

# MMWR™

MORBIDITY AND MORTALITY WEEKLY REPORT

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## The Great American Smokeout — November 19, 1998

In 1995, an estimated 47 million U.S. adults smoked cigarettes; in 1997, at least 4.5 million U.S. adolescents were cigarette smokers (1,2). Since 1977, the American Cancer Society (ACS) has sponsored the Great American Smokeout to promote community-based activities designed to encourage smokers to refrain from smoking cigarettes for at least 24 hours. In 1997, nearly 11.3 million smokers (approximately 24% of smokers) reported participating in the Smokeout, and 19% of participants reported smoking less or not at all 1–5 days after the Smokeout (3). This year, the Great American Smokeout on Thursday, November 19, will focus on preventing the use of all tobacco products and encouraging children and adolescents never to start using tobacco.

As part of the Great American Smokeout, ACS volunteers will conduct smoking-prevention and smoking-cessation activities for persons of all ages at shopping malls, worksites, hospitals, military installations, and other locations. Activities will include the ACS *Commit to Quit* program, which helps smokers select a method of quitting that meets their personal needs.

Additional information is available from ACS, telephone (800) 227-2345; CDC, telephone (800) 232-1311 or (770) 488-5705; or the ACS Great American Smokeout World-Wide Web site <http://www.cancer.org>.

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

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### **State-Specific Prevalence Among Adults of Current Cigarette Smoking and Smokeless Tobacco Use and Per Capita Tax-Paid Sales of Cigarettes — United States, 1997**

In the United States each year, tobacco use causes approximately 400,000 deaths and is the single most preventable cause of death and disease (1,2). Consequently, state and local public health agencies closely monitor tobacco use and its correlates (3). In 1996, the prevalence of current cigarette smoking among adults was the first health behavior and the first noninfectious condition added by the Council of State and Territorial Epidemiologists (CSTE) to the list of nationally notifiable conditions reported to CDC (4). In 1998, per capita sales of cigarettes (along with prevalence among youth of current cigarette smoking and current smokeless tobacco use) was added by CSTE to the list of notifiable conditions reported by states to CDC. This report summarizes state-specific findings for current cigarette and current smokeless tobacco use by adults from the Behavioral Risk Factor Surveillance System (BRFSS) and number of packs of tax-paid cigarettes sold per capita in each state from data compiled annually by The Tobacco Institute. The findings indicate that current adult cigarette smoking prevalence by state ranged from 13.7% to 30.8%, annual per capita tax-paid cigarette sales ranged from 49.1 packs to 186.8 packs, and adult smokeless tobacco use prevalence ranged from 1.4% to 8.8%.

State- and sex-specific prevalences of current cigarette smoking and current smokeless tobacco use among adults are available from the 1997 BRFSS. The BRFSS is a state-specific, random-digit-dialed telephone survey of health behaviors of the civilian, noninstitutionalized U.S. population aged  $\geq 18$  years (5) conducted by state health departments with assistance from CDC. In 1996 and 1997, respondents were asked, "Have you smoked at least 100 cigarettes in your entire life?" and "Do you now smoke cigarettes every day, some days, or not at all?" Current cigarette smokers were defined as persons who reported having smoked at least 100 cigarettes during their lifetime and who currently smoke every day or some days. To determine current smokeless tobacco use, respondents were asked, "Have you ever used or tried any smokeless tobacco products such as chewing tobacco or snuff?" and "Do you currently use any smokeless tobacco products such as chewing tobacco or snuff?" Current smokeless tobacco users were defined as persons who reported having ever used or tried any smokeless tobacco product and who currently use a smokeless tobacco product. To estimate prevalence, responses for each state were weighted to the current age, race, and sex distribution of the state's population (i.e., crude prevalence). To allow comparison of findings across states that had different age distributions, age-adjusted prevalences for each state were estimated by using direct standardization to 10-year age groups of the U.S. population in 1997 derived from U.S. census estimates (6). The number of packs of tax-paid cigarettes sold per capita in each state is compiled yearly by The Tobacco Institute by using information on federal, state, and local excise taxes and total population estimates (7).

In 1997, the median state prevalence of current cigarette smoking by adults was 23.2%; prevalence was 25.5% for men and 21.3% for women (Table 1). The crude median prevalence of current cigarette smoking was similar in 1997 and in 1996 (25.5% for men, 22.0% for women, and 23.6% for both groups combined) (4). In 1997, for

## Cigarettes Smoking and Smokeless Tobacco Use — Continued

**TABLE 1. Prevalence of current cigarette smoking\* among adults, by state and sex, and per capita tax-paid sales of cigarettes, by state† — United States, 1997**

State	Men		Women		Total		Per capita tax-paid sales of cigarettes (in packs)
	%	(95% CI) <sup>‡</sup>	%	(95% CI)	%	(95% CI)	
Alabama	28.6	(±3.3)	21.3	(±2.5)	24.7	(±2.0)	104.9
Alaska	27.4	(±4.9)	25.8	(±4.3)	26.7	(±3.3)	81.7
Arizona	22.1	(±3.9)	20.2	(±3.6)	21.1	(±2.5)	64.6
Arkansas	32.1	(±4.4)	25.2	(±3.0)	28.5	(±2.6)	108.7
California	22.4	(±2.3)	14.5	(±1.6)	18.4	(±1.4)	53.8
Colorado	24.0	(±3.2)	21.2	(±3.0)	22.6	(±2.2)	81.3
Connecticut	21.4	(±3.2)	22.2	(±2.7)	21.8	(±2.1)	75.9
Delaware	29.3	(±3.5)	24.2	(±2.5)	26.6	(±2.1)	124.1
District of Columbia	22.7	(±4.0)	15.5	(±2.8)	18.8	(±2.4)	54.3
Florida	26.0	(±2.6)	21.4	(±1.9)	23.6	(±1.6)	93.0
Georgia	25.2	(±3.2)	19.9	(±2.7)	22.4	(±2.1)	100.6
Hawaii	21.4	(±2.9)	15.8	(±2.5)	18.6	(±1.9)	49.1
Idaho	21.8	(±2.2)	18.0	(±1.9)	19.9	(±1.4)	75.0
Illinois	25.0	(±2.7)	21.6	(±2.2)	23.2	(±1.7)	79.6
Indiana	29.2	(±3.2)	23.7	(±2.7)	26.3	(±2.1)	135.3
Iowa	25.5	(±2.4)	20.9	(±2.0)	23.1	(±1.6)	93.9
Kansas	26.8	(±3.4)	18.9	(±2.3)	22.7	(±2.0)	89.2
Kentucky	33.1	(±2.9)	28.7	(±2.1)	30.8	(±1.8)	186.8
Louisiana	29.3	(±4.1)	20.4	(±2.7)	24.6	(±2.4)	105.3
Maine	25.2	(±3.3)	20.4	(±2.8)	22.7	(±2.2)	101.1
Maryland	21.8	(±2.4)	19.4	(±2.0)	20.6	(±1.6)	72.7
Massachusetts	21.8	(±3.7)	19.2	(±2.6)	20.4	(±2.2)	66.7
Michigan	29.6	(±3.0)	22.8	(±2.2)	26.1	(±1.9)	75.6
Minnesota	24.1	(±2.0)	19.8	(±1.6)	21.8	(±1.3)	84.1
Mississippi	28.3	(±4.2)	18.6	(±2.8)	23.2	(±2.5)	106.3
Missouri	31.7	(±4.1)	26.0	(±2.9)	28.7	(±2.5)	120.6
Montana	20.8	(±3.0)	20.2	(±2.6)	20.5	(±2.0)	88.9
Nebraska	24.4	(±3.1)	20.2	(±2.6)	22.2	(±2.0)	88.5
Nevada	25.7	(±5.0)	29.8	(±4.6)	27.7	(±3.4)	95.6
New Hampshire	26.0	(±4.1)	23.7	(±3.0)	24.8	(±2.5)	174.4
New Jersey	23.3	(±3.0)	19.8	(±2.3)	21.5	(±1.9)	77.0
New Mexico	21.6	(±3.2)	22.6	(±2.7)	22.1	(±2.1)	61.8
New York	25.0	(±2.6)	21.5	(±2.0)	23.1	(±1.6)	64.5
North Carolina	29.7	(±2.7)	22.3	(±2.0)	25.8	(±1.7)	125.6
North Dakota	24.3	(±3.2)	20.3	(±2.7)	22.2	(±2.1)	77.5
Ohio	26.3	(±3.2)	24.0	(±2.5)	25.1	(±2.0)	108.6
Oklahoma	25.2	(±3.7)	24.1	(±3.0)	24.6	(±2.4)	111.8
Oregon	22.1	(±2.7)	19.4	(±2.1)	20.7	(±1.7)	89.5
Pennsylvania	26.2	(±2.6)	22.5	(±2.0)	24.3	(±1.6)	92.9
Rhode Island	25.6	(±3.6)	23.0	(±3.2)	24.2	(±2.4)	90.0
South Carolina	29.5	(±3.5)	17.8	(±2.3)	23.4	(±2.1)	124.5
South Dakota	28.1	(±3.3)	20.8	(±2.6)	24.3	(±2.1)	88.8
Tennessee	27.9	(±3.1)	26.0	(±2.2)	26.9	(±1.9)	118.9
Texas	28.0	(±3.1)	17.5	(±2.2)	22.6	(±1.9)	72.6
Utah	16.1	(±2.4)	11.5	(±2.0)	13.7	(±1.6)	57.0
Vermont	25.1	(±2.9)	21.5	(±2.4)	23.2	(±1.9)	97.7
Virginia	26.2	(±3.4)	23.1	(±2.6)	24.6	(±2.1)	108.0
Washington	25.1	(±2.8)	22.7	(±2.2)	23.9	(±1.8)	55.6
West Virginia	27.1	(±3.1)	27.7	(±2.6)	27.4	(±2.0)	114.5
Wisconsin	25.6	(±3.4)	21.0	(±2.8)	23.2	(±2.2)	91.9
Wyoming	24.0	(±3.8)	24.1	(±2.8)	24.0	(±2.4)	108.8

\* Percentage of persons aged ≥18 years who reported having smoked ≥100 cigarettes during their lifetime and who currently smoke every day or some days. Estimates are weighted to the age, race, and sex distribution of the state population (crude prevalence). Source: Behavioral Risk Factor Surveillance System.

† Source: The Tobacco Institute. Data are for July 1, 1996, through June 30, 1997 (7).

‡ Confidence interval.

*Cigarettes Smoking and Smokeless Tobacco Use — Continued*

every state except Florida, the crude prevalence of current cigarette smoking was within 1% of the age-adjusted prevalence for that state.

Current adult cigarette smoking prevalence differed approximately twofold across the states (Table 1). In 1997, the current cigarette smoking prevalence was highest in Kentucky (30.8%), Missouri (28.7%), Arkansas (28.5%), Nevada (27.7%), and West Virginia (27.4%), and lowest in Utah (13.7%), California (18.4%), Hawaii (18.6%), the District of Columbia (18.8%), and Idaho (19.9%). The current cigarette smoking prevalence for men was highest in Kentucky (33.1%), and for women in Nevada (29.8%). For both men and women, current smoking prevalence was lowest in Utah.

Per capita tax-paid sales of cigarettes for July 1, 1996, through June 30, 1997, varied approximately fourfold across the states (Table 1). The state median tax-paid cigarette sales was 90 packs per person per year. Sales were highest in Kentucky (186.8 packs) and lowest in Hawaii (49.1 packs).

Questions about current adult smokeless tobacco use were included in the 1997 BRFSS in 17 states (Table 2). The difference in prevalence was more than sixfold (from 1.4% in Arizona to 8.8% in West Virginia). Among men, the prevalence of current smokeless tobacco use was highest in West Virginia (18.4%) and Wyoming (14.7%); five states (Alabama, Alaska, Kansas, Kentucky, and Montana) reported prevalences of 9%–12%, and 10 states reported prevalences of ≤8%. For women, the prevalence of current smokeless tobacco use was ≤1.7% in all 17 states.

*Reported by the following BRFSS coordinators: J Cook, Alabama, MBA; P Owen, Alaska; B Bender, MBA, Arizona; J Senner, PhD, Arkansas; B Davis, PhD, California; M Leff, MSPH, Colorado; M Adams, MPH, Connecticut; F Breukelman, Delaware; C Mitchell, District of Colum-*

**TABLE 2. Prevalence of current smokeless tobacco use\* among adults, by state and sex — United States, 1997**

State	Men		Women		Total	
	%	(95% CI <sup>†</sup> )	%	(95% CI)	%	(95% CI)
Alabama	9.9	(±2.2)	1.4	(±0.7)	5.4	(±1.1)
Alaska	9.2	(±3.2)	1.6	(±1.0)	5.5	(±1.7)
Arizona	2.6	(±1.3)	0.3	(±0.3)	1.4	(±0.7)
Georgia	6.4	(±1.8)	1.7	(±0.9)	4.0	(±1.0)
Indiana	6.8	(±1.7)	0.0	(±0.0)	3.2	(±0.8)
Kansas	10.3	(±2.5)	0.2	(±0.3)	5.1	(±1.2)
Kentucky	12.2	(±3.0)	0.6	(±0.5)	6.1	(±1.5)
Louisiana	7.6	(±2.1)	0.3	(±0.4)	3.7	(±1.1)
Montana	10.5	(±2.5)	0.2	(±0.3)	5.3	(±1.3)
Ohio	5.1	(±1.6)	0.0	(±0.1)	2.4	(±0.8)
Oklahoma	7.7	(±2.2)	0.3	(±0.3)	3.8	(±1.1)
Pennsylvania	7.4	(±1.7)	0.4	(±0.3)	3.8	(±0.9)
South Carolina	4.8	(±1.7)	1.0	(±0.6)	2.8	(±0.9)
Virginia	6.1	(±1.4)	0.1	(±0.1)	3.0	(±0.7)
Washington	5.6	(±1.4)	0.2	(±0.2)	2.9	(±0.7)
West Virginia	18.4	(±2.6)	0.2	(±0.2)	8.8	(±1.3)
Wyoming	14.7	(±2.3)	0.7	(±0.4)	7.6	(±1.2)

\*Percentage of persons aged ≥18 years who reported having ever used or tried smokeless tobacco products such as chewing tobacco or snuff and who currently use a smokeless tobacco product. Estimates are weighted to the age, race, and sex distribution of the state population (crude prevalence). Source: Behavioral Risk Factor Surveillance System.

<sup>†</sup>Confidence interval.

*Cigarettes Smoking and Smokeless Tobacco Use — Continued*

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**Editorial Note:** This report includes information about two CSTE-recommended indicators of tobacco use for all states (current cigarette smoking by adults and per capita tax-paid sales of cigarettes) and current smokeless tobacco use among adults for 17 states. Information on cigarette and smokeless tobacco use by youth in 1997 is available elsewhere (8). National surveys provide information about tobacco use and are useful for monitoring overall trends, but their effectiveness is limited for monitoring state-level year-to-year changes in tobacco consumption. National surveys also mask the twofold variation in current adult cigarette smoking prevalence among the states.

In the BRFSS, the crude and age-adjusted prevalences of current adult cigarette smoking were similar, indicating that differences in prevalence among states are related primarily to factors other than differences in adult age distributions. Although the median prevalence for current cigarette smoking among adults was nearly the same in 1996 and 1997, the twofold difference in prevalence among states, the wide variation in per capita tax-paid cigarette sales, and the wide variation in smokeless tobacco prevalence among adults suggest that further reductions in tobacco use are achievable.

The findings in this report are subject to at least three limitations. First, the BRFSS standardizes procedures among states, but the quality and completeness of the surveys can vary by state and year. Second, the changes in questions about current cigarette use in 1996 limit comparisons with previous years (9). Finally, estimates of per capita tax-paid cigarette sales provide populationwide rather than individual-based estimates of behaviors; because these estimates are based on tax revenues they may not accurately estimate actual consumption (10).

By monitoring tobacco-related health effects, policy changes, and public attitudes at state and local levels, tobacco-related activities can be evaluated and public health programs can be tailored to local populations. CDC and state health departments are working together to improve state-specific measures of tobacco-related health outcomes, policy interventions, and related activities to improve the prevention and control of tobacco use. In 1999, CDC will provide all states with funding for tobacco-use prevention and control programs. CDC also is collaborating with states that have other sources of funding for activities related to tobacco-use prevention to develop effective public health intervention, surveillance, and evaluation activities.

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*Cigarettes Smoking and Smokeless Tobacco Use — Continued*

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### **Nosocomial *Burkholderia cepacia* Infection and Colonization Associated with Intrinsically Contaminated Mouthwash — Arizona, 1998**

During August 1996–June 1998, 74 patients at two hospitals in Arizona had cultures positive for *Burkholderia cepacia*. Most isolates were from the respiratory tracts of patients in intensive-care units (ICUs). Because of the large number of *B. cepacia* isolates, personnel at both hospitals requested the Arizona Department of Health Services assist in an investigation. This report summarizes the results of the investigation.

A case of infection or colonization was defined as a positive culture for *B. cepacia* from the respiratory tract of any ICU patient at these hospitals during August 31, 1996–June 12, 1998 (epidemic period). Hospital microbiology records were reviewed to identify all isolates of *B. cepacia* during the pre-epidemic (January 1, 1994–August 30, 1996) and epidemic periods. Case-patient medical records, respiratory therapy procedures, and ICU nursing procedures were reviewed.

A total of 69 patients had positive cultures and had illness that met the case definition, compared with one ICU patient during the pre-epidemic period. Case-patients ranged in age from 17 to 87 years (median: 73 years), and 36 (52%) were male. Case-patients were admitted to the ICU with various diagnoses. None had medical conditions associated with infection with *B. cepacia* (e.g., cystic fibrosis or chronic granulomatous disease). Hospital clinicians identified 33 (48%) case-patients as having infections and 36 case-patients as having *B. cepacia* respiratory tract colonization.

All case-patients had been intubated and mechanically ventilated during their ICU stay. All mechanically ventilated patients had received routine oral care that included swabbing with an alcohol-free mouthwash (Kentron Alcohol Free Mouthwash and Gargle™, product #711-04, manufactured for Kentron Health Care, Inc., Phoenix Cosmetics, Holbrook, New York). The active ingredient in this product is cetyl pyridium chloride; the formulation does not contain alcohol. This product was produced only during 1994–1995 and was distributed throughout the United States. The extent of use of this product in ICU patients at other hospitals is unknown.

*Burkholderia cepacia* Infection and Colonization — Continued

Cultures of unopened 4-oz. bottles of the mouthwash grew *B. cepacia*, *Alcaligenes xylosoxidans*, and *Pseudomonas fluorescens putida* group. *B. cepacia* isolates from case-patients and mouthwash were similar by pulsed-field gel electrophoresis. Other potential reservoirs (e.g., lotion, povidone-iodine solution, water supplies, and a name-brand mouthwash) were culture-negative for *B. cepacia*.

On June 12, the two hospitals discontinued use of the product, and no further respiratory isolates of *B. cepacia* have occurred in their ICU patients. On June 16, the Kentron company initiated a voluntary recall of this product.

Reported by: L Matrician, G Ange, S Burns, L Fanning; C Kioski, G Cage, G Harter, D Reese, D McFall, K Komatsu, R Englund, State Epidemiologist, Arizona Dept of Health Svcs. Investigation Br, Phoenix Resident Post, Food and Drug Administration. Hospital Infections Program, National Center for Infectious Diseases; and an EIS Officer, CDC.

**Editorial Note:** *B. cepacia* (formerly *Pseudomonas cepacia*) is a motile aerobic gram-negative bacillus commonly found in liquid reservoirs and moist environments. *B. cepacia* is a well-known nosocomial pathogen that is intrinsically resistant to aminoglycosides and first- and second-generation cephalosporins; it is responsible for 0.6% of all ventilator-associated pneumonias (1; CDC, unpublished data, 1994). Numerous outbreaks of *B. cepacia* infection have been reported among cystic fibrosis patients (1–3). In December 1995, a similar outbreak involving *B. cepacia* in respiratory cultures from patients without cystic fibrosis was traced to intrinsically contaminated alcohol-free mouthwash prepared by a different manufacturer (4). An investigation by the Food and Drug Administration (FDA) suggested an association with the deionization procedure of the water used to prepare the product (R. Johnson, FDA, personal communication, 1998).

Potential pathogens may be present in low numbers in many nonsterile products used in hospitals. Mechanically ventilated patients are vulnerable to pathogens in their mouths and upper airways because of their inability to maintain the mucociliary and cough mechanisms that normally protect the lower respiratory tract (5). These outbreaks of *B. cepacia* related to mouthwash highlight the increased risk for respiratory colonization and infection among patients on ventilators. Hospital surveillance and investigation of unusual clusters are crucial to promptly identifying unexpected sources of these pathogens and protecting patients at risk.

Clinicians who detect ventilator-associated pneumonia or respiratory colonization with *B. cepacia* associated with the use of nonalcohol containing mouthwash are encouraged to report such episodes through local and state health departments to CDC's Hospital Infections Program, National Center for Infectious Diseases, telephone (404) 639-6413; fax (404) 639-6459; and to MedWatch, the FDA Medical Products Reporting Program, telephone (800) 332-1088.

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**Neonatal Tetanus — Montana, 1998**

Neonatal tetanus (NT) is a severe, often fatal disease caused by a toxin of *Clostridium tetani*, a ubiquitous spore-forming bacterium found in high concentrations in soil and animal excrements. NT is associated with nonsterile delivery and umbilical cord-care practices for newborns of mothers with antitoxin levels insufficient to protect the newborn by transplacental transfer of maternal antibody. In 1997, NT accounted for an estimated 277,400 deaths worldwide (1) but is rare in the United States. During 1995–1997, of 124 tetanus cases reported in the United States, only one occurred in a neonate (2,3). This report summarizes the investigation in March 1998 of an NT case by the Missoula City-County Health Department (MCCHD) and the Montana Department of Health and Human Services (MDHHS). The findings indicated that tetanus in a newborn of an unvaccinated mother occurred after application of nonsterile clay to the umbilical cord.

On March 21, 1998, a 9-day-old newborn, who had no previous medical problems, was taken to a hospital by her parents who reported a 10-hour history of an inability to nurse and difficulty in opening her jaw. Her parents also had noticed a foul-smelling discharge from her umbilical cord during the preceding 1–2 days. No other symptoms were noted by the parents. On admission, the newborn had trismus, increased general muscle tone, and hyperresponsiveness to external stimuli. The umbilical cord was covered with dried clay, which when retracted revealed a foul-smelling yellow-green discharge. Culture from the umbilical cord grew several anaerobic (*C. perfringens*, *C. sporogenes*) and aerobic (*Staphylococcus*, *Streptococcus*, and *Bacillus* sp.) bacterial species. NT was diagnosed based on the clinical characteristics.

The newborn was treated with tetanus immune globulin (500 units intramuscularly) and penicillin G (300,000 U/kg/day intravenously) for 10 days. On March 24, she required mechanical ventilation and remained ventilated for 12 days. She was discharged on April 10, with no apparent neurologic sequelae and was developing normally on follow-up at age 7 months.

The mother, a 32-year-old non-Hispanic white woman born in the United States, had never been vaccinated because of her family's philosophic beliefs. She had no complications during her pregnancy and was attended throughout her pregnancy by a licensed "direct-entry" midwife\* from her community. The newborn was delivered in a local hospital by cesarean section. While in the hospital, she received standard umbilical cord care with isopropyl alcohol. The newborn was discharged at 3 days of age. For home umbilical cord care, the parents applied a "Health and Beauty Clay" powder provided by the midwife. This clay powder was applied to the umbilical cord up to three times daily with a clean cotton-tipped swab. The family lived in a rural area

\*Direct-entry midwives are a group distinct from certified nurse midwives; in Montana, they are licensed to attend women during uncomplicated pregnancies, labor, and postpartum periods.



*Neonatal Tetanus — Continued*

in a house adjacent to a horse pasture. Although the newborn and her mother stayed primarily indoors, the family's dog often ran between the house and the pasture.

The "Health and Beauty Clay" was a bentonite clay from Death Valley, California. According to the manufacturer, it had been sold for 21 years as a cosmetic product without reported adverse health outcomes. The manufacturing process of the clay did not include sterilization. The clay was shipped in 2-lb. containers, sold by weight in a local store, and dispensed to local midwives in smaller containers. The midwives would further aliquot the clay into 2-oz., presumably clean vials for distribution to their patients. The use of the clay for umbilical cord care was common among local direct-entry midwives because they believed it accelerated drying of the umbilical cord.

On April 9, MCCHD distributed a health-care advisory to more than 60 health-care providers in the area that emphasized the importance of tetanus toxoid vaccination, particularly for pregnant women, and cautioned against using nonsterile products for umbilical cord care. Following this case, use of clay for umbilical cord care was discontinued by midwives in the community. The mother of the case-patient has since been vaccinated with tetanus and diphtheria toxoids (Td), but as of October 1998 has not initiated vaccination for her infant because of concern about potential adverse effects. *Reported by: B Goode, Missoula City-County Health Dept, Missoula; K Caruso, Community Medical Center, Missoula; J Murphy, A Weber, J Burgett, Montana Dept of Health and Human Svcs. Child Vaccine-Preventable Disease Br, Epidemiology and Surveillance Div, National Immunization Program; and an EIS Officer, CDC.*

**Editorial Note:** In the United States, NT is rare. Tetanus-associated deaths among children aged <1 year, an indicator for NT deaths (most tetanus deaths in this age group are caused by NT), declined from 64.0 per 100,000 population in 1900 to 4.5 by the 1940s. By 1967 in the United States, NT incidence was <0.01 per 1000 live-born infants.<sup>†</sup> This decline is associated with improvements in birth practices and increased levels of population immunity following the initiation of routine tetanus toxoid vaccination since the 1940s. Since 1972, 31 cases of NT have been reported to CDC. Of these cases, only five (16%) mothers had a history of ever having received tetanus toxoid, and only one was known to have received more than one dose.

Factors contributing to this case include the lack of maternal vaccination, the anaerobic conditions and *C. tetani* contamination of the umbilical cord resulting from the application of a nonsterile clay, and the potential exposure to *C. tetani* spores from the nearby horse pasture. The case described in this report is the first since 1984 in an infant of a mother born in the United States and with philosophic objections to vaccination. Since 1984, only two other cases of NT have been reported, both in infants of unvaccinated or inadequately vaccinated mothers born outside of the United States (3,4). The case in this report was the first NT case and one of only four tetanus cases reported from Montana since 1965.

Vaccination with tetanus toxoid during pregnancy is safe and effective in preventing NT (5). The Advisory Committee on Immunization Practices recommends giving a booster dose of Td to previously vaccinated pregnant women who have not received a Td vaccination within the preceding 10 years, and unvaccinated or partially vaccinated pregnant women should complete the primary series of three doses of Td (6,7).

To prevent NT cases in the United States, health-care professionals should review and update the vaccination status of childbearing-aged women and particularly those who are pregnant. In addition, targeted education regarding the importance and

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<sup>†</sup>Data on NT incidence per 1000 live-born infants were not available until the 1960s.

*Neonatal Tetanus — Continued*

safety of tetanus vaccination is needed among parents and direct-entry midwifery groups, and parents and health-care providers should avoid applying nonsterile products to the umbilical cord of newborns, including products that create anaerobic conditions. Unless all women giving birth are vaccinated appropriately with tetanus toxoid, even hospital-born infants in the United States are at risk for developing NT, especially if unconventional practices of umbilical cord care are followed.

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### **Risk Factors for Short Interpregnancy Interval — Utah, June 1996–June 1997**

The Utah Medicaid program provides pregnancy-related coverage for women whose household incomes are  $\leq 133\%$  of the federal poverty level.\* For women who are not otherwise eligible, Medicaid coverage of family-planning and other services ends after the second calendar month following delivery. To assess whether increased access to family-planning services would benefit Medicaid recipients, the interpregnancy intervals (IPIs) of Utah residents whose most recent pregnancies were covered by Medicaid (Medicaid-recipient mothers) were compared with those of all other Utah resident mothers. This report summarizes the results of that study, which indicate that Medicaid-recipient mothers aged  $\geq 20$  years were at increased risk for having short IPIs, and may therefore benefit from extended Medicaid coverage or other means of assuring access to family-planning services.

Data for live-born infants of Utah resident mothers from June 30, 1996, through June 29, 1997, were matched to the Medicaid eligibility database by using the mother's date of birth, last name, first name, and middle initial. IPI was defined as the time between delivery dates of consecutive live-born infants minus the gestational age (1) of the most recent child. A short IPI was defined as an IPI of  $< 12$  months; this cutoff was based on a parallel study that showed that IPIs of  $< 12$  months were associated with significantly elevated risks for adverse perinatal outcomes (Utah Department of Health, unpublished data, 1998). The risk for having a short IPI was examined

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\*Poverty statistics are based on definitions developed by the Social Security Administration in 1964 (which subsequently were modified by federal interagency committees in 1969 and 1980) and prescribed by the Office of Management and Budget as the standard to be used by federal agencies for statistical purposes.

*Risk Factors for Short Interpregnancy Interval — Continued*

in relation to maternal Medicaid status and age, marital status, education, and race/ethnicity. A mother's education was categorized as age-appropriate if she had completed high school or the usual number of grades for her age. The educational status of mothers aged  $\geq 20$  years also was evaluated based on the number of years of school completed (0–11, 12, 13–15, 16, and  $>16$  years).

Of the 42,429 live-born infants of Utah resident mothers from June 30, 1996, through June 29, 1997, 15,810 (37.3%) were ineligible for the study because they were first-born infants. An additional 4773 (11.2%) infants were excluded because the date of the previous delivery of a live-born infant or information for estimating gestational age were missing on the birth certificates.

Of the 21,846 (51.5%) infants eligible for study, 3916 (17.9%) were born after a short IPI (Table 1). Medicaid-recipient mothers (22.9% of all mothers in the study population) were nearly twice as likely as other mothers to have short IPIs. Young maternal age correlated strongly with short IPIs. Short IPIs were more common among unmarried mothers (22.5%) than married mothers (17.4%), and among mothers with less than age-appropriate education (25.2%) than among those with age-appropriate education (17.1%). American Indian/Alaskan Native mothers and Asian/Pacific Islander mothers were more likely to have short IPIs than white mothers, and Hispanic mothers were more likely to have short IPIs than non-Hispanic mothers. Mothers who had either one or five or more previous live-born infants were more likely to have short IPIs than mothers who had three previous live-born children.

When stratified analyses were performed, the association between Medicaid status and short IPI differed by maternal age. Among mothers aged  $\geq 20$  years at delivery (21,207 [97.1%] of all mothers studied), Medicaid recipients were more likely to have short IPIs than others (relative risk [RR]=1.7, 95% confidence interval [CI]=1.6–1.8). However, among mothers aged 15–19 years (631 [2.9%] of all mothers), no such association was found (RR=1.0, 95% CI=0.9–1.2).

To evaluate risk factors for having short IPIs while simultaneously controlling for other covariates, logistic regression analyses were performed. Among mothers aged  $\geq 20$  years (Table 2), Medicaid-recipient mothers were more likely to have short IPIs than other mothers (odds ratio=1.6, 95% CI=1.5–1.8). Mothers from racial/ethnic minority groups had a higher risk for short IPI than white mothers. Married mothers were more likely to have short IPIs than unmarried mothers. The risk for short IPI was inversely correlated with maternal age.

*Reported by: J Duncan, B Nangle, Bur of Vital Records; N Streeter, L Bloebaum, Div of Community and Family Health Svcs; DC Tingey, JA Olson, Div of Health Care Financing, Utah Dept of Health. State Br, Div of Applied Public Health Training; Div of Public Health Surveillance and Informatics, Epidemiology Program Office; and an EIS Officer, CDC.*

**Editorial Note:** Short IPIs have been associated with an increased risk for adverse birth outcomes (2–5). Pregnancies that are too closely spaced often are unintended, which can place substantial financial and psychologic burdens on the mother and her family (6). The findings in this study indicate that Medicaid-recipient mothers aged  $\geq 20$  years were more likely to have short IPIs than other mothers of the same age. Young mothers and mothers of racial/ethnic minority groups had increased risk for short IPIs. Utah data were unavailable to evaluate whether Medicaid-recipient mothers tended to have a shorter duration of breastfeeding or greater desire to build their families quickly than other mothers—two factors that may contribute to short IPIs. Utah women whose de-

*Risk Factors for Short Interpregnancy Interval — Continued*

liveries were covered by Medicaid, most of whom lose Medicaid coverage shortly after delivery, may have less access to family-planning services. Improving these women's access to family-planning services might help them prevent unintended pregnancies, and improve birth outcomes. Access could be improved by removing financial barriers through extending Medicaid coverage for all women after a Medi-

**TABLE 1. Risk factors for short interpregnancy interval (IPI) (<12 months) — Utah, June 30, 1996–June 29, 1997**

Maternal risk factor	N*	Short IPI		Relative risk	(95% CI†)
		No.	(%)		
<b>Delivery covered by Medicaid</b>					
Yes	4,995	1,348	(27.0)	1.8	(1.7– 1.9)
No	16,851	2,568	(15.2)	referent	
<b>Maternal age at delivery (yrs)</b>					
15–17	92	53	(57.6)	7.8	(5.5–11.2)
18–19	547	240	(43.9)	6.0	(4.3– 8.3)
20–24	5,024	1,392	(27.7)	3.8	(2.7– 5.2)
25–29	7,814	1,330	(17.0)	2.3	(1.7– 3.2)
30–34	5,536	639	(11.5)	1.6	(1.1– 2.2)
35–39	2,344	226	( 9.6)	1.3	(0.9– 1.8)
40–47	489	36	( 7.4)	referent	
<b>Education‡</b>					
Less than age-appropriate	2,248	567	(25.2)	1.5	(1.4– 1.6)
Age-appropriate	19,441	3,319	(17.1)	referent	
<b>Marital status</b>					
Unmarried	2,262	510	(22.5)	1.3	(1.2– 1.4)
Married	19,583	3,406	(17.4)	referent	
<b>Race</b>					
American Indian/ Alaskan Native	329	105	(31.9)	1.8	(1.6– 2.1)
Asian/Pacific Islander	562	135	(24.0)	1.4	(1.2– 1.6)
Black	113	28	(24.8)	1.4	(1.0– 2.0)
White	20,671	3,615	(17.5)	referent	
<b>Ethnicity</b>					
Hispanic	1,682	402	(23.9)	1.4	(1.3– 1.5)
Non-Hispanic	20,105	3,505	(17.4)	referent	
<b>No. previous live-born infants</b>					
1	9,997	1,930	(19.3)	1.2	(1.1– 1.3)
2	5,903	968	(16.4)	1.0	(0.9– 1.1)
3	3,160	503	(15.9)	referent	
4	1,461	240	(16.4)	1.0	(0.9– 1.2)
≥5	1,309	267	(20.4)	1.3	(1.1– 1.5)
<b>Overall</b>	<b>21,846</b>	<b>3,916</b>	<b>(17.9)</b>		

\*Numbers may not equal overall number because of missing data.

†Confidence interval.

‡A mother's education was considered age-appropriate if she had completed high school or the usual number of grades for her age.

*Risk Factors for Short Interpregnancy Interval — Continued***TABLE 2. Logistic regression analysis of risk factors\* for short interpregnancy interval (<12 months) among mothers aged 20–47 years (n=20,982) — Utah, June 30, 1996–June 29, 1997**

Variable	Odds ratio <sup>†</sup>	(95% CI) <sup>§</sup>
<b>Delivery covered by Medicaid</b>		
Yes	1.6	(1.5–1.8)
No	referent	
<b>Maternal age at delivery (yrs)</b>		
20–24	4.7	(3.3–6.8)
25–29	2.6	(1.8–3.7)
30–34	1.7	(1.2–2.4)
35–39	1.4	(0.9–2.0)
40–47	referent	
<b>Education (yrs)</b>		
0–11	referent	
12	1.0	(0.8–1.1)
13–15	1.1	(1.0–1.3)
16	1.1	(0.9–1.3)
>16	1.4	(1.2–1.7)
<b>Marital status</b>		
Unmarried	0.7	(0.6–0.8)
Married	referent	
<b>Race</b>		
American Indian/ Alaskan Native	1.9	(1.5–2.5)
Asian/Pacific Islander	1.6	(1.3–2.0)
Black	1.6	(1.0–2.5)
White	referent	
<b>Ethnicity</b>		
Hispanic	1.3	(1.1–1.5)
Non-Hispanic	referent	

\*The number of previous live-born children is not included in the model because of a multicollinearity problem.

<sup>†</sup>Controlling for all of the other variables in the table.

<sup>§</sup>Confidence interval.

caid-covered delivery, or through increasing availability of family-planning services for low-income women. In Utah, 74 publicly funded clinics provide family-planning services to low-income women. However, only 26% of all such women are served; Utah ranks 49th among all states for providing access to family-planning services (7).

The higher risk for having short IPLs among mothers from racial/ethnic minority groups may have been due to cultural or socioeconomic differences or to unequal access to health care. An example of such a factor was observed in one study that found the length of breastfeeding differed by race (8).

Because the sociodemographic characteristics of the Utah population are different from those of other states, caution should be used in generalizing the results of this study. In addition, the findings of this study are subject to at least three methodologic limitations. First, Medicaid status was based on the most recent pregnancy. The num-

*Risk Factors for Short Interpregnancy Interval — Continued*

ber of women in the study population whose Medicaid status had changed since the previous pregnancy was unknown; an implicit assumption has been made that mothers on Medicaid for the most recent pregnancy were on Medicaid for the previous one. Second, this study included women whose Medicaid eligibility was independent of pregnancy and those who were eligible only because they were pregnant and met the program's income requirements. Finally, the retrospective approach of this study may have overestimated the risk for having short IPIs among young women, although such bias is unlikely to account for much of the elevated risk among those women.

In Utah, extending Medicaid coverage of family-planning services and improving use of family-planning programs should be considered to help low-income women prevent unintended pregnancies and improve birth outcomes. Public health programs for preventing short IPIs also should target young mothers regardless of their Medicaid-eligibility status. The analysis described in this report may be repeated to monitor the success of efforts to improve reproductive health of women in Utah.

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*Notice to Readers***FDA Approval of a Fourth Acellular Pertussis Vaccine  
for Use Among Infants and Young Children**

On July 29, 1998, the Food and Drug Administration (FDA) licensed North American Vaccine, Inc. (Beltsville, Maryland) to distribute a combined diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP) (Certiva™ \*)† for the first four doses of

\* Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine, Adsorbed, Certiva™, manufactured and distributed by North American Vaccine, Inc., Beltsville, Maryland. Marketed by Ross Products Division, Abbott Laboratories, Inc. The diphtheria and tetanus toxoid components are produced by the Statens Seruminstitut, Copenhagen, Denmark. Final formulation and release of Certiva™ are conducted by North American Vaccine, Inc.

† Use of trade names and commercial sources is for identification only and does not imply endorsement by CDC or U.S. Department of Health and Human Services.

*Notice to Readers — Continued*

the diphtheria and tetanus toxoids and pertussis vaccination series administered to infants and children aged 6 weeks–6 years. Certiva™ is the fourth acellular pertussis vaccine to be licensed for use in infants and young children in the United States (1).

Vaccine doses should be administered at ages 2, 4, 6, and 15–20 months. Data are insufficient to evaluate the use of Certiva™ as a fifth dose among children aged 4–6 years who have received Certiva™ for the previous four doses. Additional information about the immunogenicity and safety of a fifth dose following four previous doses of the same acellular pertussis vaccine is being collected and should be available before these infants are aged 4–6 years and require a fifth dose.

The Advisory Committee on Immunization Practices (ACIP), the Committee on Infectious Diseases, the American Academy of Pediatrics, and the American Academy of Family Physicians recommend that children routinely receive a series of five doses of vaccine against diphtheria, tetanus, and pertussis before age 7 years (1,2). The first four doses should be administered at ages 2, 4, 6, and 15–18 months, and the fifth dose at age 4–6 years.

The following evidence supports the use of Certiva™ for the first four doses of the diphtheria, tetanus, and pertussis vaccination series:

1. The rates of local reactions, fever, and other common systemic symptoms following receipt of Certiva™ inoculations were significantly lower than those following whole-cell pertussis vaccination (administered as diphtheria and tetanus toxoids and pertussis vaccine [DTP]) for doses one through three in controlled clinical studies (1,3).
2. Efficacy of three doses of Certiva™ against pertussis disease was assessed in a double-blind, randomized, placebo-controlled trial in Sweden using Certiva™-EU, a vaccine containing the same amount of pertussis toxoid (40 µg) per dose as Certiva™ but more diphtheria toxoid (25 Lf versus 15 Lf) and more tetanus toxoid (7 Lf versus 6 Lf) (4). Infants were randomly assigned to be vaccinated with either Certiva™-EU or DT (Diphtheria and Tetanus Toxoids Adsorbed Vaccine, Statens Serum Institut, Copenhagen, Denmark) at ages 3, 5, and 12 months. The main observation period started 30 days after the third dose of vaccine and lasted a mean of 17 months. In this trial, pertussis was defined according to the World Health Organization case definition (i.e., a paroxysmal cough illness lasting ≥21 days and confirmed by culture, serology, or epidemiologic link to a culture-positive household contact). Starting 1 month after the third dose, the vaccine efficacy of Certiva™-EU against WHO-defined pertussis was 72% (95% confidence interval=62%–78%) (3). Although a serologic correlate of protection for pertussis has not been established, the antibody response to pertussis toxoid in U.S. infants after doses of Certiva™ at 2, 4, 6, and 15–20 months of age was comparable to that achieved in a previous trial among infants in Sweden in whom efficacy was demonstrated after three doses at 3, 5, and 12 months of age.

Because of the reduced frequency of adverse reactions and demonstrated efficacy, the ACIP recommends a licensed DTaP for all five doses of the routine diphtheria, tetanus, and pertussis vaccination series and for the remaining doses in the series for children who have started the vaccination series with whole-cell DTP vaccine (1). The ACIP considers the data to be insufficient in terms of safety and efficacy to express a preference between different acellular pertussis vaccine formulations.

*Notice to Readers — Continued*

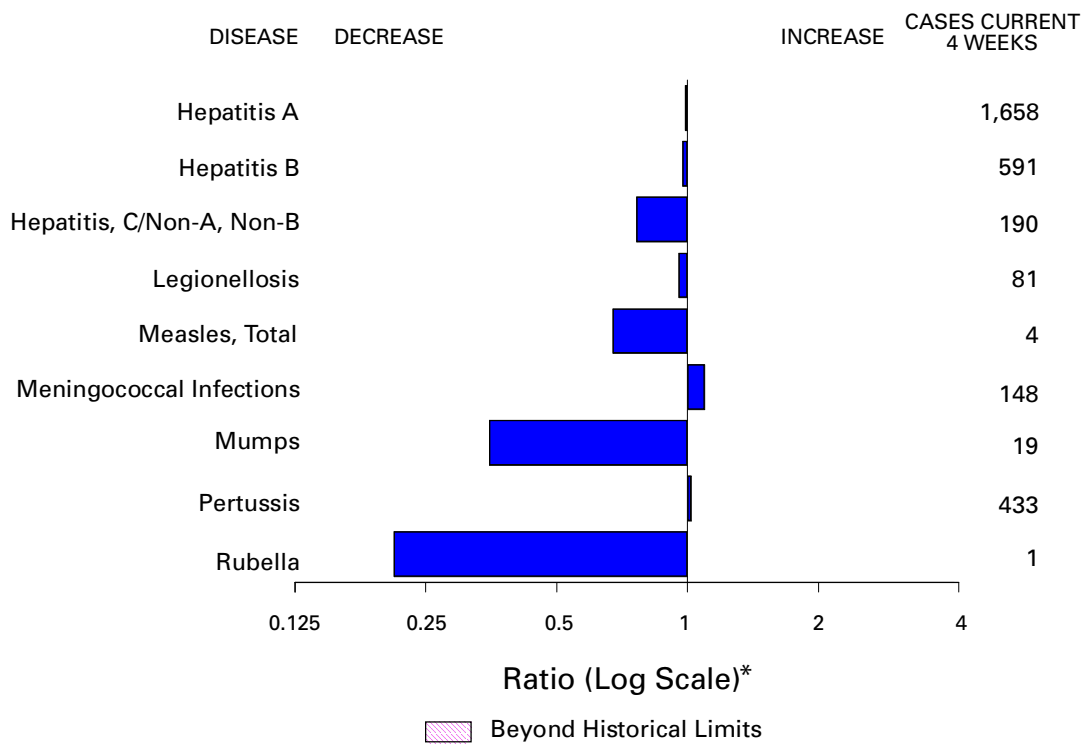
Whenever feasible, the same DTaP vaccine should be used throughout the entire vaccination series. No data exist on the safety, immunogenicity, or efficacy of different DTaP vaccines when administered interchangeably in the primary or booster vaccination of a child. However, if the vaccine provider does not know or have available the type of DTaP vaccine the child to be vaccinated had received previously, any of the licensed DTaP vaccines may be used to complete the vaccination series ( 1 ).

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**FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending October 31, 1998, 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 31, 1998 (43rd Week)**

	Cum. 1998		Cum. 1998
Anthrax	-	Plague	7
Brucellosis	47	Poliomyelitis, paralytic	1
Cholera	7	Psittacosis	39
Congenital rubella syndrome	3	Rabies, human	-
Cryptosporidiosis*	2,723	Rocky Mountain spotted fever (RMSF)	278
Diphtheria	1	Streptococcal disease, invasive Group A	1,813
Encephalitis: California*	79	Streptococcal toxic-shock syndrome*	44
eastern equine*	4	Syphilis, congenital <sup>¶</sup>	351
St. Louis*	22	Tetanus	35
western equine*	-	Toxic-shock syndrome	110
Hansen Disease	92	Trichinosis	11
Hantavirus pulmonary syndrome* <sup>†</sup>	19	Typhoid fever	278
Hemolytic uremic syndrome, post-diarrheal*	71	Yellow fever	-
HIV infection, pediatric* <sup>‡</sup>	178		

-:no reported cases

\*Not notifiable in all states.

<sup>†</sup> Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).

<sup>‡</sup> 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 September 27, 1998.

<sup>¶</sup> Updated from reports to the Division of STD Prevention, NCHSTP.

**TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending October 31, 1998, and October 25, 1997 (43rd Week)**

Reporting Area	AIDS		Chlamydia		<i>Escherichia coli</i> O157:H7		Gonorrhea		Hepatitis C/NA,NB	
	Cum. 1998*	Cum. 1997	Cum. 1998	Cum. 1997	NETSS†	PHLIS‡	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997
					Cum. 1998	Cum. 1998				
UNITED STATES	35,486	47,056	443,269	388,515	2,513	1,681	268,692	245,076	3,379	2,912
NEW ENGLAND	1,381	2,059	15,480	14,879	292	238	4,422	4,965	81	49
Maine	24	50	850	830	33	-	59	59	-	-
N.H.	28	34	779	675	41	42	78	79	-	-
Vt.	17	32	350	349	19	17	33	44	-	3
Mass.	712	727	6,977	6,032	136	138	1,867	1,757	78	39
R.I.	94	119	1,910	1,669	11	1	320	378	3	7
Conn.	506	1,097	4,614	5,324	52	40	2,065	2,648	-	-
MID. ATLANTIC	9,642	13,920	50,259	47,355	248	70	29,829	31,407	303	262
Upstate N.Y.	1,102	2,134	N	N	189	-	5,334	5,372	239	191
N.Y. City	5,457	7,287	28,897	22,597	7	12	12,939	11,767	-	-
N.J.	1,765	2,892	8,276	8,300	52	48	5,312	6,302	-	-
Pa.	1,318	1,607	13,086	16,458	N	10	6,244	7,966	64	71
E.N. CENTRAL	2,567	3,637	72,052	52,489	393	278	51,990	33,630	432	472
Ohio	540	722	21,208	18,508	106	60	13,831	12,090	7	17
Ind.	414	459	4,656	7,664	90	43	3,924	5,062	7	12
Ill.	993	1,514	20,054	U	96	39	16,975	U	31	80
Mich.	468	725	17,680	17,202	101	62	13,590	12,497	387	338
Wis.	152	217	8,454	9,115	N	74	3,670	3,981	-	25
W.N. CENTRAL	664	984	24,711	26,947	469	345	12,571	11,833	261	52
Minn.	136	156	5,183	5,514	222	181	1,980	1,932	9	3
Iowa	58	85	2,063	3,753	89	49	660	964	8	25
Mo.	312	506	10,049	9,973	40	56	7,313	6,089	238	10
N. Dak.	4	10	616	708	10	15	51	58	-	2
S. Dak.	13	8	1,286	1,107	29	31	192	124	-	-
Nebr.	59	83	1,520	2,208	53	-	510	973	4	2
Kans.	82	136	3,994	3,684	26	13	1,865	1,693	2	10
S. ATLANTIC	9,235	11,667	91,874	76,991	210	140	75,979	76,082	151	204
Del.	112	194	2,148	14	-	2	1,249	1,022	-	-
Md.	1,304	1,714	6,142	5,932	29	12	7,939	9,611	9	7
D.C.	691	879	N	N	1	-	3,010	3,686	-	-
Va.	688	965	10,950	9,469	N	42	7,482	6,921	11	24
W. Va.	70	105	2,123	2,388	8	6	669	767	6	16
N.C.	638	681	18,084	14,354	52	46	15,764	14,260	19	43
S.C.	604	644	13,833	10,426	11	8	8,720	9,599	5	35
Ga.	972	1,267	18,796	12,795	66	-	15,883	14,943	9	-
Fla.	4,156	5,218	19,798	21,613	43	24	15,263	15,273	92	79
E.S. CENTRAL	1,444	1,677	32,373	28,911	104	39	31,857	28,957	173	302
Ky.	222	319	5,264	5,230	30	-	3,069	3,390	19	12
Tenn.	522	656	11,213	10,426	49	33	9,755	9,099	147	203
Ala.	395	453	8,513	7,081	22	2	10,924	9,906	5	10
Miss.	305	249	7,383	6,174	3	4	8,109	6,562	2	77
W.S. CENTRAL	4,202	5,156	65,835	58,880	104	23	39,948	38,053	360	427
Ark.	159	193	3,073	2,429	10	10	3,165	4,109	9	13
La.	708	879	12,440	7,987	5	7	10,576	7,800	85	186
Okla.	238	255	8,112	6,171	13	6	4,458	4,006	12	7
Tex.	3,097	3,829	42,210	42,293	76	-	21,749	22,138	254	221
MOUNTAIN	1,230	1,365	26,570	24,336	298	208	7,511	6,607	307	266
Mont.	23	36	1,043	965	15	-	32	50	7	21
Idaho	19	48	1,674	1,340	36	22	145	123	87	59
Wyo.	1	13	583	492	53	54	27	44	60	65
Colo.	230	315	6,685	5,966	73	57	1,931	1,863	28	29
N. Mex.	179	146	2,965	3,123	17	13	723	717	83	49
Ariz.	499	318	9,426	8,586	21	26	3,391	2,872	8	25
Utah	101	122	1,779	1,432	72	21	187	229	23	4
Nev.	178	367	2,415	2,432	11	15	1,075	709	11	14
PACIFIC	5,121	6,591	64,115	57,727	395	340	14,585	13,542	1,311	878
Wash.	335	528	9,027	7,547	89	104	1,615	1,602	21	23
Oreg.	138	249	4,930	4,007	96	95	695	605	5	3
Calif.	4,500	5,688	46,624	43,427	204	127	11,606	10,596	1,230	705
Alaska	17	43	1,538	1,270	6	-	257	316	1	-
Hawaii	131	83	1,996	1,476	N	14	412	423	54	147
Guam	-	2	201	193	N	-	24	27	-	-
P.R.	1,246	1,510	U	U	6	U	307	489	-	-
V.I.	24	84	N	U	N	U	U	U	U	U
Amer. Samoa	-	-	U	U	N	U	U	U	U	U
C.N.M.I.	-	1	N	N	N	U	28	20	-	2

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

\*Updated monthly from reports to the Division of HIV/AIDS Prevention-Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update September 27, 1998.

†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 31, 1998, and October 25, 1997 (43rd Week)**

Reporting Area	Legionellosis		Lyme Disease		Malaria		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal
	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998*	Cum. 1997	Cum. 1998
UNITED STATES	1,029	848	10,199	10,258	1,111	1,531	5,748	7,112	11,885	14,649	5,751
NEW ENGLAND	69	73	2,498	2,720	53	76	64	116	371	364	1,232
Maine	1	3	11	8	5	1	1	-	10	18	186
N.H.	5	7	39	33	5	8	2	-	9	13	72
Vt.	5	12	9	8	1	2	4	-	2	5	57
Mass.	28	25	713	275	16	29	38	58	203	202	438
R.I.	19	9	561	356	8	5	1	2	51	31	83
Conn.	11	17	1,165	2,040	18	31	18	56	96	95	396
MID. ATLANTIC	215	172	6,387	5,895	270	451	225	335	2,335	2,571	1,308
Upstate N.Y.	76	48	3,563	2,450	83	64	34	31	300	350	931
N.Y. City	25	18	25	156	119	282	62	74	1,243	1,305	U
N.J.	11	23	1,420	1,696	44	81	71	135	498	536	177
Pa.	103	83	1,379	1,593	24	24	58	95	294	380	200
E.N. CENTRAL	339	275	136	528	110	144	876	543	1,036	1,461	123
Ohio	113	100	74	36	14	17	119	184	83	229	54
Ind.	99	45	54	29	11	16	202	153	100	128	9
Ill.	27	28	7	13	35	57	344	U	524	756	15
Mich.	69	67	1	24	43	39	160	111	311	258	35
Wis.	31	35	U	426	7	15	51	95	18	90	10
W.N. CENTRAL	67	50	180	117	84	46	107	154	330	461	600
Minn.	6	2	148	88	50	19	8	16	124	120	106
Iowa	10	9	21	5	8	9	9	7	40	46	136
Mo.	22	15	2	17	15	9	81	102	91	189	24
N. Dak.	-	2	-	-	2	3	-	-	8	10	122
S. Dak.	3	2	-	1	-	1	1	-	16	10	130
Nebr.	19	15	3	2	1	1	4	3	18	20	7
Kans.	7	5	6	4	8	4	13	26	33	66	75
S. ATLANTIC	123	103	737	678	266	271	2,116	2,896	1,662	2,787	1,664
Del.	12	10	34	109	3	5	20	17	18	28	17
Md.	26	18	526	440	75	77	551	780	243	256	397
D.C.	6	4	4	7	16	18	66	95	85	80	-
Va.	18	22	58	53	49	64	125	208	222	275	490
W. Va.	N	N	11	8	2	-	2	3	32	47	65
N.C.	11	13	49	32	23	16	618	773	365	346	136
S.C.	10	7	5	2	6	16	240	318	207	278	121
Ga.	8	1	5	1	34	30	236	452	420	495	259
Fla.	30	28	45	26	58	45	258	250	70	982	179
E.S. CENTRAL	58	47	79	83	27	34	1,023	1,471	893	1,072	239
Ky.	24	11	21	15	4	12	88	116	136	155	29
Tenn.	22	26	41	37	15	7	480	638	289	369	122
Ala.	5	3	16	10	6	10	239	369	302	344	86
Miss.	7	7	1	21	2	5	216	348	166	204	2
W.S. CENTRAL	39	29	23	81	26	48	890	1,151	1,782	2,083	131
Ark.	-	1	6	24	1	5	95	133	120	154	31
La.	3	6	4	3	13	12	363	308	200	185	-
Okla.	12	2	2	20	4	6	107	108	140	171	100
Tex.	24	20	11	34	8	25	325	602	1,322	1,573	-
MOUNTAIN	64	56	17	11	50	62	205	153	352	474	193
Mont.	2	1	-	-	1	2	-	-	18	6	47
Idaho	2	2	5	3	8	-	2	1	12	10	-
Wyo.	1	1	1	2	-	2	1	-	4	2	55
Colo.	16	18	5	-	19	27	11	13	U	71	39
N. Mex.	2	3	4	1	12	8	22	8	56	57	5
Ariz.	17	12	-	2	8	11	155	116	155	207	19
Utah	21	12	-	1	1	3	4	5	46	26	26
Nev.	3	7	2	2	1	9	10	10	61	95	2
PACIFIC	55	43	142	145	225	399	242	293	3,124	3,376	261
Wash.	9	7	7	8	17	19	27	9	177	246	-
Oreg.	-	-	20	17	16	21	5	9	118	123	7
Calif.	44	35	114	118	187	347	208	273	2,653	2,798	231
Alaska	1	-	1	2	2	3	1	1	42	63	23
Hawaii	1	1	-	-	3	9	1	1	134	146	-
Guam	2	-	-	-	1	-	1	3	36	13	-
P.R.	-	-	-	-	-	5	156	212	68	164	47
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.	-	-	-	-	-	-	164	10	77	7	-

N: Not notifiable

U: Unavailable

-: no reported cases

**TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending October 31, 1998, and October 25, 1997 (43rd Week)**

Reporting Area	<i>H. influenzae</i> , invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
	Cum. 1998*	Cum. 1997	A		B		Indigenous		Imported†		Total	
			Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	1998	Cum. 1998	1998	Cum. 1998	Cum. 1998	Cum. 1997
UNITED STATES	867	895	18,137	23,620	7,204	7,838	2	58	-	21	79	127
NEW ENGLAND	59	52	221	580	152	148	-	1	-	2	3	19
Maine	3	5	17	53	2	6	-	-	-	-	-	1
N.H.	9	9	10	31	16	15	-	-	-	-	-	1
Vt.	7	3	14	12	4	8	-	-	-	1	1	-
Mass.	34	31	90	237	47	62	-	1	-	1	2	16
R.I.	5	2	14	126	58	14	-	-	-	-	-	-
Conn.	1	2	76	121	25	43	-	-	-	-	-	1
MID. ATLANTIC	122	141	1,189	1,763	881	1,124	-	8	-	5	13	26
Upstate N.Y.	49	45	306	290	240	246	-	1	-	1	2	5
N.Y. City	26	38	310	789	235	406	-	-	-	-	-	10
N.J.	42	41	278	258	168	204	U	7	U	1	8	3
Pa.	5	17	295	426	238	268	U	-	U	3	3	8
E.N. CENTRAL	143	144	2,958	2,471	1,295	1,234	-	11	-	3	14	10
Ohio	45	76	265	269	68	65	-	-	-	1	1	-
Ind.	36	14	291	257	660	88	-	2	-	1	3	-
Ill.	49	36	547	686	151	234	-	-	-	-	-	7
Mich.	7	17	1,713	1,095	387	360	-	9	-	1	10	2
Wis.	6	1	142	164	29	487	U	-	U	-	-	1
W.N. CENTRAL	79	45	1,197	1,843	352	396	-	1	-	-	1	17
Minn.	62	33	112	166	42	35	-	-	-	-	-	8
Iowa	2	5	384	394	58	32	-	1	-	-	1	-
Mo.	8	4	543	944	210	283	U	-	U	-	-	1
N. Dak.	-	-	3	10	4	5	-	-	-	-	-	-
S. Dak.	-	2	30	19	2	1	-	-	-	-	-	8
Nebr.	1	1	38	76	14	13	-	-	-	-	-	-
Kans.	6	-	87	234	22	27	U	-	U	-	-	-
S. ATLANTIC	176	134	1,638	1,579	968	1,022	-	3	-	5	8	13
Del.	-	-	3	28	3	6	-	-	-	1	1	-
Md.	49	48	272	169	135	142	-	-	-	1	1	2
D.C.	-	-	53	21	11	28	-	-	-	-	-	1
Va.	16	12	181	195	88	106	-	-	-	2	2	1
W. Va.	5	3	6	10	8	14	-	-	-	-	-	-
N.C.	23	21	102	171	196	215	-	-	-	-	-	2
S.C.	3	4	35	95	35	88	-	-	-	-	-	1
Ga.	41	26	513	424	128	110	-	1	-	1	2	1
Fla.	39	20	473	466	364	313	-	2	-	-	2	5
E.S. CENTRAL	48	48	325	524	346	583	-	-	-	2	2	1
Ky.	7	7	20	66	39	34	-	-	-	-	-	-
Tenn.	27	27	199	323	238	373	-	-	-	1	1	-
Ala.	12	12	63	74	67	60	-	-	-	1	1	1
Miss.	2	2	43	61	2	116	U	-	U	-	-	-
W.S. CENTRAL	51	42	3,372	4,862	1,085	1,085	-	1	-	-	1	8
Ark.	-	2	89	190	85	73	-	-	-	-	-	-
La.	22	11	94	194	128	131	-	1	-	-	1	-
Okla.	26	27	513	1,251	71	40	-	-	-	-	-	1
Tex.	3	2	2,676	3,227	801	841	-	-	-	-	-	7
MOUNTAIN	92	73	2,737	3,625	693	735	1	1	-	-	1	8
Mont.	-	-	88	65	5	9	U	-	U	-	-	-
Idaho	1	1	222	117	38	39	-	-	-	-	-	-
Wyo.	1	4	35	28	8	22	-	-	-	-	-	-
Colo.	18	13	282	347	99	131	-	-	-	-	-	-
N. Mex.	7	7	131	301	287	219	-	-	-	-	-	-
Ariz.	53	29	1,714	1,895	158	172	1	1	-	-	1	5
Utah	5	3	171	498	63	77	-	-	-	-	-	1
Nev.	7	16	94	374	35	66	U	-	U	-	-	2
PACIFIC	97	216	4,500	6,373	1,432	1,511	1	32	-	4	36	25
Wash.	9	5	848	548	99	60	-	-	-	1	1	2
Oreg.	36	29	318	319	104	98	-	-	-	-	-	-
Calif.	44	167	3,282	5,344	1,211	1,331	-	5	-	2	7	19
Alaska	1	8	16	27	12	12	1	27	-	1	28	-
Hawaii	7	7	36	135	6	10	-	-	-	-	-	4
Guam	-	-	-	-	2	3	U	-	U	-	-	-
P.R.	2	-	49	244	323	663	-	-	-	-	-	-
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.	-	6	3	1	53	41	U	-	U	-	-	1

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

\*Of 204 cases among children aged <5 years, serotype was reported for 101 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 31, 1998, and October 25, 1997 (43rd Week)**

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997
UNITED STATES	2,200	2,698	7	397	524	112	4,894	4,449	-	323	157
NEW ENGLAND	94	172	-	7	8	10	778	796	-	38	1
Maine	6	17	-	-	-	-	5	14	-	-	-
N.H.	4	13	-	-	-	-	95	113	-	-	-
Vt.	5	4	-	-	-	2	67	204	-	-	-
Mass.	47	84	-	4	2	8	563	423	-	8	1
R.I.	7	18	-	1	5	-	9	16	-	1	-
Conn.	25	36	-	2	1	-	39	26	-	29	-
MID. ATLANTIC	193	281	-	21	49	6	459	329	-	130	33
Upstate N.Y.	57	72	-	6	11	6	266	128	-	111	5
N.Y. City	20	46	-	4	3	-	23	60	-	14	28
N.J.	50	58	U	2	7	U	5	13	U	4	-
Pa.	66	105	U	9	28	U	165	128	U	1	-
E.N. CENTRAL	328	411	5	69	65	29	530	481	-	-	6
Ohio	124	146	1	27	25	14	246	140	-	-	-
Ind.	57	45	-	6	9	5	118	50	-	-	-
Ill.	82	125	1	11	10	10	90	69	-	-	2
Mich.	37	59	3	25	17	-	59	51	-	-	-
Wis.	28	36	U	-	4	U	17	171	U	-	4
W.N. CENTRAL	185	196	-	27	14	6	466	359	-	27	-
Minn.	29	34	-	12	5	5	275	221	-	-	-
Iowa	38	40	-	10	7	1	66	46	-	-	-
Mo.	68	84	U	3	-	U	32	59	U	2	-
N. Dak.	5	2	-	2	-	-	2	1	-	-	-
S. Dak.	7	5	-	-	-	-	8	4	-	-	-
Nebr.	11	10	-	-	1	-	17	7	-	-	-
Kans.	27	21	U	-	1	U	66	21	U	25	-
S. ATLANTIC	382	459	1	45	61	3	276	377	-	19	78
Del.	2	5	-	-	-	-	5	1	-	-	-
Md.	26	41	-	-	1	1	51	107	-	1	-
D.C.	1	8	-	-	-	-	1	3	-	-	1
Va.	36	48	1	8	10	1	30	42	-	1	1
W. Va.	13	16	-	-	-	-	1	6	-	-	-
N.C.	52	84	-	10	10	1	90	109	-	13	59
S.C.	51	49	-	6	10	-	25	25	-	-	15
Ga.	84	90	-	1	10	-	24	13	-	-	-
Fla.	117	118	-	20	20	-	49	71	-	4	2
E.S. CENTRAL	207	204	-	14	26	1	107	125	-	2	1
Ky.	28	42	-	-	3	-	45	56	-	-	-
Tenn.	65	68	-	1	5	1	33	34	-	2	-
Ala.	90	70	-	8	8	-	26	25	-	-	1
Miss.	24	24	U	5	10	U	3	10	U	-	-
W.S. CENTRAL	267	264	1	57	73	13	330	230	-	88	4
Ark.	28	31	1	11	1	9	82	39	-	-	-
La.	56	47	-	10	12	-	7	18	-	-	-
Okla.	38	36	-	-	-	-	29	31	-	-	-
Tex.	145	150	-	36	60	4	212	142	-	88	4
MOUNTAIN	129	155	-	32	54	35	912	983	-	5	7
Mont.	4	8	U	-	-	U	9	16	U	-	-
Idaho	10	10	-	4	3	-	240	500	-	-	2
Wyo.	5	3	-	1	1	-	8	7	-	-	-
Colo.	26	42	-	6	3	6	190	299	-	-	-
N. Mex.	24	24	N	N	N	1	87	88	-	1	-
Ariz.	41	39	-	6	32	12	198	35	-	1	5
Utah	13	12	-	5	8	16	146	17	-	2	-
Nev.	6	17	U	10	7	U	34	21	U	1	-
PACIFIC	415	556	-	125	174	9	1,036	769	-	14	27
Wash.	57	74	-	9	18	5	275	322	-	9	5
Oreg.	75	105	N	N	N	4	96	39	-	-	-
Calif.	275	368	-	92	123	-	636	374	-	3	14
Alaska	3	2	-	2	8	-	14	16	-	-	-
Hawaii	5	7	-	22	25	-	15	18	-	2	8
Guam	1	1	U	2	1	U	-	-	U	-	-
P.R.	6	8	-	1	7	-	3	-	-	-	-
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	4	U	1	-	U	-	-

N: Not notifiable

U: Unavailable

-: no reported cases

**TABLE IV. Deaths in 122 U.S. cities,\* week ending  
October 31, 1998 (43rd Week)**

Reporting Area	All Causes, By Age (Years)						P&J†	Total	Reporting Area	All Causes, By Age (Years)						P&J†	Total
	All Ages	>65	45-64	25-44	1-24	<1				All Ages	>65	45-64	25-44	1-24	<1		
NEW ENGLAND	529	385	92	34	15	3	42	S. ATLANTIC	1,265	779	277	138	36	35	74		
Boston, Mass.	140	92	29	11	6	2	15	Atlanta, Ga.	128	77	23	18	5	5	3		
Bridgeport, Conn.	37	29	4	4	-	-	4	Baltimore, Md.	264	154	63	34	4	9	21		
Cambridge, Mass.	12	8	2	2	-	-	-	Charlotte, N.C.	100	64	18	15	1	2	10		
Fall River, Mass.	23	17	5	-	1	-	2	Jacksonville, Fla.	122	74	28	11	5	4	4		
Hartford, Conn.	42	27	8	3	3	1	3	Miami, Fla.	102	60	25	10	5	2	-		
Lowell, Mass.	17	16	1	-	-	-	2	Norfolk, Va.	45	28	10	3	3	1	-		
Lynn, Mass.	11	8	3	-	-	-	3	Richmond, Va.	58	36	14	4	3	1	3		
New Bedford, Mass.	28	22	5	1	-	-	-	Savannah, Ga.	39	25	12	1	1	-	5		
New Haven, Conn.	49	36	9	4	-	-	6	St. Petersburg, Fla.	66	55	7	4	-	-	6		
Providence, R.I.	42	32	5	3	2	-	-	Tampa, Fla.	227	147	47	19	6	8	19		
Somerville, Mass.	6	5	-	1	-	-	-	Washington, D.C.	101	50	30	15	3	3	3		
Springfield, Mass.	37	27	10	-	-	-	2	Wilmington, Del.	13	9	-	4	-	-	-		
Waterbury, Conn.	26	22	3	1	-	-	3	E.S. CENTRAL	910	617	179	69	26	19	44		
Worcester, Mass.	59	44	8	4	3	-	2	Birmingham, Ala.	158	111	32	4	8	3	5		
MID. ATLANTIC	2,191	1,574	416	132	38	31	97	Chattanooga, Tenn.	94	66	19	6	2	1	6		
Albany, N.Y.	43	32	8	2	1	-	2	Knoxville, Tenn.	100	76	18	6	-	-	17		
Allentown, Pa.	32	30	2	-	-	-	-	Lexington, Ky.	49	33	8	5	1	2	2		
Buffalo, N.Y.	U	U	U	U	U	U	U	Memphis, Tenn.	205	129	42	19	8	7	6		
Camden, N.J.	26	17	4	2	-	3	-	Mobile, Ala.	94	63	19	10	1	1	2		
Elizabeth, N.J.	6	2	3	1	-	-	-	Montgomery, Ala.	77	55	10	9	3	-	3		
Erie, Pa.	53	46	7	-	-	-	3	Nashville, Tenn.	133	84	31	10	3	5	3		
Jersey City, N.J.	38	28	6	2	1	1	-	W.S. CENTRAL	1,468	934	316	130	41	47	82		
New York City, N.Y.	1,181	819	239	87	25	11	48	Austin, Tex.	70	48	11	6	2	3	3		
Newark, N.J.	U	U	U	U	U	U	U	Baton Rouge, La.	54	36	12	4	2	-	-		
Paterson, N.J.	12	4	4	3	-	1	-	Corpus Christi, Tex.	49	41	4	3	-	1	1		
Philadelphia, Pa.	400	273	86	28	4	9	21	Dallas, Tex.	180	97	41	24	9	9	6		
Pittsburgh, Pa.‡	48	40	7	-	-	1	4	El Paso, Tex.	50	37	8	2	1	2	4		
Reading, Pa.	19	19	-	-	-	-	2	Ft. Worth, Tex.	124	82	24	12	2	4	8		
Rochester, N.Y.	131	105	20	3	1	2	5	Houston, Tex.	381	221	96	43	10	11	25		
Schenectady, N.Y.	19	16	3	-	-	-	-	Little Rock, Ark.	76	40	23	7	4	2	7		
Scranton, Pa.	37	32	4	-	1	-	4	New Orleans, La.	75	42	21	5	4	3	-		
Syracuse, N.Y.	84	62	16	1	2	3	5	San Antonio, Tex.	224	169	36	10	5	4	15		
Trenton, N.J.	45	34	6	3	2	-	3	Shreveport, La.	87	58	18	8	-	3	7		
Utica, N.Y.	17	15	1	-	1	-	-	Tulsa, Okla.	98	63	22	6	2	5	6		
Yonkers, N.Y.	U	U	U	U	U	U	U	MOUNTAIN	890	624	166	69	16	14	63		
E.N. CENTRAL	1,620	1,154	284	114	42	26	93	Albuquerque, N.M.	77	60	12	4	-	1	4		
Akron, Ohio	51	43	5	2	1	-	-	Boise, Idaho	31	27	1	2	-	1	2		
Canton, Ohio	43	30	8	4	1	-	2	Colo. Springs, Colo.	73	53	14	5	1	-	1		
Chicago, Ill.	U	U	U	U	U	U	U	Denver, Colo.	108	73	20	10	1	4	7		
Cincinnati, Ohio	115	79	19	7	4	6	14	Las Vegas, Nev.	145	95	33	11	4	2	8		
Cleveland, Ohio	123	85	19	10	4	5	5	Ogden, Utah	30	21	6	2	-	1	3		
Columbus, Ohio	199	148	31	16	4	-	14	Phoenix, Ariz.	148	97	28	16	3	4	13		
Dayton, Ohio	118	78	30	6	1	3	12	Pueblo, Colo.	31	26	4	1	-	-	-		
Detroit, Mich.	190	112	48	21	6	3	4	Salt Lake City, Utah	121	82	26	8	4	1	19		
Evansville, Ind.	41	34	6	-	1	-	1	Tucson, Ariz.	126	90	22	10	3	-	6		
Fort Wayne, Ind.	62	46	13	2	1	-	4	PACIFIC	1,761	1,246	328	123	30	33	137		
Gary, Ind.	8	7	-	1	-	-	-	Berkeley, Calif.	19	13	3	1	1	1	-		
Grand Rapids, Mich.	66	51	8	4	-	3	2	Fresno, Calif.	108	77	19	9	1	2	5		
Indianapolis, Ind.	194	123	39	21	9	2	7	Glendale, Calif.	23	20	-	1	1	1	2		
Lansing, Mich.	49	36	9	2	1	1	4	Honolulu, Hawaii	61	48	8	2	2	1	7		
Milwaukee, Wis.	124	92	20	6	5	1	10	Long Beach, Calif.	89	61	16	6	3	3	12		
Peoria, Ill.	41	28	7	4	1	1	3	Los Angeles, Calif.	457	323	87	36	7	4	21		
Rockford, Ill.	52	42	6	2	2	-	2	Pasadena, Calif.	22	20	2	-	-	-	6		
South Bend, Ind.	43	38	4	1	-	-	2	Portland, Oreg.	111	89	15	5	-	2	12		
Toledo, Ohio	101	82	12	5	1	1	7	Sacramento, Calif.	155	104	30	17	3	1	9		
Youngstown, Ohio	U	U	U	U	U	U	U	San Diego, Calif.	134	88	25	13	3	4	14		
W.N. CENTRAL	742	538	114	43	21	18	50	San Francisco, Calif.	150	103	34	9	1	3	19		
Des Moines, Iowa	31	22	9	-	-	-	6	San Jose, Calif.	160	112	31	10	3	4	11		
Duluth, Minn.	25	22	2	1	-	-	-	Santa Cruz, Calif.	22	16	5	-	-	1	1		
Kansas City, Kans.	42	29	4	6	3	-	-	Seattle, Wash.	113	72	28	9	3	1	6		
Kansas City, Mo.	115	76	21	5	4	1	8	Spokane, Wash.	55	42	10	1	1	1	6		
Lincoln, Nebr.	43	34	7	1	1	-	5	Tacoma, Wash.	82	58	15	4	1	4	6		
Minneapolis, Minn.	150	116	20	9	3	2	19	TOTAL	11,376 <sup>¶</sup>	7,851	2,172	852	265	226	682		
Omaha, Nebr.	90	58	16	6	1	9	6										
St. Louis, Mo.	94	63	17	7	4	3	-										
St. Paul, Minn.	67	53	7	3	2	2	5										
Wichita, Kans.	85	65	11	5	3	1	1										

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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