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Epidemiology of Measles — United States, 1998

During 1998, a provisional total of 100 confirmed measles cases was reported to CDC by state and local health departments, representing a record low number of cases and 28% fewer than the 138 cases reported in 1997 (*1*). This report describes the epidemiology of measles during 1998, which suggests that measles is no longer an indigenous disease in the United States.

Case Classification

Measles cases among persons who were infected outside the United States are classified as internationally imported cases. Cases among persons who were infected in the United States are classified as indigenous measles cases. Indigenous cases are subclassified into three groups: cases epidemiologically (epi)-linked to importation (a chain of transmission caused by an internationally imported case); imported virus cases (a chain of transmission from which an imported measles virus strain was isolated but a link to an internationally imported case was not identified) (*2*); and not importation-associated cases (no epidemiologic or virologic association to importation was detected). Internationally imported cases, cases epi-linked to importation, and imported virus cases are all considered importation-associated cases.

Of the 100 cases reported, 26 were internationally imported, and 74 were indigenous. Of the 74 indigenous cases, 45 were importation-associated, and 29 were not importation-associated. The proportion of cases not associated with importation has declined from 85% in 1995, 72% in 1996, 41% in 1997, to 29% in 1998. The 45 importation-associated indigenous cases included 13 epi-linked cases and 32 imported virus cases.

All 32 imported virus cases occurred in an outbreak in Alaska, which started 4 weeks after an imported case of measles was diagnosed in a visitor from Japan. Measles virus isolated from cases in this outbreak was nearly identical to virus circulating in Japan, although no virus was cultured from the imported case and no epidemiologic link between the imported case and the outbreak was detected (*3*). In addition to the strain isolated from the Alaska outbreak, viral genomic sequencing of specimens from epi-linked cases allowed genotype classification of measles virus strains from six chains of transmission epidemiologically linked to internationally imported cases. Virus strains isolated from cases in New York, Vermont, California, Massachusetts, and Washington matched viral genotypes from Germany, Cyprus, Japan,

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China, and Croatia, respectively. Measles virus was isolated from the Indiana outbreak but genotype information was unavailable from Zimbabwe, the source country of the imported case.

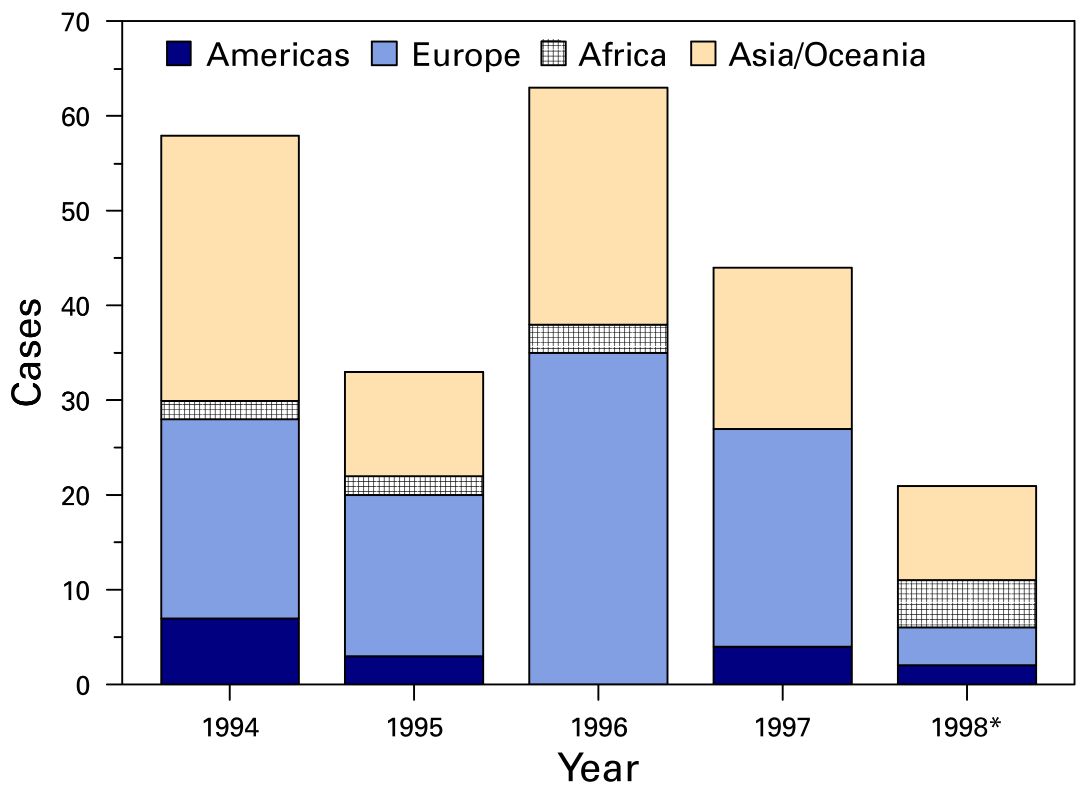
Internationally Imported Measles Cases

The 26 internationally imported cases reported in 1998 represent the lowest number of imported cases since the recording of importation status began in 1983. Imported cases from the Americas remained at very low levels, and imported cases from Europe and Asia declined compared with the previous 4 years (Figure 1). India, Japan, Kenya, Pakistan, and Saudi Arabia each were the source of two imported cases. One importation was reported from each of the other countries. Of 26 imported cases, 14 occurred among international visitors and 12 occurred among U.S. residents exposed to measles while traveling abroad.

Geographic Distribution

During 1998, 28 states and the District of Columbia reported no confirmed measles cases, compared with 21 states in 1997. Eight states accounted for 82% of cases: Alaska (33 cases), Arizona (11), Michigan (10), California (nine), New Jersey (eight), New York (four), Pennsylvania (four), and Indiana (three). In the remaining 14 states, two or fewer cases were reported. Eight states reported indigenous measles cases not associated with importation.

FIGURE 1. Measles cases, by source of importation and year — United States, 1994–1998



*Data are provisional.

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Temporal Patterns of Transmission

The median number of cases per week was one (range: 0–11). During 35 weeks, all reported measles cases were importation-associated, including 21 consecutive weeks (weeks 25–45) (Figure 2). Half of the indigenous cases that were not importation-associated occurred in two outbreaks: in New Jersey (weeks 13–16) and in Michigan (weeks 20–23).

Age and Vaccination Status

The age distribution and vaccination status of U.S. residents with measles differed from those of international visitors. Most U.S. residents with measles had been vaccinated with one or more doses of measles vaccine (53%), and 86% of international visitors with measles were unvaccinated.

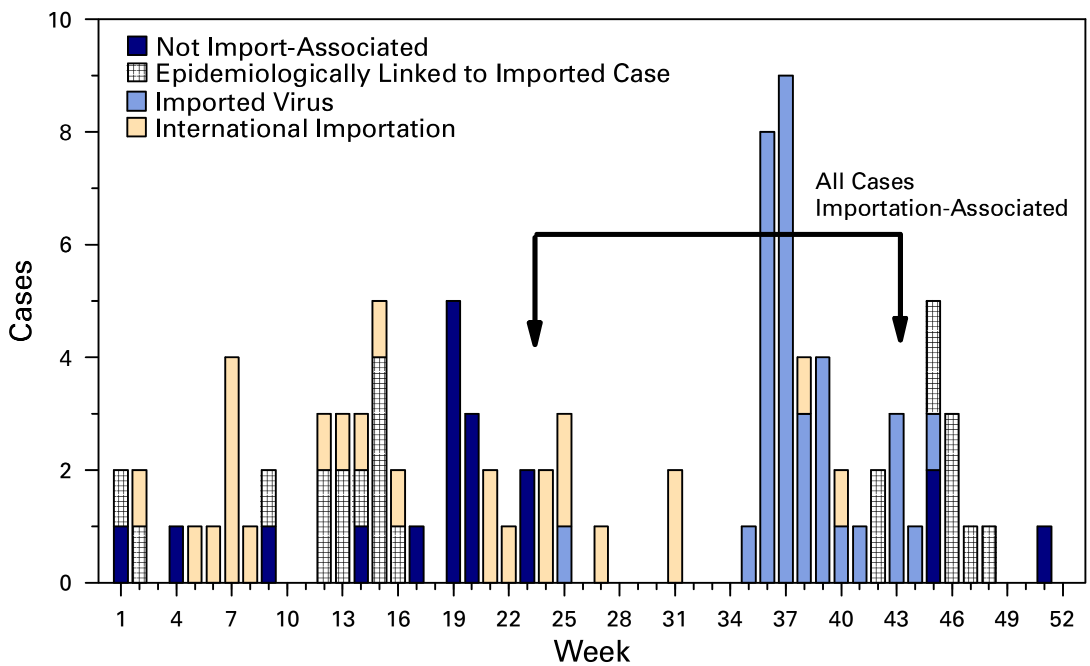
Outbreaks

Six measles outbreaks* were reported in 1998, the fewest ever reported to CDC. Outbreaks occurred in Alaska (33 cases), Arizona (11), Michigan (nine), New Jersey (six), Indiana (three), and Pennsylvania (three). The 65 measles cases reported from these outbreaks represented 65% of all cases reported during 1998. The ages of persons with outbreak-associated cases ranged from 5 months to 44 years (median: 15 years).

The largest measles outbreak reported since 1996 occurred in a high school in Anchorage, Alaska; 30 of the 33 cases had received one dose of measles vaccine. A 4-year-old unvaccinated Japanese child visiting Anchorage had measles diagnosed 4 weeks before the other cases in the outbreak. No epi-link was reported between this

*Three or more cases in a single chain of transmission.

FIGURE 2. Measles cases, by importation status and week of rash onset — United States, 1998



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case and subsequent cases. However, the genotype of viral RNA collected from outbreak cases was nearly identical to virus circulating in Japan. The interval from the onset of rash in the imported case to the end of the outbreak was 15 weeks (August 10 to November 19, the longest interval of transmission in 1998). As a result of the outbreak, the Alaskan Health Department now requires two doses of measles vaccine for all students in grades K-12 (*3*).Three outbreaks (Arizona, Indiana, and Pennsylvania) were epi-linked to an imported measles case, and two outbreaks (Michigan and New Jersey) were not importation-associated.

Reported by: State and local health depts. Measles Virus Section, Respiratory and Enteric Viruses Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Measles Elimination Activity, Child Vaccine Preventable Diseases Br, Epidemiology and Surveillance Div, National Immunization Program; and an EIS Officer, CDC.

Editorial Note: Analysis of epidemiologic data for 1998 suggests measles is no longer an indigenous disease in the United States. Most cases reported in 1998 were associated with importation, including the short chains of indigenous transmission of measles that occurred following international importation of measles.

Cases not associated with importation were insufficient to represent a continuous indigenous chain of measles transmission and probably were misclassifications (not measles), associated with undetected imported measles cases, or linked to known imported cases through chains of transmission not detected by the surveillance system. Misclassifications resulting from false-positive laboratory tests are an expected result of intensive investigation for a rare disease using a laboratory test that is not 100% specific.

Some cases may spread from undetected imported cases of measles. Detecting imported cases is difficult. International visitors with measles may leave the country before the rash appears or before they seek medical care. Even when the imported case is detected, it is difficult to detect every case in the chain of transmission, as was seen in the outbreak in Alaska. This highlights the need to obtain viral specimens from every chain of transmission to supplement epidemiologic information.

The largest outbreak in 1998 occurred in a high school without a second dose measles vaccine requirement (*3*). As of the 1998–99 school year, 55% of U.S. students were required by their states to have two doses of measles vaccine (CDC, unpublished data, 1998). Vaccination of all students with two doses of measles vaccine by 2001, as recommended by the American Academy of Pediatrics (*4*) and CDC's Advisory Committee on Immunization Practices (*5*), will reduce future school outbreaks. Completion of this strategy should further decrease the risk for indigenous transmission of measles following importation of the measles virus.

The United States appears to have eliminated measles as an indigenous disease. High measles vaccination coverage and strong surveillance remain critical to preventing international imported measles cases from causing a resurgence of measles in the United States.

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Water Fluoridation and Costs of Medicaid Treatment for Dental Decay — Louisiana, 1995–1996

Treatment costs for dental decay in young children can be substantial, especially if extensive dental procedures and general anesthesia in a hospital operating room (OR) are needed. Because caries in the primary dentition disproportionately affect children from low-income households (*1,2*), the cost for care frequently is reimbursed by state Medicaid programs. To determine whether the average treatment cost for Medicaid-eligible children in Louisiana differed by community fluoridation status, the Louisiana Department of Health and Hospitals (LDHH) and CDC analyzed Medicaid dental reimbursements and Medicaid eligibility records from July 1995 through June 1996 for children aged 1–5 years. Findings suggest that Medicaid-eligible children in communities without fluoridated water were three times more likely than Medicaid-eligible children in communities with fluoridated water to receive dental treatment in a hospital OR, and the cost of dental treatment per eligible child was approximately twice as high.

The Louisiana Bureau of Health Financing provided data on Medicaid dental reimbursements and Medicaid eligibility from July 1995 through June 1996 for children aged 1–5 years and the number of dentists practicing in each parish (county) in 1995. Demographic data for each parish were obtained from the Bureau of the Census (*3*). The proportion of the population that received optimally fluoridated water in each parish was estimated based on CDC's 1992 fluoridation census (*4*) and a study by LDHH (LDHH, unpublished data, 1996). A parish was designated as optimally fluoridated (F) if 100% of its population received fluoridated water (optimal level: ≥0.7 ppm) in both 1992 and 1996, and nonfluoridated (NF) if 0% received fluoridated water in both years. Of 64 parishes, five F parishes with 38,162 Medicaid-eligible preschoolers and 14 NF parishes with 16,444 Medicaid-eligible preschoolers were included in this analysis. All analyses were conducted at the parish level.

For each F and NF parish, the percentage of Medicaid-eligible children aged 1–5 years who, during the study period, received one or more of the following types of services was calculated: 1) caries-related services (e.g., fillings, crowns, and pulpotomies); 2) examinations or preventive care (topical fluoride or prophylaxis) but no caries-related services; 3) topical fluoride application (with or without caries-related care); and 4) dental care in a hospital OR. The mean value for each of these measures was calculated for F and NF parishes for each of the five ages.

Medicaid reimbursements for dental procedures likely to be associated with treatment for dental caries were totaled for each parish for each age group. If dental care was provided in a hospital, a payment of $650 (based on estimates from the Louisiana Bureau of Health Financing) was added for OR use and general anesthesia. The average caries-related cost per Medicaid-eligible child in each parish was obtained by di-

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viding parish Medicaid reimbursements by the number of Medicaid-eligible children in the parish in each age group.

For each age group, linear regression was used to examine the association between parish average caries-related cost per Medicaid-eligible child and fluoridation status of the parish. In addition to fluoridation status, per capita income, population, and dentists per 1000 residents were included in the model as dichotomous variables. Independent variables that added no explanatory power were eliminated through backward elimination to obtain the reduced model (*5*).

Children residing in F parishes were slightly more likely to have received only examinations or preventive services (Table 1). The proportions of children who received topical fluoride were similar, with younger children in F and older children in NF slightly more likely to have received the procedure. For all age groups, the percentage of Medicaid-eligible children who received one or more caries-related procedures was higher in NF parishes.

The difference in treatment costs per Medicaid-eligible child residing in F parishes compared with those residing in NF parishes ranged from $14.68 for 1-year-olds to $58.91 for 3-year-olds (Table 2); at all ages, costs were higher in NF than in F parishes. Louisiana Medicaid-eligible children were distributed uniformly by age; the mean difference in treatment costs per eligible preschooler was $36.28 (95% confidence interval=$9.69–$62.87).

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Editorial Note: In this analysis of Medicaid claims, more Medicaid-eligible children in NF parishes received caries-related dental treatment and OR-based care at greater cost than did Medicaid-eligible children in F parishes. In 1998, 1.3 million Louisianans received nonfluoridated water from public water systems that served approximately 10,000 customers (S. Hoffman, Office of Public Health Engineering Services, personal communication, 1999), and 3% of the state population were Medicaid-eligible children aged 1–5 years (*3*). These data suggest that at least 39,000 preschoolers in Louisiana could potentially benefit from water fluoridation; the expected annual reduction in their dental treatment costs is $1.4 million.

The findings in this report are subject to at least four limitations. First, although the analysis showed an association between lower caries-related costs and residence in one of the five F parishes, the analysis did not measure the length or magnitude of the children's exposure to fluoride. Some children classified as residing in NF parishes once may have resided in F parishes and vice versa. It also did not verify that the water systems serving the five F parishes maintained fluoride concentration at the optimal level. However, misclassification of exposure status would be more likely to reduce the observed effect of fluoridation. Second, if access to dental care were better in NF than in F parishes, children with decay who resided in F parishes would be less likely to seek restorative care, resulting in an underestimate of treatment costs in F parishes and an overstatement of water fluoridation's benefits. The observed rates for preventive care in F and NF parishes suggest similar rather than differential access. Furthermore, this analysis controlled for differences in access to dental care. Third, the difference in treatment costs attributable to water fluoridation would be overstated if

TABLE 1. Mean percentage of Medicaid-eligible children aged 1–5 years who received various dental procedures from July 1995 through June 1996 and the mean caries-related cost per eligible child, by age and fluoridation status in parish of residence — Louisiana

	Mean percentage of Medicaid-eligible children who received procedures																				
	Caries-related procedure				Examination or preventive procedure				Topical fluoride application				Hospitalized for treatment				Mean caries-related cost per eligible child			
	F* (n=5)		NF† (n=14)		F* (n=5)		NF† (n=14)		F* (n=5)		NF† (n=14)		F* (n=5)		NF† (n=14)		F* (n=5)		NF† (n=14)	
Age (yrs)	%	(SD§)	%	(SD)	%	(SD)	%	(SD)	%	(SD)	%	(SD)	%	(SD)	%	(SD)	%	(SD)	%	(SD)
1	3.3	(1.2)	4.4	(2.4)	8.2	(7.1)	6.3	(6.2)	7.5	(5.3)	5.8	(5.3)	0.2	(0.3)	1.0	(0.9)	$ 7.4	($ 5.0)	16.9	($13.1)
2	11.0	(3.3)	15.9	(5.8)	17.8	(10.8)	16.3	(8.1)	19.2	(11.2)	17.5	(9.5)	1.2	(1.1)	4.0	(2.0)	$35.3	($18.8)	$ 75.5	($29.9)
3	19.6	(4.0)	31.6	(10.9)	34.0	(7.9)	30.9	(9.2)	38.2	(15.1)	40.9	(13.2)	1.4	(1.1)	5.0	(2.6)	$53.8	($19.0)	$117.9	($42.1)
4	27.3	(5.0)	34.5	(9.4)	33.2	(6.2)	32.3	(4.8)	44.6	(9.5)	48.6	(12.3)	0.9	(1.3)	3.4	(2.3)	$52.1	($22.7)	$ 92.3	($25.2)
5	28.6	(5.4)	34.1	(10.2)	28.0	(6.2)	25.8	(4.5)	44.8	(6.4)	43.7	(11.6)	0.2	(0.2)	1.7	(1.1)	$39.5	($10.0)	$ 71.0	($30.6)

* Fluoridated parishes. Total number of Medicaid-eligible children aged 1–5 years residing in F parishes was 38,162.
† Nonfluoridated parishes. Total number of Medicaid-eligible children aged 1–5 years residing in NF parishes was 16,444.
§ Standard deviation.

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TABLE 2. Results of multivariate regression* analysis: adjusted R^2 and estimated treatment cost savings associated with water fluoridation for Medicaid-eligible children aged 1–5 years residing in fluoridated and nonfluoridated parishes, by age — Louisiana, July 1995–June 1996

Age (yrs)	Adjusted R^2	Estimated treatment cost savings associated with water fluoridation	(95% CI§)
1	0.59	$14.68	$ 5.58–$23.77
2	0.27	$40.17	$ 9.81–$70.53
3	0.42	$58.91	$19.45–$98.37
4	0.47	$36.08	$11.81–$60.35
5	0.18	$31.55	$ 1.79–$61.31
All age groups†		$36.28	$ 9.69–$62.87

*Controlling for the parish variables of per capita income, population, and number of dentists per 1000 population.
†Assumes children are distributed uniformly by age.
§Confidence interval.

children in F parishes had more exposure to other sources of fluoride (e.g., toothpaste or topical application in a dental office). Although fluoride toothpaste use could not be determined, toothpastes containing fluoride accounted for >94% of the market in 1984 (*6*). Different uses of topical applications was probably not a substantial factor because children in F and NF parishes received topical fluoride in the dental office at similar rates. Finally, lower treatment costs associated with water fluoridation should not be generalized to preschoolers from high- and middle-income families because of their lower prevalence of dental caries in primary teeth (*1,2*).

The lower treatment costs associated with residence in F parishes is a conservative estimate of benefits because the analysis did not consider benefits that accrue to populations other than Medicaid-eligible preschoolers. For this group, however, treatment cost savings associated with fluoridating the 39 NF water systems that serve populations of ≥10,000 could be substantial.

In 1996, approximately 50% of Louisiana's population using public water supplies received fluoridated water, a percentage well below the 2000 objective of 75% (objective 13.9) (*7*). The 1996 assessment of community water fluoridation in Louisiana also found that of 73 water systems adjusting fluoride content in 1986, only 45 were still doing so in 1996 (*8*). This decline prompted passage of state legislation in 1997 that 1) established a water fluoridation program within LDHH; 2) encouraged fluoridation of public water systems serving at least 5000 households (because the average number of persons per U.S. household in 1996 was 2.66, this equals approximately 13,000 persons [*3*]); and 3) created a Fluoride Advisory Board to assist in locating public and private funding to cover the costs of initiating water fluoridation in these locations. In addition, LDHH is planning an early intervention program to ensure that infants and toddlers at high risk for early childhood caries are screened and referred for clinical preventive services (e.g., topical fluoride application), prompt treatment of incipient disease, and education of the parent or caregiver.

Dental Decay — Continued

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Congenital Syphilis — United States, 1998

Congenital syphilis (CS) occurs when the spirochete *Treponema pallidum* is transmitted from a pregnant woman with syphilis to her fetus. A multiorgan infection, CS may result in a neurologic or musculoskeletal handicap or death in the fetus when not properly treated. Trends in CS rates in women of childbearing age follow by approximately 1 year the rates of primary and secondary syphilis (*1*). The last national syphilis epidemic, which was followed by a CS epidemic, occurred during the late 1980s and early 1990s. The syphilis rate began to decline in 1991 (*2*); the CS rate began to decline in 1992 (*1*). To evaluate CS epidemiology since this decline, CDC analyzed 1998 CS notifiable disease data and assessed rate changes during 1992–1998. This report summarizes the results, which indicate that the CS rate declined 78.2% from 1992 to 1998, and that rates remained disproportionately high in the southeastern United States and among minority racial/ethnic populations.

CS surveillance data were reported to CDC from the 50 states and District of Columbia. For the purpose of public health surveillance, CS is defined as 1) infants manifesting typical signs of CS or in whom *T. pallidum* is identified from lesions, placenta, umbilical cord, or autopsy specimens; 2) infants whose mothers have a syphilitic lesion at delivery; 3) infants born to women with untreated or inadequately treated syphilis before or during pregnancy, and to women whose serologic response to penicillin therapy was not documented, and either a) no examination of the infant was performed radiographically and by cerebrospinal fluid (CSF), or b) one or more radiologic or CSF tests were consistent with CS.* CS rates per 100,000 live births were determined from state natality data.†

*Congenital Syphilis Case Investigation and Report Form 73.126.
†From the National Center for Health Statistics, Vital Statistics: Natality Tapes 1989–1996.

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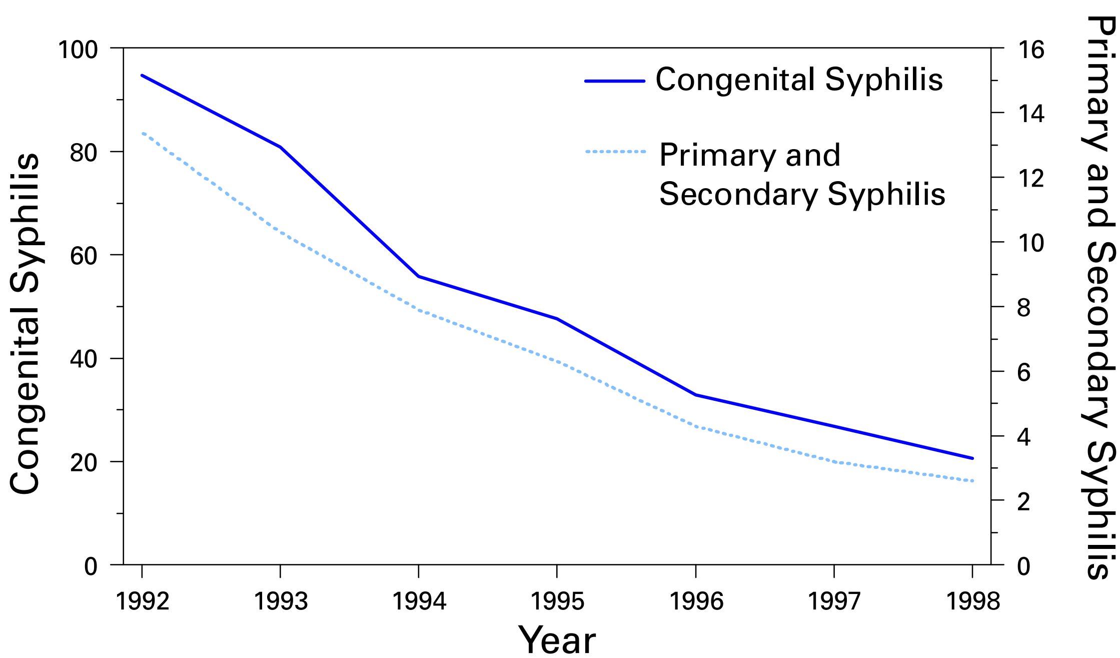
In 1998, 801 CS cases were reported for a rate of 20.6 per 100,000 live births (Figure 1). The median state-specific rate of CS was substantially higher in the South (23.0) compared with a median of zero in the Midwest, Northeast, and West[§]. Forty-seven states reported rates below the 2000 goal of 40 per 100,000 (objective 19.4) (*3*) (Table 1); 22 states reported no cases.

Persons of minority race/ethnicity accounted for the highest rates of CS in 1998. Blacks had the highest rate (87.0), followed by Hispanics (27.9), American Indians/Alaska Natives (14.0), Asians/Pacific Islanders (4.9), and non-Hispanic whites (2.9). For 16 persons, race was unknown or categorized "other." CS rates declined for all racial and ethnic groups during 1992–1998 following the decline in primary and secondary syphilis (Figure 1). Asians/Pacific Islanders (82.4%) had the largest percentage decline, followed by blacks (79.5%), Hispanics (78.5%), whites (56.9%), and American Indians/Alaska Natives (11.9%).

In 1998, 73.4% of mothers of infants with CS were aged 20–34 years (median: 27 years). The CS rate was highest for women aged 45–49 years (65.7) and lowest for

[§] *Northeast*=Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; *Midwest*=Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; *South*=Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; and *West*=Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

FIGURE 1. Congenital syphilis*, primary and secondary syphilis rates†, by year — United States, 1992–1998



*Per 100,000 live births.
†Per 100,000 population.

Congenital Syphilis — Continued

TABLE 1. Congenital syphilis cases and rates,* by mother's state of residence — United States, 1998

State	Cases	Rate	State	Cases	Rate
Alabama	9	14.9	Montana	0	0
Alaska	0	0	Nebraska	0	0
Arizona	25	33.2	Nevada	0	0
Arkansas	30	82.5	New Hampshire	0	0
California	119	22.1	New Jersey	86	75.2
Colorado	1	1.8	New Mexico	0	0
Connecticut	0	0	New York	56	21.2
Delaware	0	0	North Carolina	24	23.0
District of Columbia	8	95.4	North Dakota	0	0
Florida	71	37.5	Ohio	4	2.6
Georgia	14	12.3	Oklahoma	15	32.5
Hawaii	0	0	Oregon	0	0
Idaho	0	0	Pennsylvania	21	14.2
Illinois	71	38.8	Rhode Island	0	0
Indiana	0	0	South Carolina	19	37.2
Iowa	0	0	South Dakota	0	0
Kansas	0	0	Tennessee	9	12.2
Kentucky	5	9.5	Texas	102	30.9
Louisiana	8	12.3	Utah	1	2.4
Maine	0	0	Vermont	0	0
Maryland	44	61.5	Virginia	4	4.3
Massachusetts	2	2.5	Washington	1	1.3
Michigan	16	12.0	West Virginia	0	0
Minnesota	0	0	Wisconsin	6	8.9
Mississippi	15	36.6	Wyoming	0	0
Missouri	15	20.3	**Total**	**801**	**20.6**

*Per 100,000 live births.

women aged 10–14 years (17.9) (age was unknown for two persons). Women aged 35–49 years had a slightly higher rate (23.2) than women aged 10–34 years (20.2).

Of the 801 reported cases, 651 (81.3%) occurred because the mother received no penicillin treatment or inadequate treatment before or during pregnancy; in 233 (35.8%) of these cases, the mother received no prenatal care. Infants of mothers who had an unknown or equivocal response to therapy accounted for 91 (11.4%) of all cases; in 30 of these cases, the infant was evaluated and found to have evidence of CS radiographically or by examination of CSF. The remaining 59 (7.4%) infants were reported to have CS because of inappropriate serologic response to therapy in the mother (*4*), evidence of treatment failure or reinfection, or other reasons. Of the reported 801 infants, 748 (93.4%) were live born, 45 (5.6%) were stillborn; eight (1.0%) of those born alive were reported to have died, six within the first 2 days of life.

Reported by: State and local health depts. Div of Sexually Transmitted Diseases Prevention, National Center for HIV, STD, and TB Prevention, CDC.

Editorial Note: In 1998, CS rates continued a downward trend parallel to the decreased rates for primary and secondary syphilis. Although the South leads other regions in CS reports, the median state-specific rate in this region declined 68.6% since 1992. Historically, the South has had the highest syphilis and CS rates. Factors associated with syphilis include inadequate access to sexually transmitted disease (STD) clinics

Congenital Syphilis — Continued

and STD outreach activities, poor interagency coordination, lack of employment opportunities, and discomfort with discussing STDs (*5*).

Racial/ethnic minorities continue to be affected disproportionally by CS. No biologic association exists between race and the risk for delivering an infant with CS; race serves as a marker for other factors, such as poverty and access to health care, in communities with high syphilis rates (*5–7*). Individual factors, such as illicit drug use and the wantedness of pregnancy, also influence the chances of a mother delivering an infant with CS.

The findings in this report are subject to at least three limitations. First, the analysis includes inconsistent application of the case definition in some areas. Second, maternal treatment history and infant laboratory data reporting were incomplete at times. Third, the case report form does not include questions about important risk information (e.g., drug use, health insurance, and wantedness of pregnancy), although studies that have collected these data have suggested their importance (*8,9*).

CS surveillance is complicated by difficulty in establishing the diagnosis. Most infants born with CS have no signs of the disease at birth. If untreated, symptoms may begin within 3 months after birth and may include anemia, skin rash, hepatosplenomegaly, and nasal discharge. CS is almost entirely preventable with early prenatal screening and treatment (*9*). The primary reason that infants were born with CS in 1998 is because mothers with syphilis during pregnancy either received no prenatal care, syphilis serologic testing was performed too late in pregnancy, or mothers were tested but received late or no follow-up.

Community-based organizations, maternal- and child-health programs, and substance abuse agencies can assist in preventing CS by collaborating with health-care providers to encourage pregnant women to obtain prenatal care the first trimester. Health-care providers who perform pregnancy testing where syphilis rates are high also should perform the rapid plasma reagin card test on-site when a woman has a positive pregnancy test and again the third trimester so that results and treatment can be provided immediately. Health-care providers should treat a pregnant woman with syphilis as a medical emergency. Data reported in this study indicate the need to train prenatal health-care providers in recognizing, treating, and preventing CS, and the need to address social problems associated with syphilis as part of the renewed efforts toward its elimination in the United States (*10*).

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Public Health Dispatch

Multiple Human Exposures to a Rabid Bear Cub at a Petting Zoo and Barnwarming — Iowa, August 1999

On August 27, 1999, a black bear cub, approximately 5–6 months old, died after several hours of acute central nervous system symptoms; preliminary test results available on August 28 indicated the bear had rabies. The bear was part of the Swenson's Wild Midwest Exotic Petting Zoo in Clermont, Iowa (northeastern Iowa). At the petting zoo, visitors fed, wrestled, and may have been nipped by the bear. The bear also was taken to an August 14 barnwarming at the Tharp barn in Holy Cross, Iowa (eastern Iowa), where it reportedly nipped people. An estimated 400 people from 10 states (Arizona, California, Florida, Illinois, Iowa, Minnesota, New Mexico, New York, Ohio, and Wisconsin) and Australia had contact with the bear cub at either the petting zoo or the barnwarming during the 28 days before its death, during which the bear may have transmitted rabies virus.

On the basis of telephone calls to petting zoo visitors who signed the guest register and provided contact information, approximately 150 of the 400 persons were exposed to the bear's saliva and need to obtain vaccine and rabies immune globulin. Public health authorities are attempting to contact petting zoo visitors by telephone and the Internet. However, because not all petting zoo visitors signed the register or provided sufficient information to enable health authorities to locate them, state and local health departments are encouraged to ensure local media coverage to alert persons who had contact with the bear after July 30 to the need for exposure assessment. Persons who attended the barnwarming also need to be assessed for prophylaxis.

Information is available from the emergency telephone number of the Iowa Department of Public Health: (515) 323-4360.

Reported by: Center for Acute Disease Epidemiology, Iowa Dept of Public Health.

Public Health Dispatch

Outbreak of Poliomyelitis — Kunduz, Afghanistan, 1999

Since May 10, 1999, 26 cases of acute flaccid paralysis (AFP), including five cases with isolation of wild poliovirus type 1 and one with type 3, have been reported from Kunduz province in northern Afghanistan. Fifteen (54%) case-patients resided in Kunduz city, and the remaining patients resided in the districts surrounding Kunduz. Although the exact causes for the outbreak are not known, the discontinuation of polio

Public Health Dispatch — Continued

vaccination activities in mid-1997 in northern Afghanistan because of ongoing civil conflict may have facilitated the outbreak.

AFP surveillance was established in northern Afghanistan in early May 1999 and was instrumental in detecting and reporting AFP cases and collecting stool specimens for virus isolation in the World Health Organization network laboratory in Pakistan. To determine the extent of the outbreak, health facilities and nongovernmental organizations providing health care in northern Afghanistan have been asked to immediately report all suspected AFP cases to the Ministry of Public Health. To control the outbreak, a large-scale house-to-house vaccination campaign with oral poliovirus vaccine (OPV), targeting the >130,000 children aged <5 years in the province, was conducted during August 7–12, 1999. A second round is scheduled for September 7–12, 1999.

During 1997–1999, Afghanistan conducted three National Immunization Days (NIDs)*, providing an additional six doses of OPV to most children aged <5 years; however, none of these NIDs covered every district. Because of the conflict, the 1998 NIDs were not conducted in Kunduz and other areas of northern Afghanistan. In 1999, NIDs were conducted in May (round 1) and June (round 2) in all areas of the country and are scheduled again for October (round 3) and November (round 4). These scheduled NIDS will attempt to ensure complete coverage of the country.

Control of the outbreak is complicated by the several thousand internally displaced persons who are now moving into the Kunduz area, following renewed fighting north of Kabul. Efforts are under way to provide OPV vaccine to the children of these displaced families. Two rounds of mopping-up vaccination with OPV in the border districts of Tajikistan and Uzbekistan will be conducted in October and November to minimize any risk for poliovirus importation to these neighboring countries.

Reported by: Ministry of Public Health, Kabul, Afghanistan; Afghanistan Country Office, World Health Organization, Islamabad, Pakistan. Eastern Mediterranean Regional Office, World Health Organization, Alexandria, Egypt. Vaccines and Other Biologicals Department, World Health Organization, Geneva, Switzerland. Respiratory and Enteric Viruses Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Vaccine Preventable Disease Eradication Div, National Immunization Program, CDC.

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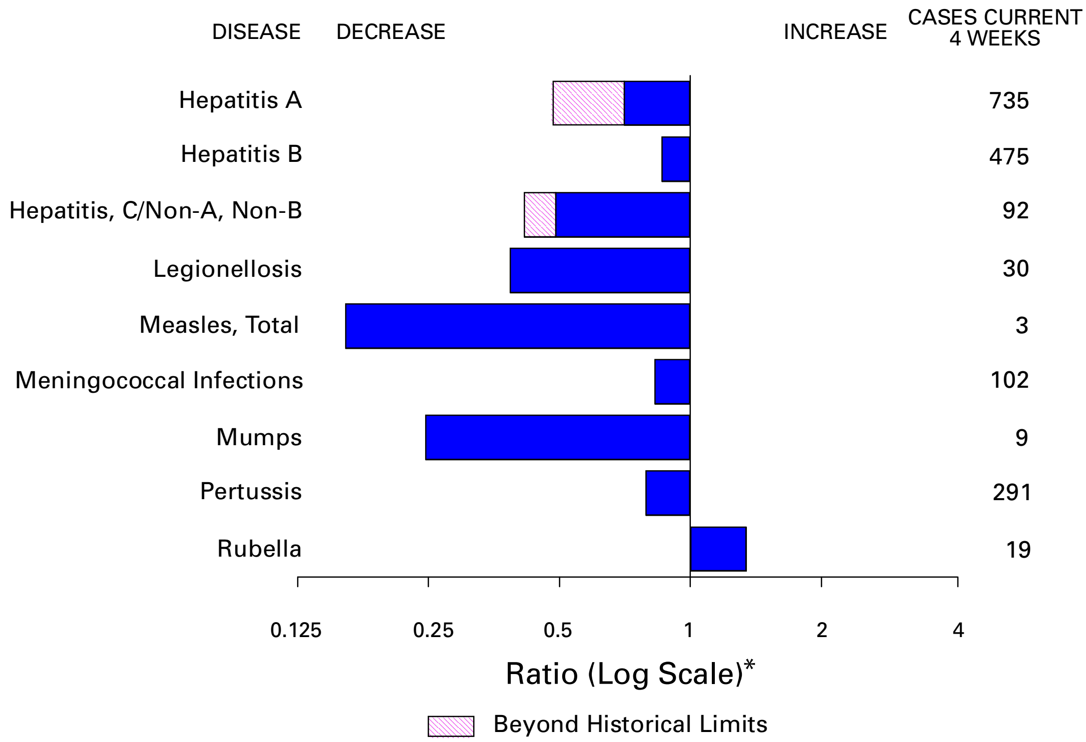
*Mass campaigns over a short period (days to weeks) in which two doses of oral poliovirus vaccine are administered to all children in the target group (usually aged 0–4 years) regardless of previous vaccination history, with an interval of 4–6 weeks between doses.

FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending August 28, 1999, 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 August 28, 1999 (34th Week)

		Cum. 1999		Cum. 1999
Anthrax		-	HIV infection, pediatric*§	86
Brucellosis*		31	Plague	3
Cholera		4	Poliomyelitis, paralytic	-
Congenital rubella syndrome		3	Psittacosis*	15
Cyclosporiasis*		38	Rabies, human	-
Diphtheria		2	Rocky Mountain spotted fever (RMSF)	348
Encephalitis:	California*	15	Streptococcal disease, invasive Group A	1,464
	eastern equine*	2	Streptococcal toxic-shock syndrome*	28
	St. Louis*	-	Syphilis, congenital¶	118
	western equine*	-	Tetanus	19
Ehrlichiosis	human granulocytic (HGE)*	95	Toxic-shock syndrome	78
	human monocytic (HME)*	23	Trichinosis	6
Hansen Disease*		57	Typhoid fever	198
Hantavirus pulmonary syndrome*†		14	Yellow fever	-
Hemolytic uremic syndrome, post-diarrheal*		51		

-: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 from reports to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update July 25, 1999.
¶ Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending August 28, 1999, and August 29, 1998 (34th Week)

	AIDS		Chlamydia		Cryptosporidiosis		*Escherichia coli* O157:H7*			
							NETSS		PHLIS	
Reporting Area	Cum. 1999†	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
UNITED STATES	26,427	30,497	371,677	378,852	1,015	2,467	1,623	1,726	1,107	1,428
NEW ENGLAND	1,298	1,094	12,455	13,264	63	108	182	231	193	195
Maine	43	22	193	644	17	24	18	25	-	-
N.H.	31	25	615	631	8	12	23	31	23	36
Vt.	6	17	310	271	18	18	20	10	12	7
Mass.	842	506	6,053	5,453	20	49	102	111	98	111
R.I.	70	92	1,504	1,520	-	5	19	8	6	1
Conn.	306	432	3,780	4,745	-	-	U	46	54	40
MID. ATLANTIC	6,746	8,609	44,532	39,467	204	374	94	186	37	67
Upstate N.Y.	846	1,008	N	N	78	217	83	128	-	-
N.Y. City	3,592	4,821	21,963	17,321	107	142	5	11	13	12
N.J.	1,278	1,563	6,456	7,638	9	15	6	47	23	42
Pa.	1,030	1,217	16,113	14,508	10	-	N	N	1	13
E.N. CENTRAL	1,719	2,238	55,241	63,970	96	462	328	290	231	246
Ohio	262	459	16,106	17,341	30	50	129	79	96	49
Ind.	224	376	6,667	6,839	18	41	42	64	27	38
Ill.	783	880	18,617	17,307	17	50	93	83	33	54
Mich.	360	389	13,851	13,590	31	24	64	64	41	44
Wis.	90	134	U	8,893	-	297	N	N	34	61
W.N. CENTRAL	611	579	21,373	22,306	88	185	355	255	195	235
Minn.	105	102	4,434	4,529	14	62	133	98	103	108
Iowa	55	51	1,615	2,601	29	43	68	62	37	42
Mo.	295	280	8,595	8,085	17	17	29	31	36	44
N. Dak.	4	4	325	646	12	22	8	7	1	13
S. Dak.	13	13	1,035	1,027	5	19	34	17	13	21
Nebr.	45	56	2,060	1,821	10	18	69	23	-	-
Kans.	94	73	3,309	3,597	1	4	14	17	5	7
S. ATLANTIC	7,281	7,496	80,700	72,803	216	172	194	137	115	117
Del.	95	104	1,779	1,655	-	2	5	-	3	1
Md.	793	899	6,918	5,126	11	12	11	20	-	12
D.C.	274	568	N	N	7	4	-	1	-	-
Va.	372	617	9,666	8,313	12	6	45	-	37	42
W. Va.	40	60	1,148	1,558	-	1	8	7	4	5
N.C.	482	535	14,812	14,528	6	-	40	38	38	35
S.C.	683	501	6,968	12,049	-	-	17	5	13	5
Ga.	1,091	730	19,477	14,876	95	65	18	50	-	-
Fla.	3,451	3,482	19,932	14,698	85	82	50	16	20	17
E.S. CENTRAL	1,145	1,267	27,658	26,360	17	19	83	85	42	49
Ky.	176	192	4,631	4,137	5	8	21	26	-	-
Tenn.	442	431	9,133	8,612	6	6	41	35	26	30
Ala.	287	372	8,221	6,609	4	-	17	19	13	17
Miss.	240	272	5,673	7,002	2	5	4	5	3	2
W.S. CENTRAL	2,858	3,787	52,519	57,403	41	781	52	61	64	73
Ark.	107	136	3,915	2,473	1	6	9	7	7	8
La.	541	651	7,726	9,299	21	11	3	3	11	4
Okla.	74	224	5,418	6,477	4	-	15	11	9	5
Tex.	2,136	2,776	35,460	39,154	15	764	25	40	37	56
MOUNTAIN	1,021	1,028	20,193	21,205	64	91	147	234	75	185
Mont.	5	20	975	793	10	8	8	12	-	4
Idaho	16	19	1,101	1,277	7	16	18	26	8	17
Wyo.	4	1	445	428	-	-	5	49	5	53
Colo.	197	209	4,411	5,236	8	11	50	43	35	39
N. Mex.	65	166	1,748	2,337	25	35	7	17	3	15
Ariz.	518	384	8,338	7,460	9	14	23	31	14	23
Utah	84	70	1,281	1,471	-	-	25	45	8	21
Nev.	132	159	1,894	2,203	5	7	11	11	2	13
PACIFIC	3,748	4,399	57,006	62,074	226	275	188	247	155	261
Wash.	218	267	7,718	7,258	-	-	59	42	64	74
Oreg.	118	129	3,779	3,478	79	31	41	70	37	73
Calif.	3,348	3,876	42,559	48,520	147	241	85	132	47	103
Alaska	13	17	1,217	1,240	-	-	-	3	-	-
Hawaii	51	110	1,733	1,578	-	3	3	-	7	11
Guam	5	-	226	261	-	-	N	N	-	-
P.R.	821	1,243	U	U	-	-	5	3	U	U
V.I.	19	19	N	N	-	-	N	N	U	U
Amer. Samoa	-	-	U	U	-	-	N	N	U	U
C.N.M.I.	-	-	N	N	-	-	N	N	U	U

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

*Individual cases may be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

†Updated monthly from reports to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update July 25, 1999.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending August 28, 1999, and August 29, 1998 (34th Week)

Reporting Area	Gonorrhea		Hepatitis C/NA,NB		Legionellosis		Lyme Disease	
	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
UNITED STATES	200,535	224,572	2,225	2,124	515	845	5,933	9,429
NEW ENGLAND	3,788	3,855	59	47	41	49	1,789	2,936
Maine	15	41	2	-	4	1	22	56
N.H.	64	58	-	-	4	3	5	28
Vt.	34	24	4	2	8	4	9	9
Mass.	1,680	1,384	50	42	16	24	678	595
R.I.	382	238	3	3	3	8	284	308
Conn.	1,613	2,110	-	-	6	9	791	1,940
MID. ATLANTIC	24,548	24,154	97	148	105	211	3,069	4,996
Upstate N.Y.	3,837	4,616	62	75	33	69	2,206	2,641
N.Y. City	9,463	7,717	-	-	9	29	25	156
N.J.	3,621	4,998	-	-	5	13	124	864
Pa.	7,627	6,823	35	73	58	100	714	1,335
E.N. CENTRAL	36,849	43,727	1,157	477	131	287	78	568
Ohio	9,798	11,073	1	7	55	95	53	27
Ind.	3,676	4,038	1	5	21	54	14	24
Ill.	13,383	14,287	25	34	10	35	10	11
Mich.	9,992	10,371	548	320	42	55	1	12
Wis.	U	3,958	582	111	3	48	U	494
W.N. CENTRAL	9,089	10,817	85	26	31	43	89	133
Minn.	1,664	1,686	4	7	4	3	45	96
Iowa	452	860	-	7	11	5	10	21
Mo.	4,448	5,716	72	9	11	11	16	9
N. Dak.	31	51	-	-	-	-	1	-
S. Dak.	120	158	-	-	2	3	-	-
Nebr.	939	742	3	2	3	15	6	3
Kans.	1,435	1,604	6	1	-	6	11	4
S. ATLANTIC	58,696	60,667	146	70	80	100	690	613
Del.	1,110	909	1	-	8	9	19	50
Md.	5,886	5,741	34	8	16	27	492	439
D.C.	1,259	2,941	-	-	1	6	3	4
Va.	6,327	5,506	10	10	17	16	76	43
W. Va.	311	557	13	4	N	N	14	8
N.C.	12,942	12,580	29	17	13	8	52	41
S.C.	3,700	7,587	15	3	7	7	5	3
Ga.	13,070	13,117	1	9	-	7	-	5
Fla.	14,091	11,729	43	19	18	20	29	20
E.S. CENTRAL	22,229	25,224	194	186	31	47	69	68
Ky.	2,030	2,402	12	16	14	23	6	16
Tenn.	7,380	7,504	83	104	14	12	36	29
Ala.	7,315	8,472	1	4	3	5	16	13
Miss.	5,504	6,846	98	62	-	7	11	10
W.S. CENTRAL	28,868	35,317	144	328	3	14	21	17
Ark.	2,002	2,646	8	13	-	1	3	6
La.	6,054	8,053	100	21	1	2	-	3
Okla.	2,665	3,530	12	8	2	8	4	2
Tex.	18,147	21,088	24	286	-	3	14	6
MOUNTAIN	5,806	5,869	98	288	33	47	11	9
Mont.	26	29	4	7	-	2	-	-
Idaho	52	120	6	85	-	2	2	3
Wyo.	14	18	31	68	-	1	3	1
Colo.	1,473	1,323	16	18	9	12	-	-
N. Mex.	379	578	7	69	1	2	1	2
Ariz.	2,982	2,708	21	4	5	9	-	-
Utah	121	157	5	19	12	16	3	-
Nev.	759	936	8	18	6	3	2	3
PACIFIC	10,662	14,942	245	554	60	47	117	89
Wash.	1,330	1,247	12	13	10	9	4	5
Oreg.	525	518	15	13	N	N	10	12
Calif.	8,369	12,635	218	474	49	36	103	71
Alaska	201	213	-	-	1	1	-	1
Hawaii	237	329	-	54	-	1	-	-
Guam	32	38	-	-	-	2	-	-
P.R.	182	264	-	-	-	-	-	-
V.I.	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	26	-	-	-	-	-	-

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

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending August 28, 1999, and August 29, 1998 (34th Week)

Reporting Area	Malaria		Rabies, Animal		Salmonellosis*			
					NETSS		PHLIS	
	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
UNITED STATES	789	895	3,699	4,917	20,641	24,678	17,161	21,746
NEW ENGLAND	30	42	537	945	1,054	1,623	1,220	1,525
Maine	2	3	100	150	87	116	60	43
N.H.	2	3	32	52	89	122	96	166
Vt.	3	-	70	42	60	83	51	68
Mass.	12	16	120	324	753	890	677	900
R.I.	3	2	68	60	65	85	48	31
Conn.	8	18	147	317	U	327	288	317
MID. ATLANTIC	174	262	683	1,087	2,407	4,179	2,202	4,045
Upstate N.Y.	47	55	492	757	727	1,004	714	933
N.Y. City	77	152	U	U	821	1,320	637	1,141
N.J.	29	31	118	136	332	867	442	888
Pa.	21	24	73	194	527	988	409	1,083
E.N. CENTRAL	74	102	81	82	2,761	4,142	2,145	3,097
Ohio	17	9	27	45	760	992	561	804
Ind.	10	10	-	7	300	463	264	375
Ill.	19	43	5	-	1,036	1,271	399	878
Mich.	26	33	46	27	627	770	600	688
Wis.	2	7	3	3	38	646	321	352
W.N. CENTRAL	49	58	488	532	1,445	1,477	1,369	1,541
Minn.	21	29	77	89	418	355	469	413
Iowa	12	7	102	116	170	254	121	204
Mo.	12	12	10	28	431	421	573	573
N. Dak.	-	2	104	102	32	43	4	54
S. Dak.	-	-	117	121	68	65	58	81
Nebr.	-	1	2	6	131	118	-	28
Kans.	4	7	76	70	195	221	144	188
S. ATLANTIC	233	177	1,362	1,633	4,859	4,544	3,366	3,620
Del.	1	1	30	29	90	47	110	88
Md.	67	55	271	326	545	566	542	558
D.C.	13	12	-	-	53	49	-	-
Va.	51	37	344	396	851	650	638	584
W. Va.	1	1	79	59	105	106	105	104
N.C.	15	14	284	428	721	643	770	808
S.C.	8	4	102	98	321	298	262	308
Ga.	21	22	122	166	684	841	651	849
Fla.	56	31	130	131	1,489	1,344	288	321
E.S. CENTRAL	18	20	189	196	1,161	1,333	620	1,055
Ky.	6	4	31	27	268	257	-	124
Tenn.	7	10	64	107	319	364	325	481
Ala.	4	4	94	60	360	422	242	372
Miss.	1	2	-	2	214	290	53	78
W.S. CENTRAL	10	18	77	25	1,414	2,246	1,674	1,894
Ark.	1	1	14	25	305	292	116	232
La.	6	6	-	-	159	262	370	458
Okla.	2	2	63	-	228	277	130	121
Tex.	1	9	-	-	722	1,415	1,058	1,083
MOUNTAIN	29	44	130	153	1,950	1,571	1,333	1,411
Mont.	4	-	46	35	39	60	1	37
Idaho	3	7	-	-	66	76	56	65
Wyo.	1	-	32	49	29	42	22	39
Colo.	11	12	1	22	513	380	519	363
N. Mex.	2	11	6	4	238	194	174	174
Ariz.	5	8	39	31	601	480	508	484
Utah	2	1	4	9	346	210	-	121
Nev.	1	5	2	3	118	129	53	128
PACIFIC	172	172	152	264	3,590	3,563	3,232	3,558
Wash.	17	16	-	-	430	292	576	447
Oreg.	15	13	1	1	312	201	371	239
Calif.	132	137	144	240	2,579	2,894	2,075	2,671
Alaska	1	2	7	23	32	31	6	19
Hawaii	7	4	-	-	237	145	204	182
Guam	-	2	-	-	20	21	-	-
P.R.	-	-	45	34	251	466	-	-
V.I.	U	U	U	U	-	-	-	-
Amer. Samoa	U	U	U	U	-	-	-	-
C.N.M.I.	-	-	-	-	-	23	-	-

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

*Individual cases may be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending August 28, 1999, and August 29, 1998 (34th Week)

Reporting Area	Shigellosis* NETSS Cum. 1999	Shigellosis* NETSS Cum. 1998	Shigellosis* PHLIS Cum. 1999	Shigellosis* PHLIS Cum. 1998	Syphilis (Primary & Secondary) Cum. 1999	Syphilis (Primary & Secondary) Cum. 1998	Tuberculosis Cum. 1999†	Tuberculosis Cum. 1998†
UNITED STATES	8,448	12,541	3,792	7,108	4,012	4,588	9,059	10,559
NEW ENGLAND	352	301	280	267	34	48	264	272
Maine	4	10	-	-	-	1	12	6
N.H.	11	10	8	15	-	1	12	-
Vt.	4	5	3	-	3	4	1	3
Mass.	316	198	221	187	22	30	155	149
R.I.	17	22	9	12	1	1	28	36
Conn.	U	56	39	53	8	11	56	78
MID. ATLANTIC	517	1,658	280	1,352	142	200	1,592	1,885
Upstate N.Y.	163	353	42	111	22	28	181	232
N.Y. City	179	529	82	516	67	41	864	915
N.J.	103	495	98	511	32	68	339	399
Pa.	72	281	58	214	21	63	208	339
E.N. CENTRAL	1,375	1,842	704	961	749	677	801	1,077
Ohio	314	364	78	85	66	93	164	161
Ind.	141	115	42	33	258	125	34	104
Ill.	614	992	354	800	296	280	377	517
Mich.	258	174	165	4	129	130	187	223
Wis.	48	197	65	39	U	49	39	72
W.N. CENTRAL	745	695	494	416	89	92	286	294
Minn.	158	207	177	264	6	6	98	98
Iowa	20	50	16	35	7	-	29	24
Mo.	485	80	268	57	60	73	117	106
N. Dak.	2	6	-	3	-	-	2	6
S. Dak.	10	29	5	20	-	1	9	14
Nebr.	38	299	-	16	6	4	12	11
Kans.	32	24	28	21	10	8	19	35
S. ATLANTIC	1,550	2,734	325	856	1,338	1,681	1,920	1,818
Del.	10	15	5	18	6	17	12	26
Md.	96	131	25	46	247	470	171	196
D.C.	38	15	-	-	33	59	32	72
Va.	75	128	35	62	113	104	131	187
W. Va.	7	11	3	7	2	2	30	29
N.C.	144	214	63	100	341	473	299	271
S.C.	86	107	42	41	159	195	194	202
Ga.	135	764	37	191	225	185	405	325
Fla.	959	1,349	115	391	212	176	646	510
E.S. CENTRAL	814	568	390	375	744	789	597	764
Ky.	180	86	-	45	63	73	111	113
Tenn.	505	107	345	158	425	376	228	243
Ala.	74	337	40	168	152	179	202	264
Miss.	55	38	5	4	104	161	56	144
W.S. CENTRAL	1,114	2,375	868	761	571	677	1,004	1,538
Ark.	57	133	21	35	40	81	110	76
La.	76	151	72	193	121	276	U	127
Okla.	357	214	102	56	136	34	86	117
Tex.	624	1,877	673	477	274	286	808	1,218
MOUNTAIN	566	747	311	485	153	164	271	358
Mont.	7	8	-	3	-	-	10	15
Idaho	17	13	7	11	1	1	14	7
Wyo.	2	1	1	-	-	1	1	4
Colo.	99	118	73	100	1	8	U	41
N. Mex.	80	187	40	91	10	19	42	41
Ariz.	281	372	184	250	133	120	150	135
Utah	38	28	-	22	2	3	27	42
Nev.	42	20	6	8	6	12	27	73
PACIFIC	1,415	1,621	140	1,635	192	260	2,324	2,553
Wash.	68	86	65	103	48	23	126	170
Oreg.	53	93	53	88	6	3	64	83
Calif.	1,269	1,411	-	1,411	135	232	1,985	2,148
Alaska	-	4	-	2	1	1	39	35
Hawaii	25	27	22	31	2	1	110	117
Guam	7	29	-	-	1	1	-	59
P.R.	59	43	-	-	107	132	41	88
V.I.	-	-	-	-	U	U	U	U
Amer. Samoa	-	-	-	-	U	U	U	U
C.N.M.I.	-	16	-	-	-	161	-	74

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

*Individual cases may be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

†Cumulative reports of provisional tuberculosis cases for 1999 are unavailable ("U") for some areas using the Tuberculosis Information System (TIMS).

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending August 28, 1999, and August 29, 1998 (34th Week)

Reporting Area	*H. influenzae,* invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
			A		B		Indigenous		Imported*		Total	
	Cum. 1999†	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	1999	Cum. 1999	1999	Cum. 1999	Cum. 1999	Cum. 1998
UNITED STATES	793	761	9,701	14,738	4,174	6,375	-	37	1	18	55	50
NEW ENGLAND	59	49	142	197	67	131	-	6	-	4	10	3
Maine	5	2	5	15	1	2	U	-	U	-	-	-
N.H.	14	8	10	9	10	11	-	-	-	1	1	-
Vt.	5	5	6	13	2	4	-	-	-	-	-	1
Mass.	22	31	54	80	31	50	-	5	-	2	7	2
R.I.	1	2	13	11	23	43	-	-	-	-	-	-
Conn.	12	1	54	69	-	21	U	1	U	1	2	-
MID. ATLANTIC	125	119	634	1,143	471	846	-	-	-	2	2	13
Upstate N.Y.	61	39	166	232	130	163	U	-	U	2	2	2
N.Y. City	28	35	162	396	139	292	-	-	-	-	-	-
N.J.	35	38	57	229	40	152	U	-	U	-	-	8
Pa.	1	7	249	286	162	239	U	-	U	-	-	3
E.N. CENTRAL	126	131	1,860	2,256	415	939	-	1	-	1	2	15
Ohio	46	42	453	228	66	53	-	-	-	-	-	1
Ind.	20	31	74	105	32	76	U	1	U	-	1	3
Ill.	51	48	340	528	-	162	-	-	-	-	-	-
Mich.	9	5	967	1,246	316	285	-	-	-	1	1	10
Wis.	-	5	26	149	1	363	U	-	U	-	-	1
W.N. CENTRAL	59	69	502	1,063	217	268	-	-	-	-	-	-
Minn.	24	54	45	90	30	30	-	-	-	-	-	-
Iowa	6	2	92	368	27	45	-	-	-	-	-	-
Mo.	21	8	282	483	123	158	-	-	-	-	-	-
N. Dak.	-	-	1	3	-	4	U	-	U	-	-	-
S. Dak.	1	-	8	21	1	1	-	-	-	-	-	-
Nebr.	3	-	40	20	11	11	-	-	-	-	-	-
Kans.	4	5	34	78	25	19	-	-	-	-	-	-
S. ATLANTIC	187	139	1,292	1,226	798	667	-	1	1	4	5	8
Del.	-	-	2	3	-	-	-	-	-	-	-	1
Md.	48	43	243	267	118	97	-	-	-	-	-	1
D.C.	4	-	37	42	14	9	U	-	U	-	-	-
Va.	14	13	103	153	63	72	-	1	-	2	3	2
W. Va.	6	5	26	3	17	5	-	-	-	-	-	-
N.C.	28	22	103	74	147	149	-	-	-	-	-	-
S.C.	3	3	28	22	53	25	U	-	U	-	-	-
Ga.	49	30	314	356	105	122	U	-	U	-	-	2
Fla.	35	23	436	306	281	188	-	-	1	2	2	2
E.S. CENTRAL	51	42	280	274	312	333	-	-	-	-	-	2
Ky.	5	7	50	22	29	33	-	-	-	-	-	-
Tenn.	29	23	142	157	169	186	-	-	-	-	-	1
Ala.	15	10	39	50	56	47	-	-	-	-	-	1
Miss.	2	2	49	45	58	67	-	-	-	-	-	-
W.S. CENTRAL	41	39	1,648	2,606	491	1,416	-	5	-	3	8	-
Ark.	2	-	37	65	33	66	-	-	-	-	-	-
La.	7	17	59	45	72	65	U	-	U	-	-	-
Okla.	28	20	336	385	94	59	-	-	-	-	-	-
Tex.	4	2	1,216	2,111	292	1,226	-	5	-	3	8	-
MOUNTAIN	69	85	905	2,222	416	565	-	2	-	-	2	-
Mont.	1	-	16	72	16	5	-	-	-	-	-	-
Idaho	1	-	31	186	20	23	-	-	-	-	-	-
Wyo.	1	1	4	27	9	3	U	-	U	-	-	-
Colo.	10	17	156	186	62	69	-	-	-	-	-	-
N. Mex.	18	4	33	108	136	221	-	-	-	-	-	-
Ariz.	30	42	544	1,354	112	133	-	1	-	-	1	-
Utah	6	3	35	138	24	51	-	1	-	-	1	-
Nev.	2	18	86	151	37	60	-	-	-	-	-	-
PACIFIC	76	88	2,438	3,751	987	1,210	-	22	-	4	26	9
Wash.	3	6	217	742	44	65	-	-	-	-	-	1
Oreg.	30	36	174	290	58	127	-	9	-	-	9	-
Calif.	35	38	2,032	2,666	863	999	-	12	-	4	16	7
Alaska	5	1	5	15	12	10	-	-	-	-	-	1
Hawaii	3	7	10	38	10	9	-	1	-	-	1	-
Guam	-	-	2	1	2	2	U	1	U	-	1	-
P.R.	1	2	107	46	100	173	-	-	-	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	-	3	-	45	U	-	U	-	-	-

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

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

†Of 155 cases among children aged <5 years, serotype was reported for 77 and of those, 19 were type b.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending August 28, 1999, and August 29, 1998 (34th Week)

	Meningococcal Disease		Mumps			Pertussis			Rubella		
Reporting Area	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998
UNITED STATES	1,654	1,868	2	218	476	73	3,381	3,730	2	188	329
NEW ENGLAND	84	82	-	4	4	9	404	649	-	7	38
Maine	5	5	U	-	-	U	-	5	U	-	-
N.H.	12	10	-	1	-	2	69	51	-	-	-
Vt.	4	1	-	1	-	2	38	59	-	-	-
Mass.	47	38	-	2	3	5	266	496	-	7	8
R.I.	4	3	-	-	-	-	20	7	-	-	1
Conn.	12	25	U	-	1	U	11	31	U	-	29
MID. ATLANTIC	154	197	-	25	171	-	613	393	-	21	143
Upstate N.Y.	40	51	U	6	3	U	527	206	U	17	113
N.Y. City	42	24	-	3	153	-	10	23	-	-	16
N.J.	39	47	U	-	6	U	12	11	U	1	13
Pa.	33	75	U	16	9	U	64	153	U	3	1
E.N. CENTRAL	259	300	-	27	59	1	292	463	-	2	-
Ohio	111	107	-	11	21	1	149	169	-	-	-
Ind.	37	52	U	3	5	U	37	71	U	1	-
Ill.	76	80	-	6	9	-	46	47	-	1	-
Mich.	34	37	-	7	22	-	33	45	-	-	-
Wis.	1	24	U	-	2	U	27	131	U	-	-
W.N. CENTRAL	179	162	-	10	24	17	171	290	-	83	32
Minn.	38	28	-	1	12	16	78	168	-	5	-
Iowa	32	27	-	4	8	1	26	57	-	28	-
Mo.	69	60	-	2	3	-	36	22	-	2	2
N. Dak.	3	3	U	-	1	U	4	3	U	-	-
S. Dak.	10	6	-	-	-	-	5	8	-	-	-
Nebr.	9	11	-	-	-	-	1	10	-	48	-
Kans.	18	27	-	3	-	-	21	22	-	-	30
S. ATLANTIC	291	305	1	38	32	11	261	186	1	32	13
Del.	6	1	-	-	-	-	4	3	-	-	-
Md.	43	24	-	3	-	-	70	32	-	1	1
D.C.	1	-	U	2	-	U	-	1	U	-	-
Va.	35	26	-	8	5	-	13	9	-	-	-
W. Va.	4	12	-	-	-	-	2	1	-	-	-
N.C.	32	46	-	8	9	-	63	74	1	31	9
S.C.	33	45	U	3	5	U	13	22	U	-	-
Ga.	49	68	U	3	1	U	25	10	U	-	-
Fla.	88	83	1	11	12	11	71	34	-	-	3
E.S. CENTRAL	115	131	-	8	13	2	64	86	-	1	1
Ky.	22	22	-	-	-	-	16	36	-	-	-
Tenn.	47	48	-	-	1	2	29	26	-	-	1
Ala.	27	38	-	7	7	-	15	20	-	1	-
Miss.	19	23	-	1	5	-	4	4	-	-	-
W.S. CENTRAL	143	215	1	29	44	8	120	233	-	7	87
Ark.	30	26	-	-	7	-	14	42	-	-	-
La.	34	42	U	3	5	U	3	3	U	-	-
Okla.	25	30	-	1	-	-	12	20	-	-	-
Tex.	54	117	1	25	32	8	91	168	-	7	87
MOUNTAIN	101	105	-	12	30	24	384	647	-	16	5
Mont.	2	4	-	-	-	-	2	5	-	-	-
Idaho	8	7	-	1	4	-	93	168	-	-	-
Wyo.	3	5	U	-	1	U	2	8	U	-	-
Colo.	27	21	-	3	6	3	122	172	-	1	-
N. Mex.	13	17	N	N	N	18	80	76	-	-	1
Ariz.	29	35	-	-	5	-	30	140	-	13	1
Utah	13	10	-	5	4	3	52	46	-	1	2
Nev.	6	6	-	3	10	-	3	32	-	1	1
PACIFIC	328	371	-	65	99	1	1,072	783	1	19	10
Wash.	51	51	-	2	7	1	540	221	-	-	5
Oreg.	57	62	N	N	N	-	27	57	-	-	-
Calif.	211	252	-	52	72	-	479	480	-	4	3
Alaska	5	2	-	1	2	-	4	12	-	-	-
Hawaii	4	4	-	10	18	-	22	13	1	15	2
Guam	1	2	U	1	2	U	1	-	U	-	-
P.R.	5	9	-	-	2	-	16	4	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	U	-	2	U	-	1	U	-	-

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

TABLE IV. Deaths in 122 U.S. cities,* week ending August 28, 1999 (34th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	458	320	82	35	11	10	30
Boston, Mass.	132	80	28	13	6	5	8
Bridgeport, Conn.	38	26	7	4	1	-	1
Cambridge, Mass.	11	8	2	1	-	-	-
Fall River, Mass.	23	20	3	-	-	-	1
Hartford, Conn.	U	U	U	U	U	U	U
Lowell, Mass.	22	17	3	2	-	-	2
Lynn, Mass.	12	10	2	-	-	-	1
New Bedford, Mass.	22	20	-	1	1	-	1
New Haven, Conn.	35	23	8	2	1	1	1
Providence, R.I.	60	48	8	-	-	4	5
Somerville, Mass.	8	5	3	-	-	-	-
Springfield, Mass.	26	13	9	3	1	-	1
Waterbury, Conn.	19	12	3	3	1	-	-
Worcester, Mass.	50	38	6	6	-	-	9
MID. ATLANTIC	2,111	1,441	404	173	50	41	73
Albany, N.Y.	49	35	9	2	2	1	1
Allentown, Pa.	U	U	U	U	U	U	U
Buffalo, N.Y.	U	U	U	U	U	U	U
Camden, N.J.	38	23	6	5	2	2	2
Elizabeth, N.J.	11	5	3	3	-	-	-
Erie, Pa.	40	32	3	1	3	1	5
Jersey City, N.J.	55	29	8	5	2	11	-
New York City, N.Y.	1,042	700	218	87	21	15	23
Newark, N.J.	U	U	U	U	U	U	U
Paterson, N.J.	19	14	1	3	-	1	-
Philadelphia, Pa.	484	336	82	47	13	6	20
Pittsburgh, Pa.§	37	24	8	3	1	1	1
Reading, Pa.	28	21	4	3	-	-	1
Rochester, N.Y.	129	95	25	7	2	-	6
Schenectady, N.Y.	U	U	U	U	U	U	U
Scranton, Pa.	35	28	5	-	1	-	1
Syracuse, N.Y.	99	72	17	4	3	3	8
Trenton, N.J.	32	18	11	3	-	-	5
Utica, N.Y.	13	9	4	-	-	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	1,340	938	250	83	31	38	73
Akron, Ohio	44	30	10	3	-	1	-
Canton, Ohio	44	31	9	1	1	2	4
Chicago, Ill.	U	U	U	U	U	U	U
Cincinnati, Ohio	128	85	30	2	2	9	12
Cleveland, Ohio	122	74	31	11	3	3	2
Columbus, Ohio	174	122	31	14	5	2	10
Dayton, Ohio	109	76	18	9	3	3	5
Detroit, Mich.	U	U	U	U	U	U	U
Evansville, Ind.	34	25	6	2	1	-	-
Fort Wayne, Ind.	70	48	10	7	3	2	4
Gary, Ind.	20	14	2	3	1	-	1
Grand Rapids, Mich.	45	32	9	2	1	1	3
Indianapolis, Ind.	131	87	26	9	3	6	4
Lansing, Mich.	28	20	5	2	1	-	1
Milwaukee, Wis.	116	89	20	3	2	2	13
Peoria, Ill.	47	31	11	4	1	-	2
Rockford, Ill.	59	36	14	4	2	3	2
South Bend, Ind.	48	39	4	2	2	1	1
Toledo, Ohio	69	55	8	4	-	2	7
Youngstown, Ohio	52	44	6	1	-	1	2
W.N. CENTRAL	575	412	109	30	14	9	38
Des Moines, Iowa	49	33	10	3	2	1	4
Duluth, Minn.	20	16	1	2	-	1	1
Kansas City, Kans.	U	U	U	U	U	U	U
Kansas City, Mo.	114	83	20	6	2	2	9
Lincoln, Nebr.	43	29	11	3	-	-	-
Minneapolis, Minn.	176	127	33	10	4	2	12
Omaha, Nebr.	89	63	18	5	2	1	4
St. Louis, Mo.	U	U	U	U	U	U	U
St. Paul, Minn.	84	61	16	1	4	2	8
Wichita, Kans.	U	U	U	U	U	U	U
S. ATLANTIC	888	571	199	69	23	26	40
Atlanta, Ga.	U	U	U	U	U	U	U
Baltimore, Md.	130	76	34	13	4	3	8
Charlotte, N.C.	97	52	26	13	4	2	5
Jacksonville, Fla.	149	105	28	9	3	4	8
Miami, Fla.	U	U	U	U	U	U	U
Norfolk, Va.	36	27	5	2	-	2	1
Richmond, Va.	68	46	16	2	2	2	5
Savannah, Ga.	48	31	9	4	1	3	-
St. Petersburg, Fla.	88	66	15	1	-	6	4
Tampa, Fla.	174	115	34	17	7	1	8
Washington, D.C.	98	53	32	8	2	3	1
Wilmington, Del.	U	U	U	U	U	U	U
E.S. CENTRAL	651	426	141	53	21	6	29
Birmingham, Ala.	177	115	40	13	6	-	7
Chattanooga, Tenn.	97	67	17	6	5	1	4
Knoxville, Tenn.	71	48	14	7	1	1	-
Lexington, Ky.	58	33	16	4	1	4	3
Memphis, Tenn.	U	U	U	U	U	U	U
Mobile, Ala.	89	59	19	7	4	-	2
Montgomery, Ala.	44	31	9	4	-	-	3
Nashville, Tenn.	115	73	26	12	4	-	10
W.S. CENTRAL	1,506	989	305	120	49	43	61
Austin, Tex.	72	50	17	1	1	3	2
Baton Rouge, La.	51	34	9	5	1	2	1
Corpus Christi, Tex.	34	25	5	4	-	-	2
Dallas, Tex.	242	140	53	32	6	11	2
El Paso, Tex.	55	42	9	4	-	-	4
Ft. Worth, Tex.	106	72	15	11	1	7	-
Houston, Tex.	326	211	78	23	8	6	19
Little Rock, Ark.	72	40	22	4	2	4	2
New Orleans, La.	142	83	27	15	13	4	8
San Antonio, Tex.	241	169	40	17	11	4	13
Shreveport, La.	50	36	9	2	2	1	-
Tulsa, Okla.	115	87	21	2	4	1	8
MOUNTAIN	835	540	164	84	24	22	43
Albuquerque, N.M.	105	67	24	10	4	-	2
Boise, Idaho	U	U	U	U	U	U	U
Colo. Springs, Colo.	58	36	11	5	3	3	2
Denver, Colo.	99	70	16	9	2	2	10
Las Vegas, Nev.	213	121	57	21	7	6	13
Ogden, Utah	28	21	2	3	-	2	2
Phoenix, Ariz.	77	49	12	10	3	3	-
Pueblo, Colo.	20	16	3	-	-	1	2
Salt Lake City, Utah	94	62	16	13	2	1	8
Tucson, Ariz.	141	98	23	13	3	4	4
PACIFIC	1,233	873	227	81	24	28	81
Berkeley, Calif.	10	8	1	1	-	-	1
Fresno, Calif.	80	57	15	6	-	2	7
Glendale, Calif.	20	16	4	-	-	-	1
Honolulu, Hawaii	72	54	17	-	1	-	3
Long Beach, Calif.	74	49	12	7	4	2	8
Los Angeles, Calif.	313	229	53	19	5	7	23
Pasadena, Calif.	17	11	6	-	-	-	4
Portland, Oreg.	119	83	19	13	2	2	4
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	122	80	22	9	4	7	9
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	125	96	14	11	-	4	8
Santa Cruz, Calif.	27	24	3	-	-	-	2
Seattle, Wash.	116	80	26	7	2	1	2
Spokane, Wash.	58	36	15	3	2	2	5
Tacoma, Wash.	80	50	20	5	4	1	4
TOTAL	9,597¶	6,510	1,881	728	247	223	468

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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