Diseases, Ninth Revision*.
** When a death occurs under "accidental" circumstances, the preferred term within the public health community is "unintentional injury."
†† These codes are not part of ICD-9 but were introduced by CDC's National Center for Health Statistics for classifying and coding human immunodeficiency virus infection.

Mortality Patterns — Continued

monia and influenza (2%). In comparison, diabetes-associated mortality increased by 2%, the 10th consecutive year mortality from this cause has increased.

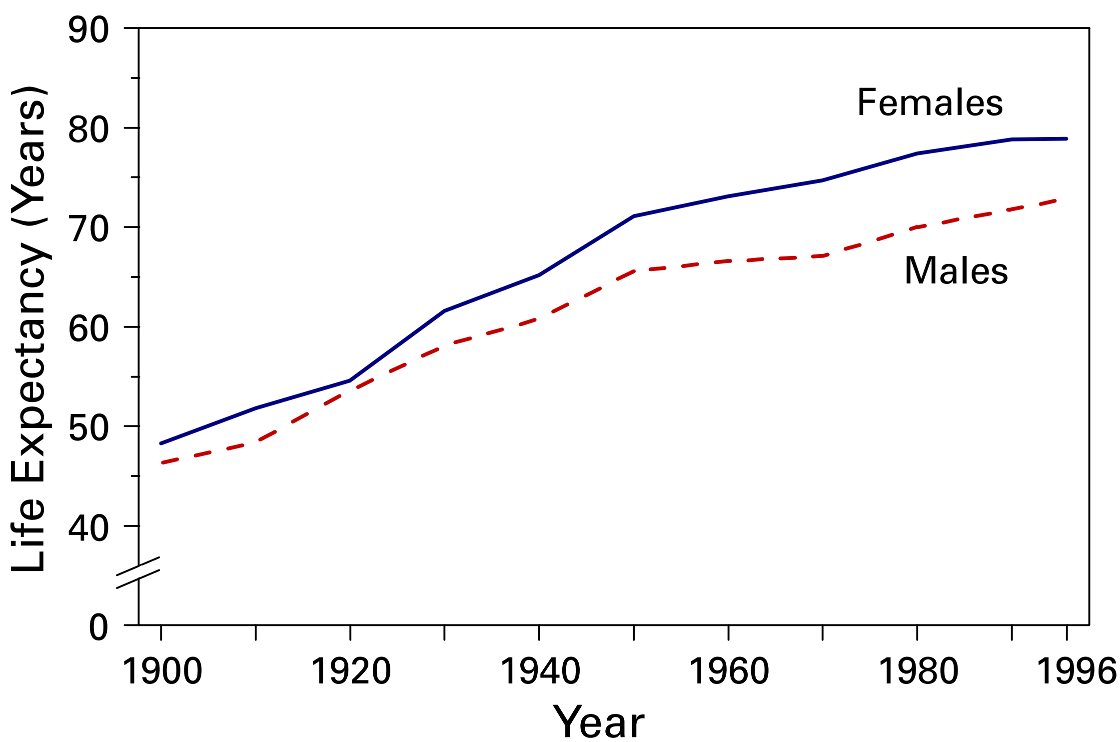
Overall estimated life expectancy increased in 1996 to 76.1 years, surpassing the previous high of 75.8 years recorded in 1992 and 1995. Record highs occurred for black females (74.2 years), black males (66.1 years), and white males (73.8 years). The life expectancy for white females, which has remained unchanged since 1994, was 79.6 years. The difference in life expectancy between males and females narrowed from 6.4 years in 1995 to 6.0 years in 1996, and the difference between whites and blacks narrowed from 6.9 years to 6.5 years. The largest difference in life expectancy between males and females occurred in the late 1970s, when life expectancy for females was 7.8 years greater than for males (Figure 1).

The overall infant mortality rate (7.2 infant deaths per 1000 live births) for 1996 declined 5% from 1995 (7.6). Declines occurred for neonates (aged <28 days), postneonates (aged 28 days through 11 months), and for non-Hispanic white, non-Hispanic black, and Hispanic infants. The three leading causes of infant mortality were congenital anomalies, disorders related to short gestation and unspecified low birthweight, and sudden infant death syndrome (SIDS). SIDS declined nearly 15% in 1996 and accounted for one third of the overall decline in infant mortality.

Reported by: Mortality Statistics Br, Div of Vital Statistics, National Center for Health Statistics, CDC.

Editorial Note: Death rates and life expectancy are especially useful for monitoring the nation's health. The preliminary data for 1996 indicate that death rates have declined for causes of death such as heart disease, cancer, and cerebrovascular diseases—causes most likely to affect the elderly—and for causes of death such as unintentional

FIGURE 1. Life expectancy at birth, by year of birth and sex — United States, 1900–1996



Mortality Patterns — Continued

injuries, homicide, suicide, and HIV infection—causes most likely to affect younger persons. Reductions in death rates for these causes, along with increases in life expectancy, indicate positive changes in U.S. mortality patterns. Although race-specific differences in life expectancy narrowed in 1996, death rates were still higher for blacks than whites, probably reflecting variations in factors such as socioeconomic status, access to medical care, and the prevalence of specific risks.

The decrease in mortality attributable to HIV infection in 1996 marked the first time deaths attributed to this cause have declined. From 1987 (when HIV infection was first reported) to 1994, HIV deaths rose an average of 16% annually. The 1995 increase of only 1.3% indicated that mortality attributable to this cause might be slowing (*2*). In addition, HIV-related morbidity decreased for the first time in 1996, and the incidence of acquired immunodeficiency syndrome opportunistic illnesses declined 6% overall compared with 1995 (*3*). These recent decreases in HIV-related morbidity and death probably resulted from a combination of a reduced rate of new HIV infections and improvements in the medical care of HIV-infected persons.

The 1996 preliminary mortality data in this report were produced by a new system of vital statistics data preparation initiated in 1995. This system provides data that are nearly complete a year before the final data are released. Through an agreement with the state vital statistics offices, data are continually transmitted to NCHS. Preliminary data, although subject to revision, are particularly helpful for surveillance purposes and for gauging progress toward national health objectives for 2000.

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Outbreak of Invasive Group A *Streptococcus* Associated with Varicella in a Childcare Center — Boston, Massachusetts, 1997

Group A *Streptococcus* (GAS) causes common childhood diseases such as streptococcal pharyngitis and impetigo and can cause severe, life-threatening invasive disease including streptococcal toxic-shock syndrome and necrotizing fasciitis. Invasive GAS disease occurs when GAS infects a normally sterile site. Clusters of invasive GAS infection previously had not been reported among children in school or childcare centers (CCCs). However, on February 13, 1997, the Boston Public Health Commission received reports of cases of concurrent invasive GAS and varicella infection among two of 14 children in the same CCC classroom. Because of the potential for further spread of invasive disease, the Boston Public Health Commission initiated an investigation of these cases. This report describes the findings of the investigation, including risk factors for infection, and recommended prevention measures. The findings indicate the potential for widespread GAS infection and carriage in CCCs and suggest that, in this outbreak, antecedent use of varicella vaccine would have prevented cases of invasive GAS.

Case Descriptions

On February 2, a previously healthy 4-year-old girl (patient 1) who had had onset of varicella on January 30 was taken to a local hospital because of swelling, tenderness, warmth, and redness over her left upper arm and shoulder. Purulent skin lesions were not present, and a blood culture was negative. The patient was admitted to the hospital with a diagnosis of cellulitis and received intravenous clindamycin, but her symptoms did not improve. She underwent surgical exploration for possible necrotizing fasciitis and subsequently received a total fasciotomy of her left arm. Cultures of tissue specimens obtained at surgery grew GAS, serotype M1T1.

On February 6, submental abscess was diagnosed in a 3-year-old classmate of patient 1 (patient 2), 7 days after onset of varicella infection. No obviously infected lesions were located over or near the abscess, and a blood culture was negative. The abscess was incised and drained, and contents grew GAS, serotype M1T1.

Investigation of the CCC

In February 1997, a total of 39 children aged 1–4 years were enrolled in the CCC. The children were divided into three classrooms by age group, and groups were separated throughout the day except for 2 hours of outdoor play. To assess the prevalence of GAS carriage associated with the CCC, during February 17–19 throat swab specimens were obtained from all children attending the CCC, their household contacts, and all CCC employees. Cases of GAS infection were identified by review of hospital records and telephone interviews with physicians.

Four case definitions were used to categorize GAS status: a case of invasive GAS infection was defined as isolation of GAS from a normally sterile site; a case of noninvasive GAS infection was defined as identification of GAS from the throat of an ill person (strep throat) either by rapid-antigen test or culture; a case of possible GAS infection was defined as identification of a clinical illness commonly caused by GAS; and a case of GAS carriage was defined as isolation of GAS from the throat culture of a well person.

Of the 14 classmates of patients 1 and 2, three had strep throat, and two had GAS carriage. Two of three available isolates (one obtained from a child with strep throat and one from a carrier of GAS) were serotype M1T1. In addition, two cases of possible GAS infection were identified: one with an infected varicella lesion and the other with leg cellulitis; however, cultures were not obtained from the lesions (Figure 1).

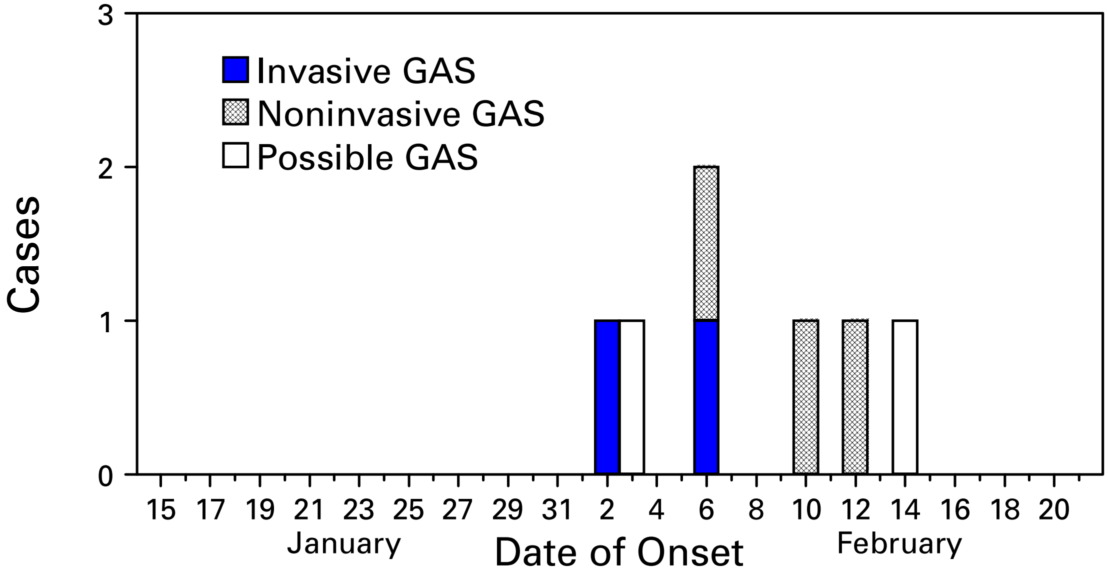
Of the 25 children in other classrooms, one had scarlet fever, serotype M1T1, and one was a carrier of GAS of another serotype. Of the 92 household contacts, three had strep throat, and their isolates were not available for serotyping. GAS carriage was present in two persons (one was serotype M1T1 and the other was a different serotype). Of the 13 CCC workers, GAS carriage, not M1T1, was present in one person. The child with scarlet fever and the household contact carrier of serotype M1T1 were both siblings of classmates of patients 1 and 2.

Identification of Risk Factors for Infection

Risk factors for GAS infection among classmates of patients 1 and 2 were identified from responses by parents on self-administered written questionnaires. All nine cases

Invasive Group A Streptococcus — *Continued*

FIGURE 1. Cases of group A *Streptococcus* (GAS) infection* at a childcare center, by date of onset — Boston, Massachusetts, January–February 1997†



*A case of invasive GAS infection was defined as isolation of GAS from a normally sterile site; a case of noninvasive GAS infection was defined as identification of GAS from the throat of an ill person (strep throat) either by rapid-antigen test or culture; and a case of possible GAS infection was defined as identification of a clinical illness commonly caused by GAS.
†n=7.

of test-confirmed (by culture or rapid-antigen test) and possible GAS infection occurred in persons with varicella infection. Of the 14 classmates of patients 1 and 2, a total of 12 were susceptible to varicella at the start of the school year: one had a previous history of varicella, and one had been vaccinated against varicella. The first case of varicella occurred on January 15; of the other 11 susceptible children, 10 had onsets of varicella during January 29–February 1 (Figure 2). Of these, seven were identified with GAS infection or carriage, and two had onset of possible GAS disease 3–14 days following onset of varicella.

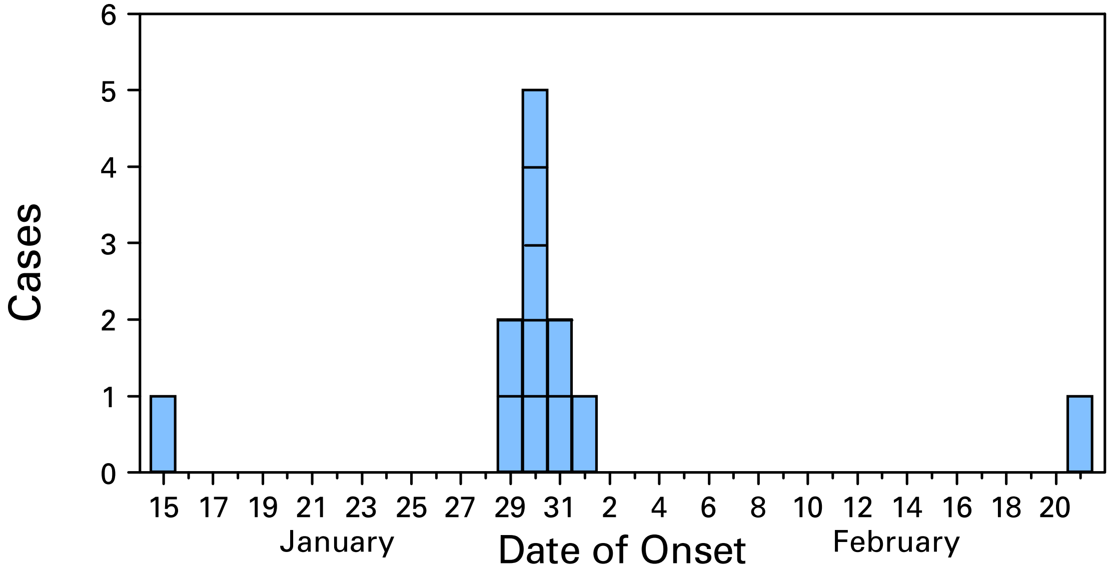
Of the 11 children who were not receiving antibiotics and whose GAS status was test-confirmed, seven who spent >30 hours per week at the CCC had documented GAS infection or carriage compared with none of the four children who spent ≤30 hours (Fisher's exact test, $p<0.01$).

A total of 112 environmental surfaces were cultured to assess the possible role of fomites in disease transmission. These surfaces included handles and other sites that a child was likely to grip (70) and any toy (e.g., toy food and phones) that a child was likely to place in his or her mouth (42). Of the 112 samples, six pieces of flat plastic food were positive for GAS; five were serotype M1T1.

Varicella vaccine was recommended and provided free for all children, CCC staff, and household contacts considered to be susceptible. In addition, to prevent additional cases of GAS infection, prophylactic antibiotic therapy was recommended for all carriers of GAS and all classmates of patients 1 and 2 regardless of culture results. The specific antibiotic therapy was prescribed by the patient's physician.

Invasive Group A Streptococcus — *Continued*

FIGURE 2. Cases of varicella at a childcare center, by date of onset — Boston, Massachusetts, January–February 1997*



*n=12.

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Editorial Note: Invasive GAS infection is a known complication of varicella infection in children. Previous reports indicate that among children with GAS bacteremia, 6%–17% of cases were associated with antecedent varicella infection (*1–3*). In Toronto, an analysis of active surveillance data for invasive GAS infection suggested a substantially increased risk for infection in children during the 2-week period following onset of varicella infection (*2*). Other reports have documented community clusters of varicella complicated by invasive GAS infection (*4,5*). For example, in 1994, a total of 24 previously healthy children (median age: 3 years; range: 6 months–8 years) in southern California developed invasive GAS infection after varicella infection (*4*).

The Advisory Committee on Immunization Practices and American Academy of Pediatrics recommend routine varicella vaccination for infants aged 12–18 months and vaccination of susceptible children, adolescents, and adults (*6,7*). Because of the increased risk for invasive GAS infection in persons with antecedent varicella and the occurrence of community clusters of invasive GAS in persons with varicella, the use of varicella vaccine is one strategy for preventing some cases of invasive GAS infection.

Because information about the epidemiology of GAS in CCCs is limited, there are no published recommendations about prevention strategies following identification of one or more cases of invasive GAS infection in CCCs. In Alabama, a fatal case of invasive GAS infection in a child attending a CCC led to identification of GAS carriage

Invasive Group A Streptococcus — *Continued*

in 25% of all children in six of nine classrooms attending the CCC (*8*). In Sweden, after a child and teacher in a CCC had onset of GAS pharyngitis, GAS infection or carriage occurred in 61% of the children in the CCC's two classrooms within 16 days of identification of the index case (*9*). In the Boston outbreak, few children were infected outside the classroom of patients 1 and 2, possibly reflecting the greater separation between the groups, the ability of 4-year-old children to control secretions, and/or the role of fomites in transmission. Results of this investigation suggest that age and CCC characteristics may be important factors in developing prevention strategies.

The role of the plastic food in transmitting GAS in this outbreak is unclear; although 4-year-old children typically do not place toys in their mouths, toy "food" may have encouraged such behavior. Guidelines for sanitation in CCCs state that "toys that are placed in children's mouths...should be set aside to be cleaned with water and detergent, disinfected, and rinsed before handling by another child" (*10*). Individual CCCs should determine whether they should have toy "food" based on their ability to enforce this standard.

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Hantavirus Pulmonary Syndrome — Chile, 1997

Hantavirus pulmonary syndrome (HPS)* was first recognized in Chile in October 1995; through July 1997, nine cases had been identified in the country. However, during August 1–October 8, 1997, a total of 12 persons with HPS, including two family clusters, were recognized. A collaborative investigation is under way to determine the magnitude of this outbreak, the associated rodent reservoir for hantaviruses, and the major risk factors for human infection. This report summarizes the preliminary results of the ongoing investigation, which suggest that the outbreak among humans is paralleled by exceptionally high densities of potential rodent reservoir species.

From October 4, 1995, through October 8, 1997, a total of 21 HPS case patients were identified in Chile; 13 died (case-fatality proportion: 62%). The mean age of patients was 26 years (range: 1 year 11 months to 41 years); four (19%) of the cases were in children aged <17 years; 76% of cases were in males. No cases occurred among health-care workers. The outbreak that began in August 1997 is centered in two southern regions of Chile (population: 1.1 million). Genetic sequencing of material amplified from the autopsy tissue of one case-patient presumptively infected in one of these two regions identified Andes virus as the etiologic agent (*2*). Clinical features have been similar to those reported in North America (*3*) but have included at least three children with petechiae.

The first family cluster (cluster 1) of HPS was reported from Cisne Medio, Lago Verde community, Aysen region. On July 15, a 39-year-old man (index case) had onset of an acute febrile respiratory illness; he died on July 21, but no appropriate specimens were available for laboratory diagnosis of HPS. Except for a brief visit to the family's house on July 27 to retrieve personal belongings, family members moved to a house in a village 4.4 miles (7 km) away. Onsets of laboratory-confirmed cases of HPS occurred in the index case-patient's wife (August 2), 2-year-old son (August 9), 12-year-old son (August 18), and his brother-in-law (who intermittently stayed in the original residence) (September 5). The second family cluster (cluster 2) included three of the four members of a household in Lago Atravesado, Coyhaique community, Aysen region. All case-patients had onsets of illness during August 23–28.

A total of 569 rodent traps were placed at the original residence of cluster 1 (on the night of August 27), at the residence of cluster 2 (on the nights of August 28 and 29), at two neighboring controls (within 889 yards [800 m]) of each case-household, and in a forested area near Lago Atravesado. Trapping yielded 253 rodents, of which 119 (47%) were *Oligoryzomys longicaudatus*; the remainder primarily were *Akodon olivaceous* and *Akodon (Abrothrix) longipilus*. High trap success in the forested area (22 [55%] captures in 40 traps) indicated that high rodent densities were not restricted to peridomestic areas. The overall trap success in the Aysen region was approximately five times that achieved 375 miles (600 km) north in Paillaco, 21.9 miles (35 km) southwest of Valdivia (49 [10%] of 478 traps).

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*HPS is defined as fever (>101 F [38.3 C]), bilateral diffuse pulmonary edema, respiratory compromise requiring supplemental oxygen developing within 72 hours of hospitalization in a previously healthy person (*1*).

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Editorial Note: Since its initial description in 1993, HPS has been established as a pan-American zoonosis (*4*). The basic clinical features in humans include fever, headache, myalgia, and gastrointestinal symptoms, followed by noncardiogenic pulmonary edema, cardiovascular collapse, and a 40%–60% case-fatality proportion. HPS results from infection with New World hantaviruses that are maintained by a single rodent reservoir species belonging to the subfamily Sigmodontinae (Order: Rodentia; Family: Muridae). Infection and disease in humans can occur after exposure to aerosols of secretions and excretions from infected rodents. Approximately 400 cases have been detected throughout the Americas, with retrospective cases identified as early as 1959. Although most cases occur sporadically in areas with endemic disease throughout the Americas, periodic outbreaks, such as the current episode in Chile, intermittently occur in association with meteorologic and ecologic conditions that facilitate increased rodent densities and contact of rodents with humans.

Compared with features of HPS in the United States, distinctive features of the outbreak in Chile include the high proportion of cases among children and the common occurrence of a bleeding diathesis (*3,4*). The high trap success in Chile reflects the high population densities of rodents, especially *O. longicaudatus,* the species provisionally identified as the reservoir of Andes virus in southern Argentina (*5*). In previous outbreaks in Argentina, person-to-person transmission of Andes virus was documented (*6,7*). Although person-to-person transmission cannot be excluded as a factor for cluster 1, the high rodent population levels probably were associated with an increased frequency of human-rodent contact and, therefore, an increased risk for transmission of rodentborne hantaviruses to humans. Additional studies are being conducted to determine the major risk factors for human infection. This multidisciplinary investigation is coupled with training in specialized diagnostic techniques at CDC, training in rodent sampling protocols in the field, and transfer of diagnostic capability to Chile. Interim measures initiated by the Ministry of Health and the regional health services include a public health education campaign about methods for reducing rodent contact (*8*).

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Hantavirus Pulmonary Syndrome — Continued

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Notice to Readers

Results of The Public Health Response to *Pfiesteria* Workshop — Atlanta, Georgia, September 29–30, 1997

On September 29–30, 1997, CDC sponsored a workshop to coordinate a multistate response to public health issues about *Pfiesteria piscicida*. Workshop attendees included representatives from the health departments of eight states (Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia) and the District of Columbia, the U.S. Food and Drug Administration, the National Institutes of Health's National Institute of Environmental Health Sciences, CDC's National Institute for Occupational Safety and Health, and the U.S. Environmental Protection Agency.

P. piscicida and morphologically related organisms (MROs) are dinoflagellates that have been implicated in recent estuarine* fish kills on the U.S. eastern seaboard and have been reported to be associated with human illness. These dinoflagellates appear similar under light microscopy and require scanning electron microscopy for definitive identification. The attendees of the workshop agreed on a combined set of environmental conditions and clinical signs and symptoms that together may represent adverse consequences of exposure to these organisms. The environmental conditions are exposure to estuarine water characterized by any of the following: 1) fish with lesions consistent with *P. piscicida* or MRO toxicity (20% of a sample of at least 50 fish of one species having lesions); 2) a fish kill involving fish with lesions consistent with *P. piscicida* or MRO toxicity; or 3) a fish kill involving fish without lesions, if *P. piscicida* or MROs are present and there is no alternative reason for the fish kill. The clinical features in humans include any of the following signs and symptoms: 1) memory loss, 2) confusion, 3) acute skin burning (on direct contact with water), or 4) three or more of an additional set of conditions (headaches, skin rash, eye irritation, upper respiratory irritation, muscle cramps, and gastrointestinal complaints [i.e., nausea, vomiting, diarrhea, and/or abdominal cramps]).

Workshop attendees suggested using the above framework to identify potentially affected persons and recommended initiating the following public health activities: 1) uniform multistate surveillance for potential *P. piscicida*- and MRO-related illness; 2) multistate, CDC-coordinated, epidemiologic studies to determine possible human health effects associated with *P. piscicida* and MRO exposure; and 3) identification of a biomarker of exposure to the toxins produced by these organisms. The public health implication of toxicity of these dinoflagellates is an example of an emerging environmental and potential occupational health issue that can best be addressed through collaboration among federal, state, and local health agencies.

*A coastal area at the mouth of a river where fresh river water mixes with salty sea water.

Notice to Readers — Continued

Reported by participants in The Public Health Response to Pfiesteria *Workshop: AL Hathcock, PhD, Div of Public Health, Delaware Health and Social Svcs; ME Levy, MD, District of Columbia Commission of Public Health; S Wiersma, MD, Florida Dept of Health; CL Drenzek, DVM, Div of Public Health, Georgia Dept of Human Resources; MP Wasserman, MD, Maryland State Dept of Health and Mental Hygiene; R Levine, MD, S Music, DTPH, North Carolina Dept of Health and Human Svcs; R Ball, MD, South Carolina Dept of Health and Environmental Control; SR Jenkins, VMD, Virginia State Health Dept; C Berryman, DVM, Bur of Public Health, West Virginia Dept of Health and Human Resources; Office of Public Health and Science, US Dept of Health and Human Svcs; Office of Seafood, Center for Food Safety and Applied Nutrition, US Food and Drug Administration; Geographic Planning and Technology Support Br, Water Management Div, Region IV, US Environmental Protection Agency; Laboratory of Pharmacology and Chemistry, National Institute of Environmental Health Sciences, National Institutes of Health; Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health, Toxicology Br, Div of Environmental Health Laboratory Sciences, and Health Studies Br, Div of Environmental Hazards and Health Effects, National Center for Environmental Health, CDC.*

Notice to Readers

Child Health Month — October 1997

October 1997 is Child Health Month. The overall theme for Child Health Month for 1997–1999 is substance-abuse prevention, and this year's focus is on prevention of tobacco use.

In 1996, approximately 69 million children and adolescents aged <18 years lived in the United States; by 2020, the number is expected to increase to 78 million (*1*). Since 1992, the American Academy of Pediatrics (AAP) has used Child Health Month to increase public awareness of the value of preventive health care. Child Health Month originated from AAP's "Children: Our Future" campaign, which was developed from the "Access to Health Care" initiative of the late 1980s. October was selected because of Child Health Day, an observance originally designated for the first Monday in October by the President in 1928 to draw national attention to the status of children's health.

Additional information about Child Health Month is available from CDC's Office of Program Planning and Evaluation, telephone (404) 639-7086.

Reference

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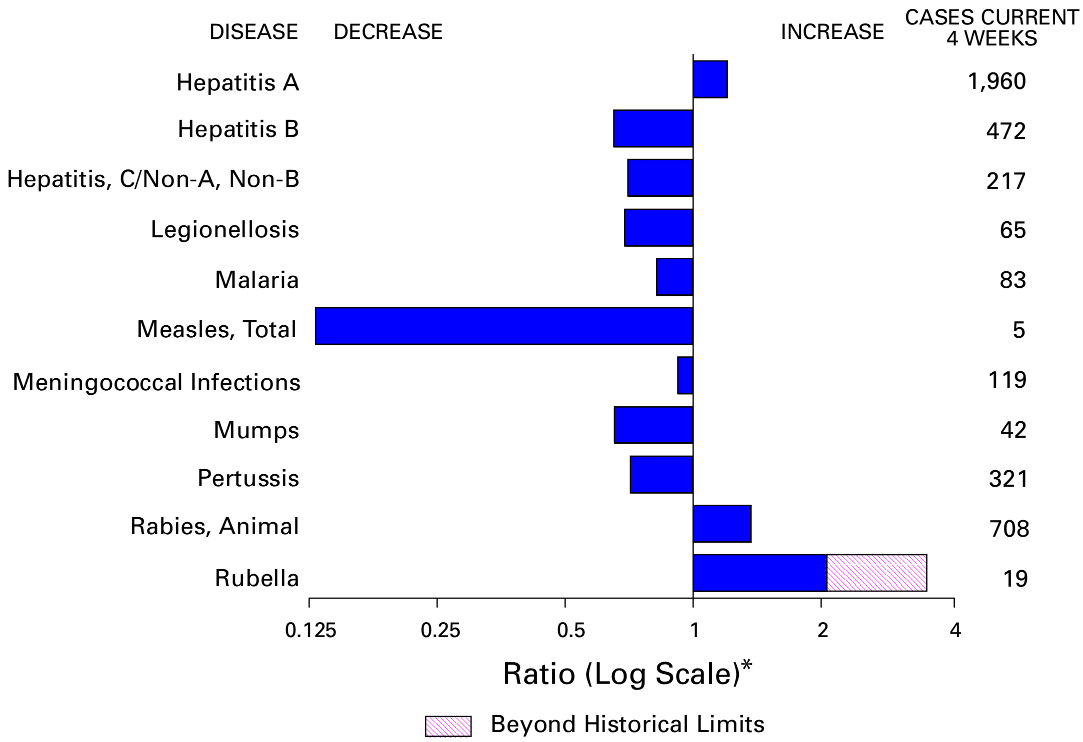
FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending October 4, 1997, with historical data — United States



*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 — provisional cases of selected notifiable diseases, United States, cumulative, week ending October 4, 1997 (40th Week)

	Cum. 1997		Cum. 1997
Anthrax	-	Plague	2
Brucellosis	59	Poliomyelitis, paralytic	-
Cholera	7	Psittacosis	35
Congenital rubella syndrome	4	Rabies, human	2
Cryptosporidiosis*	1,296	Rocky Mountain spotted fever (RMSF)	319
Diphtheria	6	Streptococcal disease, invasive Group A	1,100
Encephalitis: California*	75	Streptococcal toxic-shock syndrome*	27
eastern equine*	6	Syphilis, congenital¶	354
St. Louis*	8	Tetanus	32
western equine*	1	Toxic-shock syndrome	95
Hansen Disease	78	Trichinosis	7
Hantavirus pulmonary syndrome*†	15	Typhoid fever	255
Hemolytic uremic syndrome, post-diarrheal*	45	Yellow fever	-
HIV infection, pediatric*§	182		

-:no reported cases
*Not notifiable in all states.
†Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).
§Updated monthly to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update October 5, 1997.
¶Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending October 4, 1997, and October 5, 1996 (40th Week)

Reporting Area	AIDS		Chlamydia		*Escherichia coli* O157:H7		Gonorrhea		Hepatitis C/NA,NB	
					NETSS[†]	PHLIS[§]				
	Cum. 1997*	Cum. 1996	Cum. 1997	Cum. 1996	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1996	Cum. 1997	Cum. 1996
UNITED STATES	44,447	51,390	340,393	330,068	1,771	1,126	214,211	242,661	2,419	2,675
NEW ENGLAND	1,903	2,055	13,504	13,191	150	83	4,464	4,929	49	83
Maine	46	32	797	720	15	-	54	48	-	-
N.H.	29	66	602	562	9	12	75	125	8	7
Vt.	31	18	314	299	7	2	43	42	2	22
Mass.	646	995	5,574	5,310	76	63	1,657	1,688	32	48
R.I.	119	128	1,522	1,482	8	-	340	395	7	6
Conn.	1,032	816	4,695	4,818	35	6	2,295	2,631	-	-
MID. ATLANTIC	13,720	14,208	46,785	46,801	110	40	28,434	31,849	268	213
Upstate N.Y.	2,137	1,853	N	N	73	-	4,532	5,852	197	168
N.Y. City	7,308	7,847	24,310	23,387	10	6	10,896	11,172	-	3
N.J.	2,667	2,881	6,960	9,458	27	22	5,481	6,743	-	-
Pa.	1,608	1,627	15,515	13,956	N	12	7,525	8,082	71	42
E.N. CENTRAL	3,255	4,026	50,301	65,876	336	210	31,516	45,181	416	381
Ohio	683	870	14,666	15,955	88	48	9,083	11,618	15	29
Ind.	447	463	6,873	7,235	56	33	4,603	4,844	10	8
Ill.	1,356	1,800	8,133	18,962	58	-	3,979	13,448	66	74
Mich.	564	682	14,047	15,533	134	91	10,960	11,484	325	270
Wis.	205	211	6,582	8,191	N	38	2,891	3,787	-	-
W.N. CENTRAL	859	1,203	18,018	24,230	400	334	8,308	11,865	131	76
Minn.	157	225	U	4,017	183	182	U	1,881	3	2
Iowa	86	71	3,407	3,201	99	57	895	861	26	35
Mo.	392	619	8,448	9,665	40	54	5,328	6,582	88	20
N. Dak.	13	11	546	652	10	9	37	25	2	-
S. Dak.	8	10	1,048	1,129	24	23	115	142	-	-
Nebr.	83	83	1,741	2,130	27	-	690	813	2	6
Kans.	120	184	2,828	3,436	17	9	1,243	1,561	10	13
S. ATLANTIC	10,879	13,028	69,046	38,192	163	116	68,338	71,137	221	150
Del.	184	230	1,276	1,148	4	4	935	1,129	-	1
Md.	1,695	1,950	5,430	U	18	9	9,998	8,589	12	2
D.C.	767	1,007	N	N	2	-	3,361	3,386	-	-
Va.	879	894	8,793	8,833	N	38	6,334	7,196	23	12
W. Va.	92	88	2,280	1,646	N	1	712	602	15	9
N.C.	680	678	14,179	U	56	30	13,965	14,187	41	40
S.C.	631	663	9,685	U	8	7	9,002	8,275	34	23
Ga.	1,267	1,870	9,659	8,873	35	-	11,180	14,199	U	-
Fla.	4,684	5,648	17,744	17,692	39	27	12,851	13,574	96	63
E.S. CENTRAL	1,561	1,741	25,257	23,545	80	34	25,380	25,073	274	444
Ky.	290	307	4,947	5,195	26	-	3,188	3,226	11	27
Tenn.	638	640	9,706	10,200	39	34	8,423	9,104	193	323
Ala.	384	470	6,648	6,484	12	-	9,272	10,340	10	3
Miss.	249	324	3,956	1,666	3	-	4,497	2,403	60	91
W.S. CENTRAL	4,694	5,107	42,582	42,490	56	16	28,239	29,620	342	292
Ark.	180	205	1,968	1,379	9	5	3,266	3,114	2	8
La.	797	1,164	7,258	5,685	6	3	7,007	6,021	171	167
Okla.	240	191	5,775	5,787	7	5	3,782	3,736	7	1
Tex.	3,477	3,547	27,581	29,639	34	3	14,184	16,749	162	116
MOUNTAIN	1,277	1,527	19,391	19,803	205	104	6,795	5,938	357	454
Mont.	35	33	772	956	21	-	34	25	20	13
Idaho	41	31	1,171	1,185	28	13	98	86	49	93
Wyo.	13	5	446	477	16	-	43	35	166	139
Colo.	299	404	1,896	2,263	71	52	1,728	1,171	32	48
N. Mex.	141	139	2,437	3,017	7	5	961	656	49	68
Ariz.	323	461	9,627	8,411	N	24	3,211	2,924	24	55
Utah	104	142	1,281	1,183	52	-	203	233	4	19
Nev.	321	312	1,761	2,311	10	10	517	808	13	19
PACIFIC	6,299	8,494	55,509	55,940	271	189	12,737	17,069	361	582
Wash.	532	539	6,966	7,343	78	54	1,488	1,609	21	44
Oreg.	248	359	3,754	4,194	63	72	579	657	3	6
Calif.	5,434	7,426	42,408	42,085	119	56	10,009	14,120	213	361
Alaska	37	28	1,153	922	11	1	300	334	-	3
Hawaii	48	142	1,228	1,396	N	6	361	349	124	168
Guam	2	4	86	304	N	-	9	48	-	6
P.R.	1,511	1,785	U	U	32	U	460	511	115	128
V.I.	80	17	N	N	N	U	-	-	-	-
Amer. Samoa	-	-	-	-	N	U	-	-	-	-
C.N.M.I.	1	-	N	N	N	U	17	11	2	-

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update October 5, 1997.

[†]National Electronic Telecommunications System for Surveillance.

[§]Public Health Laboratory Information System.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending October 4, 1997, and October 5, 1996 (40th Week)

Reporting Area	Legionellosis		Lyme Disease		Malaria		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal
	Cum. 1997	Cum. 1996	Cum. 1997	Cum. 1996	Cum. 1997	Cum. 1996	Cum. 1997	Cum. 1996	Cum. 1997	Cum. 1996	Cum. 1997
UNITED STATES	678	715	7,685	11,795	1,302	1,257	6,086	9,067	13,057	14,651	6,001
NEW ENGLAND	60	41	2,399	3,433	70	44	111	131	326	331	924
Maine	2	2	8	36	1	7	-	-	11	18	162
N.H.	7	3	33	42	8	2	-	1	13	11	31
Vt.	11	4	8	20	2	4	-	-	5	1	100
Mass.	17	23	248	195	25	15	54	63	186	166	206
R.I.	6	9	338	422	5	6	2	1	30	27	26
Conn.	17	N	1,764	2,718	29	10	55	66	81	108	399
MID. ATLANTIC	139	177	4,216	7,038	330	378	292	409	2,402	2,713	1,239
Upstate N.Y.	40	57	1,777	3,211	53	68	28	62	324	313	952
N.Y. City	7	16	48	331	188	227	66	117	1,232	1,422	U
N.J.	19	12	1,015	1,632	70	57	110	133	494	574	136
Pa.	73	92	1,376	1,864	19	26	88	97	352	404	151
E.N. CENTRAL	202	221	70	370	107	150	513	1,337	1,273	1,566	149
Ohio	91	79	48	22	17	13	162	499	224	224	99
Ind.	36	42	18	25	12	14	122	169	105	139	11
Ill.	7	31	4	8	31	74	53	385	638	839	14
Mich.	57	34	-	6	36	34	102	133	216	283	24
Wis.	11	35	U	309	11	15	74	151	90	81	1
W.N. CENTRAL	47	38	98	129	45	36	117	273	404	367	378
Minn.	1	3	69	38	19	15	U	34	107	83	43
Iowa	11	8	6	16	9	2	7	18	45	50	126
Mo.	15	11	17	42	8	9	82	189	172	154	19
N. Dak.	2	-	-	-	3	1	-	-	9	6	59
S. Dak.	2	2	1	-	1	-	-	-	10	15	60
Nebr.	12	11	2	3	1	2	5	10	14	14	2
Kans.	4	3	3	30	4	7	23	22	47	45	69
S. ATLANTIC	96	100	575	578	276	227	2,560	2,933	2,547	2,750	2,428
Del.	9	10	34	165	5	3	17	33	18	33	47
Md.	18	21	416	273	77	66	732	525	251	228	448
D.C.	4	7	7	3	14	7	90	105	75	108	5
Va.	19	15	46	41	62	37	179	333	220	234	525
W. Va.	N	N	6	11	-	5	3	9	45	47	75
N.C.	12	9	27	60	14	25	568	796	333	382	705
S.C.	6	5	2	5	16	10	305	298	242	283	148
Ga.	-	3	1	1	28	23	425	533	482	487	253
Fla.	27	30	36	19	60	51	241	301	881	948	222
E.S. CENTRAL	37	41	62	66	29	29	1,333	1,960	939	1,058	231
Ky.	6	6	8	23	8	7	109	113	135	177	27
Tenn.	25	18	35	19	7	12	591	640	321	362	126
Ala.	2	4	7	7	10	3	357	442	327	332	73
Miss.	4	13	12	17	4	7	276	765	156	187	5
W.S. CENTRAL	13	18	61	90	16	41	768	1,435	1,754	1,716	255
Ark.	-	1	16	20	4	-	124	195	151	145	27
La.	2	1	2	2	9	7	283	416	183	18	5
Okla.	3	6	13	17	3	-	100	145	132	129	88
Tex.	8	10	30	51	-	34	261	679	1,288	1,424	135
MOUNTAIN	45	35	17	7	61	51	194	123	379	482	158
Mont.	1	1	-	-	2	7	-	-	7	15	40
Idaho	2	-	3	-	-	-	1	4	8	7	-
Wyo.	1	3	4	3	2	7	-	2	2	6	31
Colo.	16	7	5	-	27	20	11	24	64	70	19
N. Mex.	2	2	1	1	8	2	52	7	26	65	11
Ariz.	9	15	1	-	10	6	116	70	201	180	44
Utah	9	2	1	1	3	4	5	2	25	39	5
Nev.	5	5	2	2	9	5	9	14	46	100	8
PACIFIC	39	44	187	84	368	301	198	466	3,033	3,668	239
Wash.	6	5	8	13	19	21	9	8	221	210	-
Oreg.	-	-	17	17	17	20	9	8	123	131	14
Calif.	32	34	160	53	327	250	178	448	2,499	3,124	202
Alaska	-	1	2	-	3	3	1	-	61	59	23
Hawaii	1	4	-	1	2	7	1	2	129	144	-
Guam	-	1	-	-	-	-	2	3	13	55	-
P.R.	-	-	-	-	5	2	194	176	164	130	56
V.I.	-	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	9	1	2	-	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending October 4, 1997, and October 5, 1996 (40th Week)

Reporting Area	*H. influenzae*, invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
			A		B		Indigenous		Imported†		Total	
	Cum. 1997*	Cum. 1996	Cum. 1997	Cum. 1996	Cum. 1997	Cum. 1996	1997	Cum. 1997	1997	Cum. 1997	Cum. 1997	Cum. 1996
UNITED STATES	822	809	20,978	21,453	6,486	7,414	1	63	-	49	112	455
NEW ENGLAND	47	27	498	298	110	168	-	11	-	6	17	16
Maine	5	-	47	16	6	2	-	-	-	1	1	-
N.H.	6	10	23	11	12	13	-	1	-	-	1	-
Vt.	3	1	11	7	5	11	-	-	-	-	-	2
Mass.	29	14	189	151	41	63	-	10	-	4	14	12
R.I.	2	2	123	15	14	9	-	-	-	-	-	-
Conn.	2	-	105	98	32	70	-	-	-	1	1	2
MID. ATLANTIC	105	167	1,455	1,479	989	1,090	-	14	-	8	22	37
Upstate N.Y.	27	42	244	331	210	259	-	2	-	3	5	11
N.Y. City	27	43	535	455	350	387	-	5	-	2	7	11
N.J.	38	45	220	286	179	215	-	2	-	-	2	3
Pa.	13	37	456	407	250	229	-	5	-	3	8	12
E.N. CENTRAL	131	142	2,065	1,960	677	856	-	7	-	3	10	20
Ohio	75	79	258	616	60	101	-	-	-	-	-	5
Ind.	14	10	231	256	75	111	-	-	-	-	-	-
Ill.	29	39	471	578	164	275	-	6	-	1	7	3
Mich.	12	8	986	342	340	295	-	-	-	2	2	3
Wis.	1	6	119	168	38	74	-	1	-	-	1	9
W.N. CENTRAL	41	37	1,732	1,869	351	392	-	12	-	5	17	22
Minn.	27	23	156	106	32	48	-	3	-	5	8	18
Iowa	6	4	371	282	35	56	-	-	-	-	-	-
Mo.	4	7	872	936	243	229	-	1	-	-	1	3
N. Dak.	-	-	10	100	4	2	U	-	U	-	-	-
S. Dak.	2	1	18	41	1	5	-	8	-	-	8	-
Nebr.	1	1	79	113	12	27	-	-	-	-	-	-
Kans.	1	1	226	291	24	25	-	-	-	-	-	1
S. ATLANTIC	135	148	1,387	1,002	1,001	1,015	-	1	-	10	11	11
Del.	-	2	25	15	5	8	-	-	-	-	-	1
Md.	48	53	182	166	145	129	-	-	-	2	2	2
D.C.	-	5	17	30	25	28	-	-	-	1	1	-
Va.	12	8	175	135	99	112	-	-	-	1	1	3
W. Va.	3	7	10	13	14	21	-	-	-	-	-	-
N.C.	20	22	156	130	202	266	-	-	-	2	2	2
S.C.	4	4	90	44	85	71	-	-	-	1	1	-
Ga.	26	31	294	122	107	30	-	-	-	1	1	2
Fla.	22	16	438	347	319	350	-	1	-	2	3	1
E.S. CENTRAL	40	23	468	1,044	516	651	-	-	-	-	-	2
Ky.	5	5	61	42	31	61	-	-	-	-	-	-
Tenn.	25	9	293	676	341	364	-	-	-	-	-	2
Ala.	10	8	70	152	57	51	-	-	-	-	-	-
Miss.	-	1	44	174	87	175	-	-	-	-	-	-
W.S. CENTRAL	40	33	4,283	4,265	740	925	-	3	-	4	7	26
Ark.	1	-	195	353	43	66	-	-	-	-	-	-
La.	10	3	182	138	118	104	-	-	-	-	-	-
Okla.	26	26	1,197	1,823	37	24	-	-	-	-	-	-
Tex.	3	4	2,709	1,951	542	731	U	3	U	4	7	26
MOUNTAIN	80	40	3,451	3,429	722	893	-	6	-	2	8	156
Mont.	-	1	61	95	8	12	-	-	-	-	-	-
Idaho	1	1	111	173	33	75	-	-	-	-	-	1
Wyo.	4	-	32	28	30	35	-	-	-	-	-	1
Colo.	12	11	336	358	131	108	-	-	-	-	-	7
N. Mex.	8	9	285	312	210	322	-	-	-	-	-	16
Ariz.	30	12	1,796	1,325	170	196	-	5	-	-	5	8
Utah	3	6	490	804	77	77	-	-	-	1	1	118
Nev.	22	-	340	334	63	68	-	1	-	1	2	5
PACIFIC	203	192	5,639	6,107	1,380	1,424	1	9	-	11	20	165
Wash.	5	2	442	402	55	73	-	1	-	1	2	38
Oreg.	29	25	295	722	81	83	-	-	-	-	-	13
Calif.	156	157	4,766	4,883	1,218	1,245	1	6	-	8	14	40
Alaska	6	6	25	38	18	11	-	-	-	-	-	63
Hawaii	7	2	111	62	8	12	-	2	-	2	4	11
Guam	-	-	-	7	1	1	U	-	U	-	-	-
P.R.	-	2	228	168	1,143	725	-	-	-	-	-	2
V.I.	-	-	-	30	-	30	U	-	U	-	-	-
Amer. Samoa	-	-	-	-	-	-	U	-	U	-	-	-
C.N.M.I.	6	10	1	1	34	5	U	1	U	-	1	-

N: Not notifiable U: Unavailable -: no reported cases

*Of 185 cases among children aged <5 years, serotype was reported for 98 and of those, 39 were type b.

†For imported measles, cases include only those resulting from importation from other countries.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending October 4, 1997, and October 5, 1996 (40th Week)

	Meningococcal Disease		Mumps			Pertussis			Rubella		
Reporting Area	Cum. 1997	Cum. 1996	1997	Cum. 1997	Cum. 1996	1997	Cum. 1997	Cum. 1996	1997	Cum. 1997	Cum. 1996
UNITED STATES	2,516	2,462	5	440	551	62	3,875	4,459	14	155	218
NEW ENGLAND	159	103	-	8	1	6	695	993	-	1	26
Maine	17	10	-	-	-	-	6	35	-	-	-
N.H.	13	3	-	-	-	-	96	81	-	-	-
Vt.	4	3	-	-	-	1	193	88	-	-	2
Mass.	77	41	-	2	1	1	365	732	-	1	20
R.I.	15	11	-	5	-	4	16	30	-	-	-
Conn.	33	35	-	1	-	-	19	27	-	-	4
MID. ATLANTIC	239	259	-	43	72	-	275	349	-	29	12
Upstate N.Y.	55	68	-	7	21	-	96	189	-	2	4
N.Y. City	39	38	-	3	17	-	56	30	-	27	5
N.J.	54	54	-	5	4	-	9	27	-	-	2
Pa.	91	99	-	28	30	-	114	103	-	-	1
E.N. CENTRAL	362	359	2	47	107	5	332	546	-	5	3
Ohio	138	127	-	20	39	2	126	191	-	-	-
Ind.	42	51	-	7	7	-	45	47	-	-	-
Ill.	112	101	-	9	20	2	61	133	-	2	1
Mich.	42	38	2	11	39	1	41	34	-	-	2
Wis.	28	42	-	-	2	-	59	141	-	3	-
W.N. CENTRAL	183	192	-	14	16	11	331	304	-	-	-
Minn.	29	25	-	5	5	9	210	234	-	-	-
Iowa	39	40	-	7	1	1	45	15	-	-	-
Mo.	83	73	-	-	7	1	51	31	-	-	-
N. Dak.	2	3	U	-	2	U	2	1	U	-	-
S. Dak.	5	10	-	-	-	-	4	4	-	-	-
Nebr.	8	18	-	2	-	-	6	6	-	-	-
Kans.	17	23	-	-	1	-	13	13	-	-	-
S. ATLANTIC	448	390	-	60	90	6	375	464	14	83	91
Del.	5	2	-	-	-	-	1	21	-	-	-
Md.	39	50	-	4	30	-	106	166	-	3	-
D.C.	-	5	-	-	-	-	3	1	-	1	1
Va.	42	47	-	10	12	-	42	73	-	1	2
W. Va.	15	13	-	-	-	-	6	2	-	-	-
N.C.	80	65	-	9	19	5	104	76	4	57	77
S.C.	49	47	-	10	5	1	24	32	10	19	1
Ga.	88	114	-	8	3	-	11	19	-	-	-
Fla.	130	47	-	19	21	-	78	74	-	2	10
E.S. CENTRAL	198	187	-	21	20	-	91	183	-	-	2
Ky.	41	25	-	3	-	-	29	136	-	-	-
Tenn.	74	51	-	5	1	-	33	19	-	-	-
Ala.	65	65	-	7	4	-	21	19	-	-	2
Miss.	18	46	-	6	15	-	8	9	-	-	N
W.S. CENTRAL	240	271	-	45	39	2	162	112	-	4	8
Ark.	30	30	-	1	1	1	25	5	-	-	-
La.	46	49	-	12	13	-	17	8	-	-	1
Okla.	33	30	-	-	-	1	26	8	-	-	-
Tex.	131	162	U	32	25	U	94	91	U	4	7
MOUNTAIN	153	147	3	54	22	13	949	401	-	6	6
Mont.	8	7	-	-	-	-	16	28	-	-	-
Idaho	10	21	1	3	-	-	543	100	-	1	2
Wyo.	2	3	-	1	-	-	7	5	-	-	-
Colo.	41	31	-	3	4	9	242	143	-	-	2
N. Mex.	24	22	N	N	N	-	76	51	-	-	-
Ariz.	41	32	1	32	1	2	33	28	-	5	1
Utah	12	15	1	8	3	2	16	16	-	-	-
Nev.	15	16	-	7	14	-	16	30	-	-	1
PACIFIC	534	554	-	148	184	19	665	1,107	-	27	70
Wash.	65	79	-	14	19	19	301	461	-	5	15
Oreg.	103	98	N	N	N	-	17	53	-	-	1
Calif.	357	366	-	109	136	-	321	558	-	14	51
Alaska	2	7	-	4	2	-	14	3	-	-	-
Hawaii	7	4	-	21	27	-	12	32	-	8	3
Guam	1	4	U	1	8	U	-	-	U	-	-
P.R.	9	11	-	7	1	-	1	2	-	-	-
V.I.	-	-	U	-	1	U	-	-	U	-	-
Amer. Samoa	-	-	U	-	-	U	-	-	U	-	-
C.N.M.I.	-	-	U	4	-	U	-	-	U	-	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE IV. Deaths in 122 U.S. cities,* week ending October 4, 1997 (40th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	534	385	94	32	12	11	52
Boston, Mass.	150	94	34	9	7	6	16
Bridgeport, Conn.	35	25	8	-	-	2	4
Cambridge, Mass.	14	11	2	1	-	-	6
Fall River, Mass.	21	16	4	1	-	-	-
Hartford, Conn.	40	28	7	4	1	-	2
Lowell, Mass.	21	18	2	1	-	-	1
Lynn, Mass.	11	10	1	-	-	-	1
New Bedford, Mass.	25	23	2	-	-	-	-
New Haven, Conn.	42	22	12	5	2	1	5
Providence, R.I.	30	25	5	-	-	-	1
Somerville, Mass.	5	4	-	1	-	-	1
Springfield, Mass.	45	34	4	4	1	2	2
Waterbury, Conn.	42	34	6	1	1	-	3
Worcester, Mass.	53	41	7	5	-	-	10
MID. ATLANTIC	2,167	1,508	401	172	46	40	99
Albany, N.Y.	39	33	2	2	1	1	2
Allentown, Pa.	25	21	3	-	1	-	1
Buffalo, N.Y.	64	51	11	1	1	-	5
Camden, N.J.	19	10	4	3	2	-	2
Elizabeth, N.J.	31	24	5	1	1	-	-
Erie, Pa.	48	41	4	2	-	1	2
Jersey City, N.J.	42	22	11	8	1	-	2
New York City, N.Y.	1,145	784	209	106	25	21	43
Newark, N.J.	U	U	U	U	U	U	U
Paterson, N.J.	18	9	9	-	-	-	1
Philadelphia, Pa.	300	199	67	26	3	5	12
Pittsburgh, Pa.§	77	52	10	7	3	5	4
Reading, Pa.	29	20	4	1	2	2	3
Rochester, N.Y.	131	85	30	8	4	4	10
Schenectady, N.Y.	22	19	3	-	-	-	-
Scranton, Pa.	28	27	1	-	-	-	2
Syracuse, N.Y.	78	57	16	3	2	-	5
Trenton, N.J.	31	23	5	2	-	1	2
Utica, N.Y.	19	13	4	2	-	-	1
Yonkers, N.Y.	21	18	3	-	-	-	2
E.N. CENTRAL	1,989	1,325	355	179	64	62	114
Akron, Ohio	45	29	9	4	3	-	-
Canton, Ohio	28	22	4	1	-	1	3
Chicago, Ill.	396	223	82	56	18	15	27
Cincinnati, Ohio	92	68	13	7	2	2	7
Cleveland, Ohio	147	85	35	18	5	4	2
Columbus, Ohio	191	136	31	17	4	3	28
Dayton, Ohio	102	77	13	3	4	5	4
Detroit, Mich.	204	110	52	24	7	9	6
Evansville, Ind.	38	24	7	2	4	1	3
Fort Wayne, Ind.	70	50	11	5	2	2	2
Gary, Ind.	13	4	3	4	1	1	-
Grand Rapids, Mich.	56	45	6	3	-	2	6
Indianapolis, Ind.	194	149	22	11	4	8	10
Lansing, Mich.	25	20	5	-	-	-	1
Milwaukee, Wis.	115	79	23	9	1	3	1
Peoria, Ill.	34	27	5	2	-	-	1
Rockford, Ill.	55	35	11	5	2	2	5
South Bend, Ind.	50	36	8	4	-	2	2
Toledo, Ohio	72	49	14	2	5	2	5
Youngstown, Ohio	62	57	1	2	2	-	1
W.N. CENTRAL	630	440	100	48	13	19	32
Des Moines, Iowa	U	U	U	U	U	U	U
Duluth, Minn.	26	23	3	-	-	-	-
Kansas City, Kans.	35	17	8	5	4	1	-
Kansas City, Mo.	87	56	13	7	-	1	2
Lincoln, Nebr.	39	27	8	3	-	1	1
Minneapolis, Minn.	124	97	16	9	-	2	7
Omaha, Nebr.	92	57	20	9	1	5	4
St. Louis, Mo.	79	54	13	5	1	6	6
St. Paul, Minn.	75	61	7	5	1	1	8
Wichita, Kans.	73	48	12	5	6	2	4
S. ATLANTIC	1,164	722	256	105	50	30	51
Atlanta, Ga.	135	81	36	10	6	2	4
Baltimore, Md.	161	95	37	16	6	7	13
Charlotte, N.C.	89	54	17	9	2	7	5
Jacksonville, Fla.	113	84	21	5	2	1	2
Miami, Fla.	101	59	23	11	6	2	-
Norfolk, Va.	44	25	7	7	3	2	-
Richmond, Va.	79	38	22	14	2	3	5
Savannah, Ga.	51	33	9	6	3	-	-
St. Petersburg, Fla.	78	62	10	2	3	1	2
Tampa, Fla.	162	109	36	15	2	-	17
Washington, D.C.	125	72	31	10	6	5	3
Wilmington, Del.	26	10	7	-	9	-	-
E.S. CENTRAL	891	601	185	57	34	13	48
Birmingham, Ala.	201	134	40	15	5	6	15
Chattanooga, Tenn.	79	61	13	3	1	1	4
Knoxville, Tenn.	93	60	22	6	5	-	9
Lexington, Ky.	57	38	13	4	2	-	4
Memphis, Tenn.	174	120	26	17	10	1	12
Mobile, Ala.	147	103	28	7	6	3	3
Montgomery, Ala.	10	8	2	-	-	-	1
Nashville, Tenn.	130	77	41	5	5	2	-
W.S. CENTRAL	1,424	847	280	144	85	52	46
Austin, Tex.	74	48	13	10	1	2	4
Baton Rouge, La.	46	30	8	3	3	2	-
Corpus Christi, Tex.	45	27	8	6	1	3	2
Dallas, Tex.	169	109	33	17	6	4	4
El Paso, Tex.	74	45	18	6	4	1	1
Ft. Worth, Tex.	109	80	18	4	3	4	1
Houston, Tex.	400	239	86	48	20	7	13
Little Rock, Ark.	59	35	16	3	1	4	1
New Orleans, La.	119	6	15	25	38	19	-
San Antonio, Tex.	175	114	41	13	5	2	11
Shreveport, La.	38	30	4	2	1	1	3
Tulsa, Okla.	116	84	20	7	2	3	6
MOUNTAIN	851	540	175	92	24	20	61
Albuquerque, N.M.	84	52	19	10	1	2	7
Boise, Idaho	37	25	2	8	1	1	1
Colo. Springs, Colo.	44	28	9	3	3	1	6
Denver, Colo.	98	62	18	14	2	2	3
Las Vegas, Nev.	168	104	39	19	1	5	11
Ogden, Utah	20	16	4	-	-	-	2
Phoenix, Ariz.	151	84	42	13	7	5	10
Pueblo, Colo.	31	24	5	2	-	-	5
Salt Lake City, Utah	110	71	19	9	8	3	9
Tucson, Ariz.	108	74	18	14	1	1	7
PACIFIC	1,709	1,214	296	119	49	30	124
Berkeley, Calif.	19	11	5	1	1	1	-
Fresno, Calif.	80	55	16	6	3	-	5
Glendale, Calif.	23	20	3	-	-	-	1
Honolulu, Hawaii	77	58	11	3	3	2	6
Long Beach, Calif.	65	36	18	7	1	3	12
Los Angeles, Calif.	472	341	81	31	10	9	23
Pasadena, Calif.	24	18	5	-	-	1	2
Portland, Oreg.	95	62	23	5	5	-	3
Sacramento, Calif.	174	124	25	17	6	2	17
San Diego, Calif.	142	101	26	8	6	1	15
San Francisco, Calif.	131	90	25	9	2	4	14
San Jose, Calif.	195	139	32	14	8	2	13
Santa Cruz, Calif.	36	35	1	-	-	-	9
Seattle, Wash.	127	85	19	16	3	4	2
Spokane, Wash.	49	39	6	2	1	1	2
Tacoma, Wash.	U	U	U	U	U	U	U
TOTAL	11,359¶	7,582	2,142	948	377	277	627

U: Unavailable -: no reported cases

*Mortality data in this table are voluntarily reported from 122 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 this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

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