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Japanese Encephalitis Among Three U.S. Travelers Returning from Asia, 2003–2008

Japanese encephalitis virus (JEV), a mosquito-borne flavivirus, is a leading cause of encephalitis in Asia (*1*). The risk for Japanese encephalitis (JE) for most travelers is low, but varies by travel destination, duration, season, and activities (*2*). As part of routine surveillance and diagnostic testing, state health officials or clinicians send specimens from patients with unexplained encephalitis to CDC. To characterize the epidemiologic and clinical features of JE cases, CDC reviewed all laboratory-confirmed cases that occurred during 1992 (when a JE vaccine was first licensed in the United States) to 2008. Four cases were identified, including one previously reported (*3*). This report describes the three previously unpublished cases. All were Asian immigrants or family members who traveled to Asia to live or to visit friends or relatives and had not been vaccinated for JE. The three patients experienced fever with mental status changes, but JE was recognized early in the clinical course of only one patient. All recovered, but two patients had residual neurologic deficits. Travelers to Asia might be at increased risk for JE because of rural itineraries and lack of perceived risk (*4*). To protect against JE, travelers should seek medical advice on protective measures, including possible JE vaccination, well in advance of departure for Asia. While in Asia, travelers should use personal protective measures to reduce the risk for mosquito bites. Health-care providers should assess the risk for JE in travelers to Asia and provide appropriate preventive or supportive treatment measures.

Case Reports

Case 1. On August 21, 2003, a woman aged 30 years was hospitalized in Minnesota with neck pain, confusion, and slow speech. The patient was born in Korea, moved to the United States at age 3 years, and moved back to Korea at age 26 years. For 7 months before illness onset, she had lived on an island off the coast of southern Thailand. She reportedly had no record of receiving JE vaccine. On July 30, while in Thailand, a dog bit her on the ankle. On August 1 and 4, she received rabies postexposure prophylaxis with rabies vaccine. On August 7, she was hospitalized with a nonspecific febrile illness, treated empirically with intravenous antibiotics, discharged the next day, then rehospitalized during August 10–14 for additional symptomatic treatment. On August 20, she returned to the United States.

On admission to the Minnesota hospital, she was afebrile with normal vital signs. Routine laboratory studies and brain scans were unremarkable. Cerebrospinal fluid (CSF) showed lymphocytic pleocytosis (33 white blood cells [WBC]/mm^3 [normal: 0–5 WBC/mm^3] with 97% lymphocytes, 27 red blood cells (RBC) per mm^3 [normal: 0 RBC/mm^3]), slightly elevated protein (51 mg/dL [(normal: 15–45 mg/dL]), and normal glucose concentrations. Other tests were negative, including bacterial cultures, polymerase chain reaction assays for herpes simplex and rabies viruses, a stool culture for enteroviruses, and enzyme immunoassays for immunoglobulin M (IgM) antibodies to a standard panel of domestic arboviruses.*

* West Nile, La Crosse, St. Louis encephalitis, eastern equine encephalitis, and western equine encephalitis viruses.

INSIDE

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The patient received rabies immune globulin and intravenous corticosteroids, and completed the rabies vaccination series. Her mental status improved over several days, and she was discharged on August 26 with a presumptive diagnosis of viral meningoencephalitis. Serum and CSF samples collected on August 21 (day 14 of illness) subsequently tested positive for JEV-specific IgM and neutralizing antibodies at CDC. The patient recovered fully.

Case 2. On July 26, 2005, on a return flight to California from the Philippines, a woman aged 68 years developed weakness and loss of appetite. The next day, she developed fever, chills, nausea, and dry cough and was hospitalized on July 28 to receive intravenous antibiotics. The patient, an immigrant to the United States who reportedly never received JE vaccine, had spent the previous 3 months visiting friends and relatives in Manila. On admission to the hospital, she had fever (103.5°F [39.7°C]) and a peripheral WBC count of 11,900/mm^3 (85% neutrophils). Other routine laboratory tests, abdominal computed tomography (CT) scan and ultrasound, and a chest radiograph were unremarkable.

Within a few hours after admission, the patient developed agitation, disorientation, and hypotension requiring intravenous vasopressors and she was transferred to the intensive-care unit. The next day, she became obtunded with spastic limb movements and upper-body muscle tension. She was treated empirically with lorazepam, tetanus immune globulin, acyclovir, and fluconazole. CSF showed lymphocytic pleocytosis (75 WBC/mm^3 with 71% lymphocytes and 29% neutrophils), elevated protein (133 mg/dL), and normal glucose concentrations. CT and magnetic resonance imaging (MRI) of the brain and electroencephalography were noncontributory. During the next 3 weeks, the patient was extubated, regained her ability to speak, and was able to walk with assistance. On August 24 (hospital day 28), she was discharged for further outpatient rehabilitation. Serum obtained on August 4 (day 9 of illness) subsequently tested positive for JEV-specific IgM and neutralizing antibodies at CDC.

Case 3. In mid-January, 2008, a previously healthy boy aged 9 years and his family flew from their home in Washington to Phnom Penh, Cambodia, where they stayed for 1 week. He subsequently visited family in rural southern Vietnam for nearly 3 weeks and stayed another 5 days in a hotel in Ho Chi Minh City. Three weeks before departure to Asia, the family had visited a travel medicine clinic but deferred JE vaccination because of insufficient time to complete a full primary series, which is typically administered over 30 days.

On February 17, while in Ho Chi Minh City, the patient developed fever, headache, weakness, loss of appetite, and vomiting. On February 18, the family returned to Phnom Penh, where the patient was hospitalized with decreased

mental status, seizures, and progressive limb weakness. On February 22, he was transferred to a hospital in Bangkok where he had fever, intermittent seizures, bilateral papilledema, motor aphasia, involuntary limb movements, and somnolence requiring mechanical ventilation. CSF showed 5 WBC/mm^3, 42 RBC/mm^3, and normal protein and glucose concentrations. Head CT and MRI scans showed abnormalities of the thalami, basal ganglia, and right caudate nucleus. A battery of laboratory tests for potential encephalitis pathogens was negative,[†] except for anti-JEV IgM in serum and CSF.

While hospitalized, the patient received anticonvulsants, diuretics, corticosteroids, antibiotics, and influenza antivirals. He was extubated on February 27 and airlifted to a hospital in the United States on March 18. The patient was discharged home on March 26 with substantial residual cognitive deficits, aphasia, and motor dysfunction. Six months later, he was walking independently, eating solid food, and making gains in speech recovery. Serum collected on March 25 (5 weeks after illness onset) subsequently tested positive for JEV-specific IgM and neutralizing antibodies at CDC, confirming the diagnosis made in Thailand.

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Editorial Note: JE is predominately a disease of rural Asia and parts of the western Pacific, especially where rice culture and pig farming coexist (*1*). In JE-endemic countries, most adults have protective immunity, and JE is primarily a disease of children. However, travel-associated JE can occur in any age group. In temperate areas, JEV transmission occurs mainly in summer and fall; in tropical and subtropical areas, seasonal transmission varies with monsoons and irrigation practices, and might be extended or occur year-round.

The risk for JE for most travelers to Asia is low, but varies based on travel destination, duration, season, and activities. The overall incidence of JE among persons traveling to Asia from countries where JE is not endemic is estimated to be <1 case per 1 million travelers (*3*). The risk to short-term travelers whose visits are limited to urban areas is negligible (*1,2*). In contrast, expatriates and travelers with prolonged stays in rural areas where JE is endemic or epidemic are at greater risk, possibly similar to that of the resident, nonimmune population (*2*). Travelers on even brief trips to rural areas might have increased risk (*5–7*), especially if they are extensively exposed to mosquitoes (*2*).

From 1973 to 1992, 11 JE cases were reported among U.S. residents, including five among civilian travelers (*8*). Since December 1992, when a JE vaccine was first licensed in the United States, only four cases of JE have been reported among U.S. residents, the three travel-associated JE cases described in this report and the case reported previously in 2004 (*3*). All four JE cases were among civilian travelers or expatriates. Two of the travel-associated JE cases described in this report were Asian-native adults who had immigrated to the United States many years earlier, and the third was in a U.S.-native child whose parents were Asian immigrants. Immigrants who return to their native countries to visit friends or relatives might be less concerned about or less aware of disease risks associated with travel to those countries, and thus might be less inclined to seek pretravel medical advice (*4*).

Although <1% of JEV infections result in clinical disease, JE is a devastating illness that has a case-fatality ratio of approximately 30% and causes neurologic sequelae in approximately 50% of survivors (*1*). No specific treatment exists. Therefore, prevention is paramount.[§] Travelers to JE-endemic countries should be advised of the risks for JE disease and the importance of personal protective measures to reduce the risk for mosquito bites (*9*). The use of bed nets, insect repellents, and protective clothing, and avoidance of outdoor activity, especially in the evening and at night, are important preventive measures for JE (*2*). JE vaccine can reduce further the risk for infection for travelers in high-risk settings, depending on season, location, duration, and activities. In March 2009, the Food and Drug Administration approved a new inactivated Vero cell culture-derived JE vaccine (IXIARO) for use in persons aged ≥17 years. An inactivated mouse brain–derived JE vaccine (JE-VAX) has been licensed in the United States since 1992 for use in persons aged ≥1 year. However, JE-VAX is no longer being produced, and limited supplies remain. Therefore, CDC recommends that JE-VAX only be used for children aged 1–16 years.

JE should be suspected in a patient with evidence of a neuroinvasive viral infection (e.g., encephalitis, aseptic meningitis, or acute flaccid paralysis) who recently returned from a JE-endemic country in Asia or the western Pacific. Health-care providers should contact their state or local health

[†] CSF evaluated by bacterial culture, latex agglutination for *Haemophilus influenzae* type b, *Streptococcus pneumoniae*, *Streptococcus agalactiae*, and *Neisseria meningitidis* serogroups A, B, C, Y, and W135, and polymerase chain reaction for herpes simplex virus and enteroviruses.

[§] Updated recommendations regarding the prevention of travel-associated JE and a map of JE-endemic areas are available at http://wwwn.cdc.gov/travel/yellowbook/ch4/japanese-encephalitis.aspx.

department or CDC's Division of Vector-Borne Infectious Diseases (telephone: 970-221-6400) for assistance with JEV diagnostic testing.

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Differences in Prevalence of Obesity Among Black, White, and Hispanic Adults — United States, 2006–2008

Obesity is associated with increased health-care costs, reduced quality of life, and increased risk for premature death (*1,2*). Common morbidities associated with obesity include coronary heart disease, hypertension and stroke, type 2 diabetes, and certain types of cancer (*1,2*). As of 2007, no state had met the *Healthy People 2010* objective to reduce to 15% the prevalence of obesity among U.S. adults (*3,4*). An overarching goal of *Healthy People 2010* is to eliminate health disparities among racial/ethnic populations. To assess differences in prevalence of obesity among non-Hispanic blacks, non-Hispanic whites, and Hispanics, CDC analyzed data from Behavioral Risk Factor Surveillance System (BRFSS) surveys conducted during 2006–2008. Overall, for the 3-year period, 25.6% of non-Hispanic blacks, non-Hispanic whites, and Hispanics were obese. Non-Hispanic blacks (35.7%) had 51% greater prevalence of obesity, and Hispanics (28.7%) had 21% greater prevalence, when compared with non-Hispanic whites (23.7%). This pattern was consistent across most U.S. states. However, state prevalences varied substantially, ranging from 23.0% (New Hampshire) to 45.1% (Maine) for non-Hispanic blacks, from 21.0% (Maryland) to 36.7% (Tennessee) for Hispanics, and from 9.0% (District of Columbia [DC]) to 30.2% (West Virginia) for non-Hispanic whites. Given the overall high prevalence of obesity and the significant differences among non-Hispanic blacks, non-Hispanic whites, and Hispanics, effective policies and environmental strategies that promote healthy eating and physical activity are needed for all populations and geographic areas, but particularly for those populations and areas disproportionally affected by obesity.

BRFSS is an ongoing, state-based, random-digit–dialed telephone survey of the U.S. civilian, noninstitutionalized population aged ≥18 years, conducted in 50 states, DC, and three U.S. territories. The median response rate* among all states and territories, based on Council of American Survey and Research Organizations (CASRO) guidelines, was 51.4% (range: 35.1%–66.0%) in 2006, 50.6% (range: 26.9%–65.4%) in 2007, and 53.3% (range: 35.8%–65.9%) in 2008. The median cooperation rate† was 74.5% (range: 56.9%–83.5%) in 2006, 72.1% (range: 49.6%–84.6%) in 2007, and 75.0% (range: 59.3%–87.8%) in 2008. Obesity was defined as a body mass index (BMI) ≥30. BMI was calculated from self-reported weight and height (weight [kg] / height [m^2]). Pregnant women and respondents reporting a weight ≥500 pounds or a height ≥7 feet were excluded. To ensure sufficient sample sizes for valid obesity estimates from most states, 3 years of data were used, and analyses were limited to three racial/ethnic populations: non-Hispanic whites, non-Hispanic blacks, and Hispanics. Estimates were based on populations with at least 50 respondents and a prevalence relative standard error of less than 30%. Data also were analyzed by sex and U.S. census region. All analyses were conducted using statistical software to account for complex sampling design. Age-adjusted prevalences were estimated using the 2000 U.S. standard population.

* The percentage of persons who completed interviews among all eligible persons, including those who were not successfully contacted.
† The percentage of persons who completed interviews among all eligible persons who were contacted.

During 2006–2008, the age-adjusted estimated prevalence of obesity overall was 25.6% among non-Hispanic blacks, non-Hispanic whites, and Hispanics. Non-Hispanic blacks had the greatest prevalence of obesity (35.7%), followed by Hispanics (28.7%), and non-Hispanic whites (23.7%) (Table 1). These differences were consistent across all census regions and greater among women than men. Non-Hispanic black women had the greatest prevalence (39.2%), followed by non-Hispanic black men (31.6%), Hispanic women (29.4%), Hispanic men (27.8%), non-Hispanic white men (25.4%), and non-Hispanic white women (21.8%) (Table 1).

Among the four U.S. census regions, greater prevalences of obesity for non-Hispanic blacks were found in the South (36.9%) and Midwest (36.3%) than in the West (33.1%) and Northeast (31.7%). Greater prevalences of obesity for non-Hispanic whites were found in the Midwest (25.4%) and South (24.4%) than in the Northeast (22.6%) and West (21.0%). Among Hispanics, smaller prevalence was observed in the Northeast (26.6%) than in the Midwest (29.6%), South (29.2%), or West (29.0%) (Table 1).

In most states, non-Hispanic blacks had the greatest prevalence of obesity, followed by Hispanics, and non-Hispanic whites. In the 45 states and DC where non-Hispanic blacks had sufficient respondents, the state-specific prevalence of obesity ranged from 23.0% (New Hampshire) to 45.1% (Maine); in 40 states, prevalence was ≥30%, and in five states (Alabama, Maine, Mississippi, Ohio, and Oregon) prevalence was ≥40% (Table 2, Figure). Among Hispanics in 50 states and DC, the prevalence of obesity ranged from 21.0% (Maryland) to 36.7% (Tennessee) and was ≥30% in 11 states (Table 2, Figure). Among non-Hispanic whites in 50 states and DC, the prevalence of obesity ranged from 9.0% (DC) to 30.2% (West Virginia). In five states (California, Colorado, Connecticut, Hawaii, and New Mexico) and DC, obesity prevalence was <20% (Table 2, Figure).

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Editorial Note: The prevalence of obesity in the United States has more than doubled in the past three decades, and certain racial/ethnic populations have been affected disproportionally (*5,6*). Data from the 2003–2004 National Health and Nutrition Examination Survey (NHANES), for which height and weight of adults aged ≥20 years are measured by survey staff members, indicated the prevalence of obesity was 45.0% among non-Hispanic blacks, 36.8% among Mexican-Americans, and 30.6% among non-Hispanic whites (*6*). This report found smaller prevalences, using height and weight data that were self-reported to BRFSS and, therefore, likely

TABLE 1. Prevalence* of obesity† among adults, by black/white race or Hispanic ethnicity, census region,§ and sex — Behavioral Risk Factor Surveillance System surveys, United States, 2006–2008

	White, non-Hispanic (n = 900,629)		Black, non-Hispanic (n = 84,838)		Hispanic (n = 63,825)	
Census region	**%**	**(95% CI¶)**	**%**	**(95% CI)**	**%**	**(95% CI)**
Overall						
Both sexes	**23.7**	**(23.5–23.9)**	**35.7**	**(35.0–36.3)**	**28.7**	**(28.0–29.5)**
Men	**25.4**	**(25.1–25.7)**	**31.6**	**(30.6–32.7)**	**27.8**	**(26.7–28.9)**
Women	**21.8**	**(21.6–22.1)**	**39.2**	**(38.5–40.0)**	**29.4**	**(28.5–30.3)**
Northeast						
Both sexes	22.6	(22.2–23.0)	31.7	(30.0–33.4)	26.6	(25.0–28.3)
Men	25.0	(24.4–25.6)	26.5	(24.0–29.1)	26.9	(24.3–29.6)
Women	20.0	(19.6–20.5)	36.1	(34.0–38.3)	26.0	(24.1–28.0)
Midwest						
Both sexes	25.4	(25.1–25.8)	36.3	(34.9–37.9)	29.6	(27.4–31.9)
Men	27.0	(26.5–27.6)	32.1	(29.7–34.5)	29.7	(26.4–33.1)
Women	23.8	(23.3–24.2)	40.1	(38.3–42.0)	29.2	(26.6–31.9)
South						
Both sexes	24.4	(24.1–24.7)	36.9	(36.2–37.7)	29.2	(28.1–30.3)
Men	26.3	(25.8–26.8)	32.6	(31.4–33.9)	28.3	(26.6–30.1)
Women	22.5	(22.1–22.9)	40.6	(39.7–41.5)	29.7	(28.3–31.1)
West						
Both sexes	21.0	(20.6–21.5)	33.1	(29.7–36.7)	29.0	(27.7–30.3)
Men	22.1	(21.5–22.8)	34.1	(29.0–39.6)	27.3	(25.5–29.2)
Women	19.8	(19.3–20.4)	32.0	(28.2–36.1)	30.4	(28.7–32.1)

* Age adjusted to the 2000 U.S. standard population.
† Body mass index (BMI) ≥30.0; BMI was calculated from self-reported weight and height (weight [kg] / height [m^2]).
§ Additional information available at http://www.census.gov.
¶ Confidence interval.

TABLE 2. State-specific percentage* of adults categorized as obese,† by black/white race or Hispanic ethnicity — Behavioral Risk Factor Surveillance System surveys, United States, 2006–2008

	White, non-Hispanic		Black, non-Hispanic		Hispanic	
State/Area	%	(95% CI§)	%	(95% CI)	%	(95% CI)
Alabama	27.3	(25.9–28.6)	40.4	(38.0–42.8)	29.0	(21.5–38.0)
Alaska	25.0	(23.3–26.8)	30.8	(20.5–43.4)	30.8	(21.7–41.7)
Arizona	21.7	(19.9–23.7)	35.9	(26.0–47.2)	31.4	(27.8–35.1)
Arkansas	27.1	(26.0–28.2)	37.6	(34.4–41.0)	25.5	(21.4–30.2)
California	19.8	(18.9–20.8)	34.3	(29.6–39.3)	29.2	(27.6–30.9)
Colorado	16.2	(15.6–16.8)	26.2	(22.3–30.4)	25.1	(23.3–27.0)
Connecticut	19.9	(18.9–20.9)	31.2	(27.9–34.8)	24.6	(21.8–27.7)
Delaware	24.3	(23.0–25.7)	39.2	(35.7–42.9)	29.0	(22.1–37.0)
District of Columbia	9.0	(8.2–10.0)	32.9	(31.2–34.7)	22.6	(18.4–27.3)
Florida	20.9	(20.0–21.8)	35.1	(32.4–37.9)	26.0	(23.8–28.4)
Georgia	23.5	(22.5–24.5)	36.0	(33.9–38.2)	26.1	(21.4–31.5)
Hawaii	16.4	(15.1–17.9)	26.0	(17.4–36.9)	26.7	(23.5–30.1)
Idaho	23.6	(22.6–24.5)	—¶	—	28.7	(25.1–32.7)
Illinois	23.4	(22.4–24.3)	33.3	(30.2–36.5)	30.7	(27.0–34.7)
Indiana	26.1	(25.1–27.1)	35.7	(32.1–39.5)	26.6	(21.9–31.9)
Iowa	25.5	(24.6–26.5)	35.7	(28.7–43.3)	27.5	(22.3–33.5)
Kansas	25.7	(24.9–26.5)	39.8	(35.4–44.3)	31.7	(28.5–35.2)
Kentucky	27.4	(26.4–28.5)	38.5	(33.2–44.1)	27.0	(20.4–34.9)
Louisiana	24.9	(24.0–25.9)	35.9	(34.0–37.8)	24.4	(19.9–29.6)
Maine	23.6	(22.7–24.5)	45.1	(31.4–59.5)	27.8	(20.3–36.8)
Maryland	22.4	(21.6–23.3)	34.0	(32.1–36.0)	21.0	(17.5–25.0)
Massachusetts	20.0	(19.3–20.7)	30.0	(27.2–33.1)	27.1	(24.7–29.5)
Michigan	26.2	(25.3–27.1)	37.4	(34.6–40.2)	31.2	(25.4–37.5)
Minnesota	24.3	(23.3–25.3)	32.5	(26.8–38.7)	27.9	(20.9–36.1)
Mississippi	27.6	(26.5–28.7)	40.4	(38.8–42.1)	26.0	(20.1–33.0)
Missouri	26.5	(25.3–27.8)	36.1	(32.1–40.2)	28.8	(22.2–36.3)
Montana	21.0	(20.0–21.9)	—	—	22.9	(17.5–29.5)
Nebraska	25.7	(24.8–26.6)	35.9	(28.8–43.6)	29.0	(25.0–33.3)
Nevada	22.8	(21.3–24.3)	28.7	(22.8–35.3)	29.1	(26.0–32.5)
New Hampshire	22.9	(22.1–23.8)	23.0	(13.2–36.8)	32.3	(25.4–40.0)
New Jersey	21.9	(20.9–22.9)	33.0	(30.5–35.6)	24.1	(21.8–26.5)
New Mexico	19.5	(18.3–20.8)	31.9	(24.1–41.0)	27.6	(26.1–29.1)
New York	22.8	(21.9–23.8)	29.7	(27.0–32.5)	27.1	(24.5–29.9)
North Carolina	24.9	(24.2–25.7)	38.8	(37.0–40.6)	25.3	(22.5–28.2)
North Dakota	25.1	(24.1–26.1)	—	—	31.9	(23.6–41.5)
Ohio	26.6	(25.5–27.8)	42.5	(38.6–46.5)	25.9	(20.9–31.6)
Oklahoma	27.3	(26.4–28.3)	32.7	(29.6–36.0)	30.7	(27.0–34.7)
Oregon	24.6	(23.6–25.7)	41.6	(30.5–53.7)	23.0	(19.0–27.5)
Pennsylvania	25.0	(24.1–25.9)	36.5	(33.0–40.2)	31.3	(26.2–36.7)
Rhode Island	20.1	(19.1–21.2)	30.1	(25.1–35.5)	26.0	(22.7–29.6)
South Carolina	25.1	(24.1–26.1)	38.8	(36.9–40.6)	27.0	(22.1–32.6)
South Dakota	25.3	(24.4–26.3)	—	—	28.6	(22.0–36.3)
Tennessee	27.0	(25.7–28.2)	38.0	(34.1–42.1)	36.7	(25.6–49.5)
Texas	23.5	(22.4–24.7)	37.8	(34.8–41.0)	32.3	(30.6–34.0)
Utah	22.6	(21.7–23.5)	34.9	(23.6–48.1)	21.6	(18.5–25.0)
Vermont	21.2	(20.5–22.0)	—	—	24.4	(19.2–30.5)
Virginia	23.6	(22.3–25.0)	34.5	(31.5–37.6)	24.7	(19.8–30.3)
Washington	24.0	(23.5–24.6)	29.7	(25.9–33.7)	29.9	(27.8–32.1)
West Virginia	30.2	(29.1–31.3)	36.3	(29.7–43.6)	26.1	(18.2–35.8)
Wisconsin	24.5	(23.5–25.6)	36.4	(32.2–40.8)	27.3	(20.1–36.1)
Wyoming	22.5	(21.7–23.4)	36.9	(25.5–50.1)	28.6	(25.0–32.5)

* Age adjusted to the 2000 U.S. standard population.
† Body mass index (BMI) ≥30.0; BMI was calculated from self-reported weight and height (weight [kg] / height [m^2]).
§ Confidence interval.
¶ Number of respondents <50 or relative standard error ≥30%.

to produce underestimates. However, differences among non-Hispanic blacks, non-Hispanic whites, and Hispanics in this report were similar to those found in the NHANES study: non-Hispanic blacks had the greatest prevalence of obesity, followed by Hispanics and non-Hispanic whites.

At least three reasons might account for the differences in the prevalence of obesity among the study populations observed

in this and other studies. First, racial/ethnic populations differ in behaviors that contribute to weight gain. For example, compared with non-Hispanic whites, non-Hispanic blacks and Hispanics are less likely to engage in regular (nonoccupational) physical activity (*7*). In addition, differences exist in attitudes and cultural norms regarding body weight. For example, according to one study, both non-Hispanic black and Hispanic women are more satisfied with their body size than non-Hispanic white women; persons who are satisfied with their body size are less likely to try to lose weight (*8*). Finally, certain populations have less access to affordable, healthful foods and safe locations for physical activity. Evidence suggests that neighborhoods with large minority populations have fewer chain supermarkets and produce stores and that healthful foods are relatively more expensive than energy-dense foods, especially in minority and low-income communities (*9*). Evidence also indicates that minority and low-income populations have less access to physical activity facilities and resources and that traffic and neighborhood safety might inhibit walking (*9*).

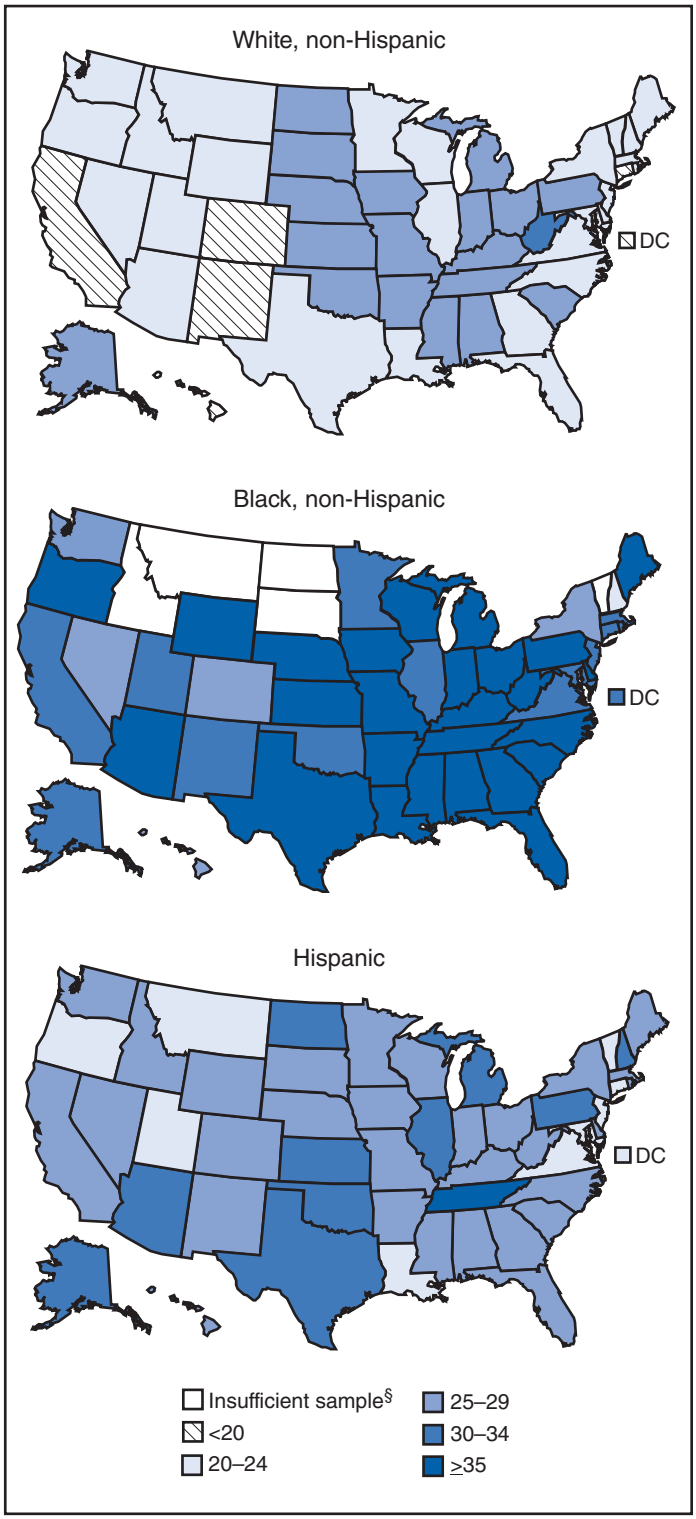
The reasons for the substantial differences among states in the prevalence of obesity among non-Hispanic blacks, non-Hispanic whites, and Hispanics are complex and not well understood. CDC currently provides funding and technical assistance to 25 states to develop their own effective obesity prevention and control programs. As part of this funding, states are implementing evidence-based policies, systems, and environmental strategies to address health disparities. For example, the New York State Department of Health uses federal and state funds to increase access to fruits and vegetables for low-income, primarily minority populations. Program strategies include 1) participating in community-supported agriculture and delivering fresh produce to low-income areas, 2) creating mobile farmer's markets to serve low-income neighborhoods, and 3) implementing food stamp nutrition education programs designed to increase access to and consumption of fruits and vegetables. Surveyed at the end of an education series, 76% of program participants said they intended to increase consumption of fruits and vegetables at home.[§]

Through the Racial and Ethnic Approaches to Community Health (REACH) program, CDC funds communities to eliminate racial and ethnic disparities in health,[¶] using community-based policies, systems, and environmental approaches. For example, REACHing African Americans in Los Angeles, California, coordinates a coalition that has created a network of 35 physical activity programs, helps develop wellness programs in local workplaces, and works with city

[§] Additional information available at http://www.health.state.ny.us/prevention/nutrition.

[¶] Additional information available at http://www.cdc.gov/reach.

FIGURE. State-specific percentage* of adults categorized as obese†, by black/white race or Hispanic ethnicity — Behavioral Risk Factor Surveillance System surveys, United States, 2006–2008



* Age adjusted to the 2000 U.S. standard population.

† Body mass index (BMI) ≥30.0; BMI was calculated from self-reported weight and height (weight [kg] / height [m^2]).

§ Number of respondents <50 or relative standard error ≥30%.

officials to provide policies that support healthy eating in under-resourced communities. As a result, the Community Redevelopment Agency has developed an incentive package to attract grocery stores, and the city council approved a proposal that prohibits new fast-food restaurants in certain under-resourced communities.**

The findings in this report are subject to at least three limitations. First, the respondent heights and weights used to calculate BMI were self-reported. The prevalences of obesity reported in this study likely are underestimated because height commonly is overreported and weight underreported (*10*). Second, BRFSS excludes persons without landline telephones. Evidence shows that adults living in wireless-only households tend to be younger, to have lower incomes, and to be members of minority populations,†† which might result in either underestimates or overestimates. Third, because of limited numbers of non-Hispanic black respondents in five states, valid estimates for that population could not be calculated for those states.

The high prevalence of obesity overall in the United States underscores the importance of implementing effective intervention strategies in the general population. Effective policy and environmental strategies to promote physical activity include developing communication programs and community- and street-scale urban design and land use policies, and creating or enhancing access to places for physical activity.§§ Given the significant disparities in obesity prevalence, public health officials should ensure that those populations with the greatest need are the ones that benefit the most from these efforts and are involved in developing effective strategies for their communities. To reduce disparities among populations in the prevalence of obesity, an effective public health response is needed that includes surveillance, policies, programs, and supportive environments achieved through the efforts of government, communities, workplaces, schools, families, and individuals.

** Additional information available at http://www.cdc.gov/reach/pdf/voices_101007.pdf.

†† Additional information available at http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless200805.htm.

§§ Additional information available at http://www.thecommunityguide.org/index.html.

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Tularemia — Missouri, 2000–2007

Tularemia is an uncommon but potentially fatal zoonotic disease caused by the gram-negative coccobacillus *Francisella tularensis*. Approximately 40% of all tularemia cases reported to CDC each year occur in Arkansas, Oklahoma, and Missouri (*1*). To define the epidemiologic and clinical features of tularemia in Missouri, the Missouri Department of Health and Senior Services (MDHSS) analyzed surveillance data and conducted a retrospective clinical chart review of cases that occurred during 2000–2007. This report describes the results of that analysis, which identified 190 cases (87 confirmed and 103 probable), for an average annual incidence of 0.4 cases per 100,000 population statewide. Most cases occurred during the summer months (78%) and among males (66%). Analysis of 121 clinical charts revealed that children were more likely than adults to be diagnosed with glandular tularemia, whereas adults were more likely to be diagnosed with pneumonic tularemia. Sixty-three (52%) patients were hospitalized; one patient died. Among 78 cases with a documented exposure source, 72% were associated with tick bite. In 33 (85%) of 39 culture-confirmed cases, the laboratory received specimens without any indication of suspicion of a tularemia diagnosis. Clinicians should 1) be aware of the range of tularemia symptoms, 2) consider the diagnosis in patients reporting fever and tick or animal

exposure, and 3) initiate empiric antimicrobial therapy while awaiting laboratory confirmation. Laboratory staff should take appropriate precautions when processing culture specimens from tularemia-endemic regions, even if suspicion of tularemia is not noted when the specimen is submitted.

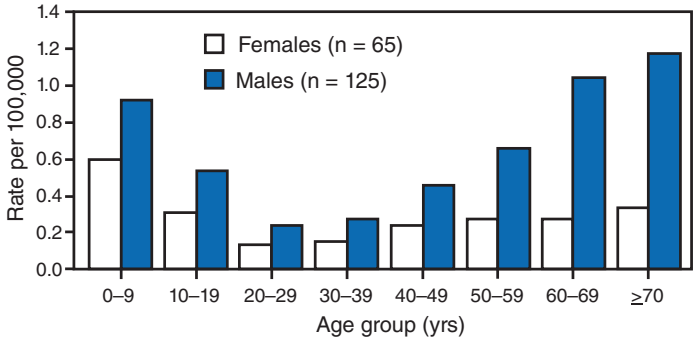
Tularemia is a nationally notifiable disease. Although tularemia was removed from the list of nationally notifiable diseases in 1994, it was reinstated in 2000 because of increased concern about potential use of *F. tularensis* as a biologic weapon (*1,2*). In Missouri, since 2000, clinicians and laboratories have been required to report to MDHSS cases of illness that are clinically compatible with tularemia and have presumptive or confirmed laboratory evidence of infection. The clinical presentation of tularemia ranges from cutaneous ulcers to pneumonia and depends on the mode of transmission and site of inoculation (*3*). Routes of *F. tularensis* transmission to humans include arthropod bites, contact with infected animal tissues, ingestion of contaminated food or water, and inhalation of contaminated aerosols (e.g., aerosols generated by mowing over infected animal carcasses and through improper handling of laboratory cultures).

To define the epidemiologic and clinical features of tularemia in Missouri, MDHSS analyzed 190 tularemia case reports from the period 2000–2007 and conducted an independent review of 121 available clinical records (including clinician notes, laboratory results, and drug administration records) using an abstraction form modified from the CDC case report form.* Reports were included in this analysis if the diagnosis of tularemia met the National Notifiable Disease Surveillance System case definition.† The primary clinical form of the disease was classified according to health-care provider diagnosis and documented clinical features. For the purpose of this analysis, patients with tularemia who presented with undifferentiated febrile illness or sepsis without localizing signs (often referred to as typhoidal tularemia) were categorized as pneumonic tularemia, because these cases frequently have evidence of respiratory disease (*3*). Data on exposures occurring within 3 weeks of illness onset were abstracted from clinical notes; aerosol exposure was defined as exposure through inhalation of agricultural grains or dusts, or aerosols created by mowing over animal carcasses. MDHSS reviewed clinical notes of all culture-confirmed cases to determine whether the provider had documented suspicion of tularemia by the time specimens were submitted to the laboratory. Appropriate antibiotic therapy was defined as treatment with an aminoglycoside or a fluoroquinolone for at least 10 days or a tetracycline for at least 15 days (*4*). The county of residence and 2000 census data were used for county incidence calculations. Continuous variables were analyzed by Student's t-tests, and categorical variables were analyzed using chi-square or Fischer's exact tests, as appropriate.

During 2000–2007, a total of 190 cases of tularemia (87 confirmed and 103 probable) were reported to MDHSS, yielding a statewide average annual incidence of 0.4 cases per 100,000 population. No increase or decrease was observed in annual trend (range: 13–32 cases per year). The majority of cases were reported from central and southwestern Missouri. The total number of cases by county for the 8-year period ranged from zero to 14, yielding average annual incidence rates that ranged up to 5.25 cases per 100,000 population. Males accounted for 125 (66%) patients; median patient age was 37 years (range: 6 months–93 years), with a distinct bimodal distribution among males (Figure 1).

Clinical records were available for 121 (64%) patients, including 59 (49%) with confirmed and 62 (51%) with probable tularemia. For the 107 (88%) cases with data on primary clinical form, ulceroglandular tularemia was the most common overall (42%). The distribution of clinical form differed significantly between children and adults ($p<0.01$). Children were

FIGURE 1. Average annual incidence rate of tularemia, by age group and sex* — Missouri, 2000–2007



* Among 190 total cases. Reports were included in this analysis if the diagnosis of tularemia met the National Notifiable Disease Surveillance System case definition. A confirmed case was defined as clinically compatible illness with isolation of *F. tularensis* from a clinical specimen or a fourfold or greater change in paired serum antibody titers to *F. tularensis* antigen between acute and convalescent samples. A probable case was defined as clinically compatible illness with detection of *F. tularensis* in a clinical specimen by fluorescent assay or a single elevated serum antibody titer to *F. tularensis* antigen, as determined by individual laboratory cutoff values. Case definitions available at http://www.cdc.gov/ncphi/disss/nndss/casedef/tularemia_current.htm. Age-specific and sex-specific incidence calculated using 2000 census data.

* CDC tularemia case report form available at http://www.cdc.gov/tularemia/tul_pubhealthofficials.html.

† A confirmed case was defined as clinically compatible illness with isolation of *F. tularensis* from a clinical specimen or a fourfold or greater change in paired serum antibody titers to *F. tularensis* antigen between acute and convalescent samples. A probable case was defined as clinically compatible illness with detection of *F. tularensis* in a clinical specimen by fluorescent assay or a single elevated serum antibody titer to *F. tularensis* antigen, as determined by individual laboratory cutoff values. Case definitions available at http://www.cdc.gov/ncphi/disss/nndss/casedef/tularemia_current.htm.

diagnosed with glandular tularemia more than twice as often as adults, whereas adults were diagnosed with the pneumonic form 10 times as often as children (Table).

For the 26 cases categorized as pneumonic tularemia based on clinical features, 12 (46%) had recorded exposures, of which six were inhalational (four patients worked with grain or hay; two mowed over dead animals) and six were tick exposures (without lesions or lymphadenopathy). Ten (38%) patients had cough, and seven (27%) had shortness of breath or chest pain. The mean initial temperature documented in clinical record was 100.7°F (38.2°C) (range: 98.0–105.0°F [36.7–40.6°C]). Among the 16 patients for whom initial chest radiograph reports were available, six (38%) reports were normal, six (38%) noted unilateral pulmonary infiltrates, and four (25%) noted pleural effusions. Two (13%) patients developed empyema, and two (13%) developed generalized sepsis.

Eighty (66%) of the 121 patients had an uneventful clinical course with full recovery, 40 (33%) patients had a complicated

TABLE. Number and percentage of human tularemia cases among children (aged ≤18 years) and adults, by year of diagnosis, exposure source, primary clinical form, treatment prescribed, and outcome — Missouri, 2000–2007*

Characteristic	Children		Adults		Total	
	No.	(%)	No.	(%)	No.	(%)
Year of diagnosis	**73**	**(100)**	**117**	**(100)**	**190**	**(100)**
2000	9	(12)	14	(12)	**23**	**(12)**
2001	11	(15)	14	(11)	**25**	**(13)**
2002	6	(8)	10	(9)	**16**	**(9)**
2003	15	(21)	15	(13)	**30**	**(16)**
2004	8	(11)	18	(16)	**26**	**(14)**
2005	6	(8)	19	(16)	**25**	**(13)**
2006	4	(6)	9	(8)	**13**	**(7)**
2007	14	(19)	18	(16)	**32**	**(17)**
Exposure source†	**34**	**(100)**	**44**	**(100)**	**78**	**(100)**
Tick bite	26	(76)	30	(68)	**56**	**(72)**
Animal/animal tissue contact	2	(6)	4	(9)	**6**	**(8)**
Agricultural or lawnmowing aerosols§	0	(0)	6	(14)	**6**	**(8)**
Multiple exposure sources	6	(18)	4	(9)	**10**	**(13)**
Primary clinical form¶	**45**	**(100)****	**62**	**(100)**	**107**	**(100)**
Ulceroglandular	19	(42)	26	(42)	**45**	**(42)**
Glandular	20	(44)	10	(16)	**30**	**(28)**
Pneumonic	2	(4)	24	(39)	**26**	**(24)**
Oculoglandular	3	(7)	1	(2)	**4**	**(4)**
Oropharyngeal	1	(2)	1	(2)	**2**	**(2)**
Treatment prescribed††	**47**	**(100)**	**62**	**(100)**	**109**	**(100)**
Tetracyclines	8	(17)	45	(71)	**53**	**(49)**
Aminoglycosides	29	(62)	22	(35)	**51**	**(47)**
Fluoroquinolones	18	(38)	27	(44)	**45**	**(41)**
Ineffective antibiotics§§	40	(82)	42	(58)	**82**	**(75)**
Outcome	**49**	**(100)**	**72**	**(100)**	**121**	**(100)**
No complications	35	(71)	45	(63)	**80**	**(66)**
Required surgical intervention	9	(18)	8	(11)	**17**	**(14)**
Developed more severe secondary form of tularemia	0	(0)	7	(10)	**7**	**(6)**
Recurrence of disease¶¶	4	(8)	3	(4)	**7**	**(6)**
Severe organ dysfunction	0	(0)	6	(8)	**6**	**(5)**
Multiple complications	1	(2)	2	(3)	**3**	**(2)**
Died	0	(0)	1	(1)	**1**	**(1)**

* Data on year of diagnosis are for 190 tularemia cases reported to the Missouri Department of Health and Senior Services during 2000–2007. Data on exposure source, primary clinical form, treatment prescribed, and outcome were abstracted from available clinical charts of 121 of these cases. Reports were included in this analysis if the diagnosis of tularemia met the National Notifiable Disease Surveillance System case definition. A confirmed case was defined as clinically compatible illness with isolation of *F. tularensis* from a clinical specimen or a fourfold or greater change in paired serum antibody titers to *F. tularensis* antigen between acute and convalescent samples. A probable case was defined as clinically compatible illness with detection of *F. tularensis* in a clinical specimen by fluorescent assay or a single elevated serum antibody titer to *F. tularensis* antigen, as determined by individual laboratory cutoff values. Case definitions available at http://www.cdc.gov/ncphi/disss/nndss/casedef/tularemia_current.htm.

† Exposure source as documented by the health-care provider in the patient chart.

§ Lawnmowing aerosols generated by mowing over an animal carcass.

¶ Categorization of primary clinical form based on the recorded history, examination, and health-care provider assessment.

** Percentages do not sum to 100% because of rounding.

†† Treatment by antimicrobial class; not mutually exclusive.

§§ Beta-lactams, macrolides, and lincosamides are not considered effective for treatment of tularemia (*4*).

¶¶ Recurrence of disease after a course of an effective antimicrobial drug.

clinical course, and one patient died of sepsis (Table). Sixty-three (52%) of the 121 patients were hospitalized (median duration: 4 days [range: 1–27 days]). Three patients with pneumonic and one patient with ulceroglandular tularemia were admitted to an intensive-care unit. Six patients with glandular and two with pneumonic tularemia were rehospitalized because of relapse or other complications. Among 17 (14%) patients who required surgical intervention, 15 had suppurated lymph nodes requiring incision and drainage, and two developed a loculated empyema requiring thoracotomy and decortication.

Information on antimicrobial treatment was available for 109 patients; 97 (89%) received at least one appropriate antibiotic to treat tularemia (*4*) (Table), and the remaining 12 (11%) were treated with combinations of antibiotics that are considered ineffective against tularemia. Among 14 patients initially treated with 10 days of ciprofloxacin monotherapy, 12 (86%) recovered completely, whereas two (14%) experienced persistence of symptoms. Of 73 patients for whom sufficient data were available, the median interval between onset of symptoms and commencement of an effective antimicrobial was 14 days (range: 0–82 days). The incidence of complications was not related to age, sex, or the timing of effective therapy.

The total number of specimens submitted for culture and serology could not be determined; however, of the 57 confirmed cases, 39 (68%) had positive cultures, most commonly from blood, lymph nodes, or lesions, and 18 (32%) had a fourfold or greater difference in paired serum antibody titers. All probable cases were diagnosed based on a single elevated serum antibody titer to *F. tularensis*. Among the 39 culture-confirmed cases, 33 (85%) laboratory results were available before the health-care provider documented a suspicion of tularemia in the clinical record.

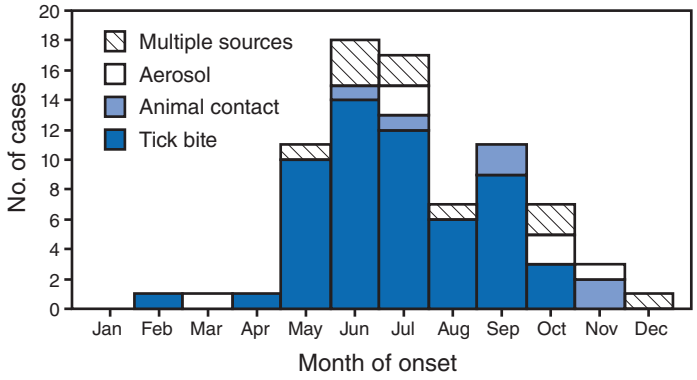
Among 78 cases for which exposure was known, tick bites were the most commonly noted exposures (72%) (Table), and 80% of tick bite exposures occurred during May–September. Cases associated with other exposures did not show a distinct seasonal trend (Figure 2). Animal and aerosol exposures accounted for 16% of cases, with aerosol exposures reported only for adults.

Reported by: *G Turabelidze, MD, PhD, S Patrick, PhD, Missouri Dept of Health and Senior Svcs. PS Mead, MD, KS Griffith, MD, Div of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases; IB Weber, MBChB, MMed, EIS Officer, CDC.*

Editorial Note: With fewer than 200 incident cases reported annually in the United States, tularemia is an uncommon but serious human illness that is best prevented through the use of personal protective measures. The seasonal, age, and sex distributions of cases described in this report are consistent with national surveillance data (*1*). However, this report identifies age-specific differences in diagnosed clinical form that have not been documented previously, and suggests a higher proportion of tick-associated cases than earlier studies of tularemia in this region (*5,6*). The observed peaks in tick-associated cases in June and September coincide with periods of activity of questing nymphal ticks in spring and adults in late summer in Missouri. The findings in this report might not be representative of other areas of the United States because of differences in clinician or public awareness and exposure risk. Patients reporting fever and tick, animal, or aerosol (e.g., agricultural, lawnmowing, and laboratory aerosols) exposure should be evaluated promptly for infection with *F. tularensis*. Because *F. tularensis* takes several days to culture and seroconversion occurs 10–20 days after infection (*4*), the initiation of empiric antimicrobial therapy should not be delayed pending laboratory confirmation. Naturally occurring tularemia usually is sporadic, occurs in rural areas, and manifests as either ulceroglandular or glandular illness. An intentional aerosolized release might result in clusters of illness, occur in urban areas, and be characterized by a higher proportion of pneumonic disease (*7*). For this reason, cases of pneumonic tularemia should be reported urgently to local and state health departments and CDC.

F. tularensis is highly infectious when grown in culture (*8*); therefore, appropriate infection-control measures are needed to prevent laboratory-acquired infection. Although 85% of

FIGURE 2. Number of tularemia cases (N = 78), by month of onset and presumptive exposure source* — Missouri, 2000–2007



* Data on presumptive exposure source were abstracted as available from clinical charts of 121 cases reported in Missouri during 2000–2007. Reports were included in this analysis if the diagnosis of tularemia met the National Notifiable Disease Surveillance System case definition. A confirmed case was defined as clinically compatible illness with isolation of *F. tularensis* from a clinical specimen or a fourfold or greater change in paired serum antibody titers to *F. tularensis* antigen between acute and convalescent samples. A probable case was defined as clinically compatible illness with detection of *F. tularensis* in a clinical specimen by fluorescent assay or a single elevated serum antibody titer to *F. tularensis* antigen, as determined by individual laboratory cutoff values. Case definitions available at http://www.cdc.gov/ncphi/disss/nndss/casedef/tularemia_current.htm.

culture-confirmed cases described in this report were handled and processed before documented clinical concern for tularemia, no laboratory-acquired cases were identified. Diagnostic procedures with clinical materials can be performed in biosafety level 2 conditions; however, all work with suspect cultures of *F. tularensis* should be performed in a biosafety cabinet (*9*). Manipulation of cultures and other procedures that might produce aerosols or droplets (e.g., grinding, centrifuging, vigorous shaking, and animal studies) should be conducted under biosafety level 3 conditions (*9*). The state public health laboratory and public health department should be consulted immediately if tularemia is suspected (*9*). Moreover, laboratorians are encouraged to take appropriate precautions when processing culture specimens from endemic regions, even if suspicion of tularemia is not noted on the request form.

Currently, only aminoglycosides, tetracyclines, chloramphenicol, and rifampin are approved by the Food and Drug Administration for treatment of tularemia. Studies conducted in vitro and in animals suggest that fluoroquinolone antimicrobials are effective for treatment of *F. tularensis* infections (*10*), and drugs of this class have been included in the Strategic National Stockpile for potential use in the event of a bioterrorist attack (*2*). Although additional systematic information is needed regarding the efficacy of fluoroquinolones for treatment of tularemia, the 86% cure rate among patients receiving fluoroquinolone monotherapy described in this report is comparable with rates previously reported for gentamicin and doxycycline (*10*).

The findings in this report are subject to at least three limitations. First, although no differences were noted with respect to age, sex, year of diagnosis, or county of residence between patients for whom clinical records were and were not available, these groups might have differed with respect to other variables. Second, data on the full range of exposure and clinical variables were not available for all clinical charts. Finally, inter-laboratory thresholds for titer levels reported as positive might have led to variability in case detection across counties.

In 2003, MDHSS initiated a public awareness campaign on tick bite prevention. Outreach to hunters included billboard placement near state parks and an educational mailing to all hunting and fishing license registration sites. Tularemia experts participated in public media awareness events, and additional radio and print materials were made available to local public health agencies, a network of senior citizen sites, and the general public.

The prevention of tularemia requires educating those at greatest risk for exposure (e.g., hikers, campers, and hunters). The use of protective clothing, repellents containing DEET (N,N-dimethyl-meta-toluamide), and pesticides (e.g., permethrin) on clothing can help reduce the risk for exposure through tick and arthropod bites (*3*). Hunters and others who handle potentially infected animals should wear gloves to avoid introduction of *F. tularensis* through cuts or abrasions, and game meat should always be cooked thoroughly. To reduce the risk for aerosol exposures, grassy areas should be surveyed before mowing and any dead animals removed. Persons facing potential occupational risks such as agricultural and laboratory workers should follow safe practice guidelines.[§]

[§] Additional information available at http://www.cdc.gov/niosh/topics/tickborne.

Acknowledgments

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Intensive-Care Patients With Severe Novel Influenza A (H1N1) Virus Infection — Michigan, June 2009

On July10, 2009, this report was posted as an MMWR Dispatch *on the* MMWR *website* (http://www.cdc.gov/mmwr).

In April 2009, CDC reported the first two cases in the United States of human infection with a novel influenza A (H1N1) virus (*1*). As of July 6, a total of 122 countries had reported 94,512 cases of novel influenza A (H1N1) virus infection, 429 of which were fatal; in the United States, a total of 33,902 cases were reported, 170 of which were fatal.* Cases of novel influenza A (H1N1) virus infection have included rapidly progressive lower respiratory tract disease resulting in respiratory failure, development of acute respiratory distress syndrome (ARDS), and prolonged intensive care unit (ICU) admission (*2*). Since April 26, communitywide transmission of novel influenza A (H1N1) virus has occurred in Michigan, with 655 probable and confirmed cases reported as of June 18 (Michigan Department of Community Health [MDCH], unpublished data, 2009). This report summarizes the clinical characteristics of a series of 10 patients with novel influenza A (H1N1) virus infection and ARDS at a tertiary-care ICU in Michigan. Of the 10 patients, nine were obese (body mass index [BMI] ≥30), including seven who were extremely obese (BMI ≥40); five had pulmonary emboli; and nine had multiorgan dysfunction syndrome (MODS). Three patients died. Clinicians should be aware of the potential for severe complications of novel influenza A (H1N1) virus infection, particularly in extremely obese patients.

The surgical intensive care unit (SICU) at the University of Michigan Health System (UMHS) specializes in the evaluation of adult patients with severe ARDS for advanced mechanical ventilation and possible extracorporeal membrane oxygenation (ECMO). During May 26–June 18, the unit received 13 patients for evaluation from outlying hospitals, 10 of whom were confirmed to have novel influenza A (H1N1) virus infection by testing of respiratory specimens with real-time reverse transcription–polymerase chain reaction (rRT-PCR) at MDCH and CDC. Direct immunofluorescent antibody staining at UMHS was negative for influenza A in all 10 patients. Viral culture at UMHS was positive for influenza A in two patients. All 10 patients were referred to the SICU because of severe hypoxemia, ARDS, and an inability to achieve adequate oxygenation with conventional ventilation modalities. Medical records of all 10 patients were reviewed for demographics, case characteristics, clinical findings, and clinical course.

Illness onset of the 10 patients occurred during May 22–June 13. The median age was 46 years (range: 21–53 years); nine patients were obese, including seven who were extremely obese (Table). In the three fatal cases, the time from illness onset to death ranged from 17 to 30 days. Four patients received steroids during their illness before transfer to the SICU; two with asthma received oral steroids as outpatients during the initial evaluation and treatment of their acute respiratory illness (one was on chronic oral steroids for underlying lung disease, and one without chronic pulmonary disease was prescribed oral steroids and oral antimicrobials). Five patients received intravenous corticosteroids during their SICU hospitalization: four for treatment of severe vasopressor-dependent refractory septic shock, and one for continuation of therapy for chronic pulmonary disease.

All 10 patients required initial advanced mechanical ventilation (high-frequency oscillatory or bilevel ventilation with high mean airway pressures [32–55 cm H_20]). Two patients required veno-venous ECMO support. Six required continuous renal replacement therapy (CRRT) for acute renal failure. Upon transfer to the SICU, five had elevated white blood cell counts, and one had a decreased white blood cell count. The median white blood cell count (WBC) was 9,500 cells/mm^3 (range: 3,700–19,700 cells/mm^3; normal: 4,000–10,000 cells/mm^3). All ten patients had elevated aspartate transaminase (AST) levels. The median AST level was 83.5 IU/L (range: 41–109 IU/L; normal: 8–30 IU/L). Six of the nine patients who were tested had elevated creatine phosphokinase (CPK) levels. The median CPK level was 999 IU/L (range: 51– 6,572 IU/L; normal: 38–240 IU/L). Nine patients were admitted to the SICU with MODS, and nine manifested septic shock requiring vasopressor support. All 10 patients required tracheostomy.

Chest radiograph findings in all 10 patients were abnormal, with bilateral infiltrates consistent with severe multilobar pneumonia or ARDS. Computed tomography (CT) of the chest confirmed pulmonary emboli in four patients at admission to the SICU and in one additional patient who deteriorated 6 days after admission to the SICU. A hypercoagulable state was evident in two additional patients. One of these patients had frequent clotting of the CRRT circuit despite regional citrate anticoagulation. Another patient had bilateral iliofemoral deep venous thromboses, necessitating systemic heparin anticoagulation. None of the 10 patients had evidence of concomitant disseminated intravascular coagulation by laboratory studies.

As of July 8, none of the 10 patients had evidence of bacterial infection after admission to the SICU or in subsequent blood,

* Information on the number of cases of novel influenza A (H1N1) virus infection worldwide is available from the World Health Organization at http://www.who.int/csr/don/2009_07_06/en/index.html. Information on the number of cases of novel influenza A (H1N1) virus infection in the United States is available from CDC at http://www.cdc.gov/h1n1flu/update.htm.

TABLE. Selected characteristics of intensive-care patients with severe novel influenza A (H1N1) virus infection — Michigan, June 2009

Patient	Age (yrs)	Sex	Underlying conditions	Initial signs or symptoms	BMI*	No. days between onset and first hospitalization	No. days between illness onset and SICU† admission	Advanced mechanical ventilation	Diagnosis		Vaso-pressors	Outcome**
									PE§	MODS¶		
1	28	M	Asthma	High fever, cough, sore throat that progressed to blood-tinged sputum, decreasing mental status	34.2	7	8	HFOV††	Yes	Yes	Yes	Death
2	21	M	None	Fever, sore throat, dry cough, sneezing; progressed to tachypnea and dyspnea	50.5	7	8	Bilevel	Yes	Yes	Yes	Improved, transferred
3	48	F	Asthma, smoker	Shortness of breath, rhinorrhea, non-productive cough	58.9	5	9	HFOV	No	Yes	Yes	Improved, transferred
4	35	M	None	Upper respiratory tract illness symptoms	51.7	6	8	HFOV	Yes	No	No	Improved, transferred
5	43	M	None	Fever, cough, malaise, chills, sweats	48.7	4	5	HFOV to ECMO§§	Yes	Yes	Yes	Death
6	52	M	None	Sinus drainage, cough with clear sputum production, decreased appetite	NA¶¶	6	13	HFOV	Yes	Yes	Yes	Improved, transferred
7	44	M	None	Fever, productive cough with black/red sputum, nausea, vomiting, diarrhea	50.2	5	7	HFOV	No	Yes	Yes	Death
8	51	M	Granulomatous chronic lung disease	Fever, worsening dyspnea, rigors, nausea, vomiting, malaise	39.7	1	9	HFOV to ECMO	No	Yes	Yes	ECMO plus ventilator
9	53	M	None	Fever, chills, cough, shortness of breath	38.5	7	16	HFOV	No	Yes	Yes	Improved, transferred
10	53	M	None	Fever, cough	47.8	6	6	HFOV	No	Yes	Yes	HFOV

* Body mass index. Based on admitting weight at University of Michigan Health System surgical intensive care unit.
† Surgical intensive care unit.
§ Pulmonary emboli.
¶ Multiorgan dysfunction syndrome.
** As of July 8, 2009.
†† High-frequency oscillatory ventilation.
§§ Extracorporeal membrane oxygenation.
¶¶ Not available. Height unknown; weight = 72 kg.

bronchoalveolar lavage, or urine cultures. All patients received antibiotic therapy upon admission to the initial hospitals, and broad spectrum antibiotics were continued upon transfer to the SICU.

The timing of antiviral treatment initiation was difficult to determine because patients were transferred from other hospitals; however, the estimated median number of days from illness onset to initiation of antiviral treatment was 8 days (range: 5–12 days). During their care at the SICU, all 10 patients were administered oseltamivir and amantadine beyond the standard 5-day course, including higher-dose oseltamivir (up to 150 mg orally twice a day), with dose adjustment for decreased renal function.

As of July 8, one patient remained in the SICU requiring ECMO, one remained on advanced mechanical ventilation, five were transferred back to the referring facility in stable condition, and three had died. Autopsies were performed on two patients; results in both patients confirmed bilateral severe hemorrhagic viral pneumonitis with interstitial inflammation and diffuse alveolar damage and concurrent bilateral pulmonary emboli.

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Editorial Note: This report describes the clinical findings of a limited series of patients with novel influenza A (H1N1) virus infection and refractory ARDS admitted to a tertiary-care ICU for advanced mechanical ventilation. This patient group represents the most severely ill subset of persons with novel influenza A (H1N1) virus infection and is notable for the predominance of males, the high prevalence of obesity (especially extreme obesity), and the frequency of clinically significant pulmonary emboli and MODS. All required advanced mechanical ventilator support, reflecting severe pulmonary

damage. The pulmonary compromise described in this report suggests that severe pulmonary damage occurred as a result of primary viral pneumonia. Although data are not available, this damage also might be attributable to secondary host immune responses (e.g., through cytokine dysregulation triggered by high viral replication). However, bacterial coinfection in the lung not identified by blood culture or bronchoalveolar lavage cannot be excluded.

Only three of the patients in this series had underlying conditions associated with a higher risk for seasonal influenza complications. Conditions associated with an increased risk for complications from seasonal influenza include extremes of age, pregnancy, chronic underlying medical conditions (e.g., pulmonary, cardiovascular, hepatic, hematologic, neurologic, and neuromuscular conditions and metabolic disorders or immunosuppression), long-term aspirin therapy in persons aged ≤18 years, and being a resident of a nursing home or other chronic-care facility (*3*). However, fatal disease associated with novel influenza A (H1N1) virus infection has occurred among persons without these conditions who previously were healthy (*2*).

The high prevalence of obesity in this case series is striking. Whether obesity is an independent risk factor for severe complications of novel influenza A (H1N1) virus infection is unknown. Obesity has not been identified previously as a risk factor for severe complications of seasonal influenza. In a mouse model, diet-induced obese mice had significantly higher mortality when infected with seasonal influenza virus compared with their leaner counterparts (*4*). In addition, extremely obese patients have a higher prevalence of comorbid conditions that confer higher risk for influenza complications, including chronic heart, lung, liver, and metabolic diseases.

One study of patients admitted to critical-care units indicated that obesity was an independent risk factor for mortality (*5*). A meta-analysis concluded that prolonged duration of mechanical ventilation and longer SICU length of stay, but not mortality, are associated with obesity (*6*). Another study reported that extremely obese ICU patients had higher rates of mortality, nursing home admission, and ICU complications compared with moderately obese patients (BMI 30–39) (*7*). Further investigations of the role of extreme obesity and accompanying comorbidities in severely ill patients with novel influenza A (H1N1) virus infection are needed.

Pulmonary emboli are not known to be a common complication of ARDS or of sepsis syndrome, but both ARDS and sepsis represent hypercoagulable states (*8*). Pulmonary emboli were not noted in patients hospitalized with novel influenza A (H1N1) virus infection in Mexico (*3*). One clinical study did not identify any increased risk for pulmonary embolism with seasonal influenza virus infection (*9*). However, a report of two patients with rapidly progressive hypoxemia associated with influenza A (H3N2) virus infection noted that they received a diagnosis of acute pulmonary embolism (*10*). Clinicians providing care to patients with novel influenza A (H1N1) virus infection should be aware of the potential for patients with ARDS to develop a hypercoagulable state and for pulmonary emboli to cause severe complications, including fatal outcomes.

Two observational studies have demonstrated a reduction in mortality with oseltamivir treatment among hospitalized patients with seasonal influenza compared with untreated patients (*11,12*). Although early antiviral treatment (<48 hours from illness onset) is optimal to reduce illness among outpatients with seasonal influenza (*13*), a reduction in mortality of hospitalized persons with seasonal influenza or avian influenza A (H5N1) virus infection was reported even when oseltamivir treatment was initiated later (*11,14*). Early antiviral treatment of hospitalized patients with suspected influenza is recommended, including for patients admitted ≥48 hours after illness onset (*13*).

The patients in this series received higher oseltamivir dosing and longer duration of treatment than standard therapy. Data to inform clinical guidance are needed on viral shedding, pharmacokinetics, and clinical effectiveness of standard versus higher-dose oseltamivir treatment and on optimal duration of therapy for patients, including obese persons, with severe or progressive novel influenza A (H1N1) virus infection. Limited data for seasonal influenza treatment suggest that doubling the oseltamivir dose is well-tolerated with a comparable adverse event profile as the standard adult dose (75 mg orally twice a day) (*15*). Higher oseltamivir dosing and longer duration of treatment has been suggested for H5N1 (avian influenza) patients with severe pulmonary disease (*14*). Until additional data are available, higher oseltamivir dosage (e.g., 150 mg orally twice a day for adults) or extending the duration of treatment can be considered for severely ill hospitalized patients with novel influenza A (H1N1) virus infection.

Further characterization of severe cases of novel influenza A (H1N1) virus infection in the United States and worldwide is needed to determine the frequency of the findings from this limited case-series. Clinicians caring for patients with suspected novel influenza A (H1N1) virus infection should monitor them closely for rapid clinical deterioration, especially with regard to increasing oxygenation requirements and potential for development of complications (e.g., respiratory failure, ARDS, multiorgan failure, septic shock, and pulmonary emboli). Empiric antiviral treatment is recommended for all hospitalized patients at admission with suspected novel influenza A (H1N1) virus

infection, † including persons who have received a diagnosis of community-acquired pneumonia. Empiric antibiotic agents also should be used as appropriate for suspected bacterial infection. Depending on the antiviral susceptibilities of circulating influenza A virus strains, either zanamivir monotherapy or combination therapy with oseltamivir (for treatment of novel influenza A [H1N1] virus infection) and rimantadine (for treatment of oseltamivir-resistant seasonal influenza A [H1N1]) might be indicated in hospitalized patients until final virus identification is available. In communities in which novel influenza A (H1N1) virus is the predominant circulating influenza virus, oseltamivir or zanamivir should be administered as early as possible to hospitalized patients with suspected novel influenza A (H1N1) virus infection, even before diagnostic testing results are available. Clinicians should be aware that negative results of rapid influenza diagnostic tests, immunoflouresence, or viral culture do not exclude the possibility of novel influenza A (H1N1) virus infection. Although five patients in this case-series received corticosteroids, their role in the management of severely ill patients with novel influenza A (H1N1) virus infection is unclear, and routine corticosteroid use is not recommended.§

Many hospitalized patients with novel influenza A (H1N1) virus infection have had underlying comorbidities recognized to be high-risk conditions for complications of seasonal influenza. However, clinicians should be aware that severe illness and fatal outcomes also can occur in patients without known risk factors for complications of seasonal influenza, including persons with extreme obesity.

† Interim guidance on antiviral recommendations for patients with novel influenza A (H1N1) virus infection and their close contacts is available from CDC at http://www.cdc.gov/h1n1flu/recommendations.htm.

§ Initial guidance on the clinical management of patients with novel influenza A (H1N1) virus infection is available from the World Heallth Organization at http://www.who.int/csr/resources/publications/swineflu/clinical_management H1N1_21_May_2009.pdf.

Acknowledgment

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Notice to Readers

Epidemic Intelligence Service Application Deadline — September 15, 2009

Applications are now being accepted for CDC's July 2010–June 2011 Epidemic Intelligence Service (EIS) program. EIS is a 2-year, postgraduate program of service and on-the-job training for health professionals interested in the practice of epidemiology. Each year, EIS selects approximately 90 persons from applicants around the world and provides them with opportunities to gain hands-on experience in epidemiology at CDC or at state or local health departments. EIS officers, often called CDC's "disease detectives," have gone on to occupy leadership positions at CDC and other public health agencies nationally and internationally. However, the experience also is useful for health professionals who want to gain a population health perspective.

Persons with a strong interest in applied epidemiology who meet at least one of the following qualifications may apply to EIS:

- physicians with at least 1 year of clinical training;

- persons with a PhD, DrPH, or other doctoral degree in epidemiology, biostatistics, social or behavioral sciences, natural sciences, or nutrition sciences;
- dentists, physician assistants, or nurses with an MPH or equivalent degree; or
- veterinarians with an MPH or equivalent degree or relevant public health experience.

Information regarding the new EIS online application and program details is available at http://www.cdc.gov/eis/applynow.html; by telephone (404-498-6110); or by e-mail (eis@cdc.gov).

Notice to Readers

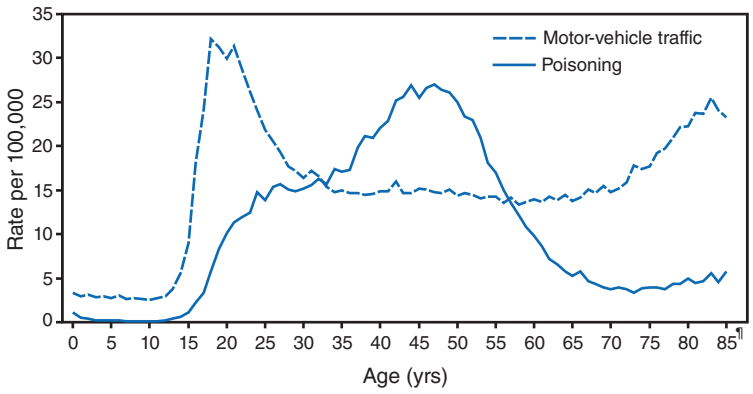
Availability of Provisional Tuberculosis and HIV/AIDS Data in Quarterly Table IV

CDC is in the process of 1) implementing Public Health Information Network tuberculosis (TB) case notification message standards, which will simplify reporting of TB cases, and 2) upgrading the national surveillance data management system for human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS). As a result, the quarterly Table IV scheduled for this issue of *MMWR* is not being published.

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Motor-Vehicle Traffic* and Poisoning† Death Rates,§ by Age — United States, 2005–2006



* Motor-vehicle traffic deaths include pedestrians, pedal cyclists, or occupants, and involve any type of motor vehicle on public roads.
† Poisoning deaths include those resulting from drug overdose or other misuse of drugs, and those associated with solid or liquid biologic substances, gases or vapors, or other substances.
§ Deaths from injuries, per 100,000 population. Injuries are of any manner, including unintentional, suicide, homicide, undetermined intent, legal intervention, and operations of war.
¶ Aggregate death rate for persons aged ≥85 years.

Motor-vehicle traffic and poisoning were the leading causes of injury deaths in the United States during 2005–2006. Motor-vehicle traffic death rates were higher than poisoning death rates among persons aged ≤31 years and those aged ≥58 years. Poisoning death rates were higher than motor-vehicle traffic death rates among adults aged 34–56 years. During 2005–2006, 92% of poisoning deaths involved drugs.

SOURCE: National Vital Statistics System, mortality data, available at http://www.cdc.gov/nchs/deaths.htm.

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending July 11, 2009 (27th week)*

Disease	Current week	Cum 2009	5-year weekly average†	Total cases reported for previous years 2008	2007	2006	2005	2004	States reporting cases during current week (No.)
Anthrax	—	—	—	—	1	1	—	—	
Botulism:									
foodborne	1	10	0	17	32	20	19	16	WA (1)
infant	—	27	2	109	85	97	85	87	
other (wound and unspecified)	—	13	1	19	27	48	31	30	
Brucellosis	2	46	2	80	131	121	120	114	CA (2)
Chancroid	—	18	0	25	23	33	17	30	
Cholera	—	2	0	3	7	9	8	6	
Cyclosporiasis§	1	50	10	139	93	137	543	160	GA (1)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup	—	—	4	62	55	67	80	112	
eastern equine	—	—	0	4	4	8	21	6	
Powassan	—	—	0	2	7	1	1	1	
St. Louis	—	3	0	13	9	10	13	12	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§,**:									
Ehrlichia chaffeensis	11	185	25	1,137	828	578	506	338	NY (5), OH (2), MD (1), KY (1), TN (2)
Ehrlichia ewingii	—	—	0	9	—	—	—	—	
Anaplasma phagocytophilum	6	124	29	1,026	834	646	786	537	NY (3), OH (1), WI (1), VA (1)
undetermined	—	34	10	180	337	231	112	59	
Haemophilus influenzae,††									
invasive disease (age <5 yrs):									
serotype b	—	13	0	30	22	29	9	19	
nonserotype b	2	108	3	244	199	175	135	135	FL (2)
unknown serotype	3	121	3	163	180	179	217	177	MN (1), OK (1), CO (1)
Hansen disease§	—	32	2	80	101	66	87	105	
Hantavirus pulmonary syndrome§	—	4	1	18	32	40	26	24	
Hemolytic uremic syndrome, postdiarrheal§	6	81	7	330	292	288	221	200	OH (2), NE (1), NC (1), OK (1), CA (1)
Hepatitis C viral, acute	9	453	15	878	845	766	652	720	MD (1), NC (1), TX (3), WA (1), CA (3)
HIV infection, pediatric (age <13 years)§§	—	—	3	—	—	—	380	436	
Influenza-associated pediatric mortality§,¶¶	1	91	1	85	77	43	45	—	MA (1)
Listeriosis	11	263	19	759	808	884	896	753	NY (2), PA (1), MI (1), MD (1), NC (1), GA (1), FL (1), TN (1), MS (1), CA (1)
Measles***	1	38	3	140	43	55	66	37	CA (1)
Meningococcal disease, invasive†††:									
A, C, Y, and W-135	1	150	4	330	325	318	297	—	FL (1)
serogroup B	2	80	4	188	167	193	156	—	OH (1), MN (1)
other serogroup	—	13	0	38	35	32	27	—	
unknown serogroup	9	250	10	616	550	651	765	—	NY (2), OH (1), MD (1), TN (1), OK (1), TX (1), CA (2)
Mumps	1	176	18	454	800	6,584	314	258	NY (1)
Novel influenza A virus infections§§§	—	37,246	—	2	4	N	N	N	
Plague	—	4	0	1	7	17	8	3	
Poliomyelitis, paralytic	—	—	—	—	—	—	1	—	
Polio virus infection, nonparalytic§	—	—	—	—	—	N	N	N	
Psittacosis§	—	6	0	8	12	21	16	12	
Q fever total§,¶¶¶:	—	39	3	124	171	169	136	70	
acute	—	34	1	110	—	—	—	—	
chronic	—	5	—	14	—	—	—	—	
Rabies, human	—	—	0	1	1	3	2	7	
Rubella****	—	1	0	16	12	11	11	10	
Rubella, congenital syndrome	—	1	—	—	—	1	1	—	
SARS-CoV§,††††	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	—	83	2	157	132	125	129	132	
Syphilis, congenital (age <1 yr)	—	92	8	422	430	349	329	353	
Tetanus	—	6	1	19	28	41	27	34	
Toxic-shock syndrome (staphylococcal)§	2	42	2	71	92	101	90	95	TN (1), CA (1)
Trichinellosis	—	10	0	39	5	15	16	5	
Tularemia	—	21	6	123	137	95	154	134	
Typhoid fever	2	165	7	447	434	353	324	322	WA (1), CA (1)
Vancomycin-intermediate *Staphylococcus aureus*§	—	30	0	63	37	6	2	—	
Vancomycin-resistant *Staphylococcus aureus*§	—	—	—	—	2	1	3	1	
Vibriosis (noncholera *Vibrio* species infections)§	10	135	7	492	549	N	N	N	MD (1), GA (3), FL (3), TN (1), WA (1), CA (1)
Yellow fever	—	—	—	—	—	—	—	—	

See Table I footnotes on next page.

TABLE I. (*Continued*) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending July 11, 2009 (27th week)*

—: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts.

* Incidence data for reporting year 2008 and 2009 are provisional, whereas data for 2004, 2005, 2006, and 2007 are finalized.

† Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years. The total sum of incident cases is then divided by 25 weeks. Additional information is available at http://www.cdc.gov/epo/dphsi/phs/files/5yearweeklyaverage.pdf.

§ Not reportable in all states. Data from states where the condition is not reportable are excluded from this table, except starting in 2007 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/epo/dphsi/phs/infdis.htm.

¶ Includes both neuroinvasive and nonneuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for West Nile virus are available in Table II.

** The names of the reporting categories changed in 2008 as a result of revisions to the case definitions. Cases reported prior to 2008 were reported in the categories: Ehrlichiosis, human monocytic (analogous to *E. chaffeensis*); Ehrlichiosis, human granulocytic (analogous to *Anaplasma phagocytophilum*), and Ehrlichiosis, unspecified, or other agent (which included cases unable to be clearly placed in other categories, as well as possible cases of *E. ewingii*).

†† Data for *H. influenzae* (all ages, all serotypes) are available in Table II.

§§ Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Implementation of HIV reporting influences the number of cases reported. Updates of pediatric HIV data have been temporarily suspended until upgrading of the national HIV/AIDS surveillance data management system is completed. Data for HIV/AIDS, when available, are displayed in Table IV, which appears quarterly.

¶¶ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Ninety influenza-associated pediatric deaths occurring during the 2008-09 influenza season have been reported.

*** The one measles case reported for the current week was imported.

††† Data for meningococcal disease (all serogroups) are available in Table II.

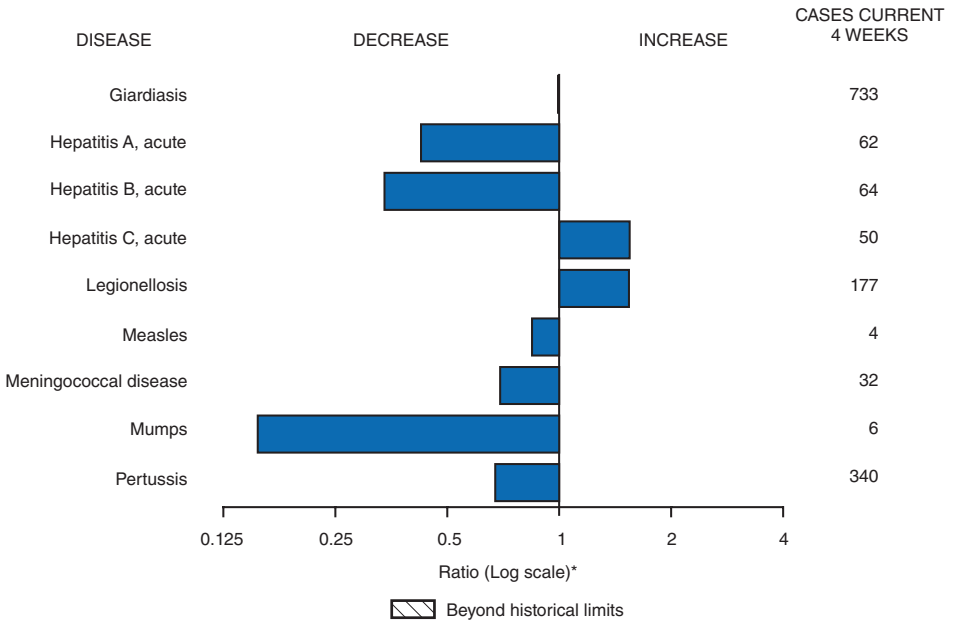
§§§ These cases were obtained from state and territorial health departments in response to the pandemic influenza A (H1N1) virus infections and include both confirmed and probable cases in addition to those reported to the National Notifiable Diseases Surveillance System (NNDSS). Because of the volume of cases and the method by which they are being collected, a 5-year weekly average for this disease is not calculated.

¶¶¶ In 2008, Q fever acute and chronic reporting categories were recognized as a result of revisions to the Q fever case definition. Prior to that time, case counts were not differentiated with respect to acute and chronic Q fever cases.

**** No rubella cases were reported for the current week.

†††† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals July 11, 2009, with historical data



* 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.

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TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending July 11, 2009, and July 5, 2008 (27th week)*

Reporting area	Chlamydia†					Coccidiodomycosis					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 week		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	12,097	22,758	25,700	559,244	604,484	88	145	469	4,697	3,461	69	109	482	2,378	2,276
New England	869	762	1,655	20,590	18,377	—	0	1	1	1	1	5	23	118	168
Connecticut	170	228	1,306	6,044	5,215	N	0	0	N	N	—	0	16	16	41
Maine§	49	48	72	1,307	1,280	N	0	0	N	N	—	0	6	14	13
Massachusetts	580	323	947	10,233	8,795	N	0	0	N	N	—	2	13	35	50
New Hampshire	—	32	63	663	1,031	—	0	1	1	1	1	1	4	19	35
Rhode Island§	52	58	244	1,740	1,464	—	0	0	—	—	—	0	3	4	4
Vermont§	18	22	53	603	592	N	0	0	N	N	—	1	7	30	25
Mid. Atlantic	1,648	2,852	6,734	77,441	76,678	—	0	0	—	—	12	13	35	283	276
New Jersey	—	422	879	10,184	11,682	N	0	0	N	N	—	0	4	1	18
New York (Upstate)	579	566	4,563	15,236	13,802	N	0	0	N	N	3	4	17	68	77
New York City	516	1,120	3,130	30,205	29,720	N	0	0	N	N	—	1	8	29	50
Pennsylvania	553	808	1,072	21,816	21,474	N	0	0	N	N	9	7	15	185	131
E.N. Central	1,090	3,460	4,382	81,822	99,798	—	0	4	20	31	15	24	126	557	579
Illinois	—	1,104	1,356	24,317	29,905	N	0	0	N	N	—	2	13	38	57
Indiana	290	405	713	11,733	11,340	N	0	0	N	N	—	3	17	84	77
Michigan	552	835	1,322	23,300	23,790	—	0	3	10	24	2	5	13	109	110
Ohio	112	787	1,300	13,863	23,641	—	0	2	10	7	9	8	59	187	116
Wisconsin	136	388	494	8,609	11,122	N	0	0	N	N	4	8	46	139	219
W.N. Central	815	1,325	1,547	33,113	34,068	—	0	1	2	—	15	17	68	356	327
Iowa	131	192	257	5,037	4,440	N	0	0	N	N	5	4	30	82	79
Kansas	532	178	401	4,812	4,652	N	0	0	N	N	—	2	8	39	25
Minnesota	1	267	331	5,947	7,443	—	0	0	—	—	9	4	14	89	76
Missouri	—	497	583	12,864	12,511	—	0	1	2	—	—	3	13	53	77
Nebraska§	71	98	219	2,364	2,653	N	0	0	N	N	1	2	8	37	45
North Dakota	12	26	60	524	948	N	0	0	N	N	—	0	10	6	1
South Dakota	68	58	85	1,565	1,421	N	0	0	N	N	—	2	9	50	24
S. Atlantic	2,068	4,363	5,730	96,480	120,014	—	0	1	5	2	15	21	49	441	389
Delaware	78	76	180	2,495	1,913	—	0	1	1	—	—	0	1	1	7
District of Columbia	—	126	227	3,479	3,589	—	0	0	—	—	—	0	2	—	7
Florida	586	1,386	1,597	36,282	37,158	N	0	0	N	N	13	8	35	148	160
Georgia	1	748	1,909	13,168	20,547	N	0	0	N	N	2	6	20	178	113
Maryland§	494	436	772	11,023	11,864	—	0	1	4	2	—	1	5	19	15
North Carolina	—	167	1,309	—	14,072	N	0	0	N	N	—	1	16	47	15
South Carolina§	536	534	1,448	12,306	13,721	N	0	0	N	N	—	1	6	20	26
Virginia§	346	614	903	15,787	15,522	N	0	0	N	N	—	1	4	23	35
West Virginia	27	70	101	1,940	1,628	N	0	0	N	N	—	0	3	5	11
E.S. Central	1,500	1,698	2,176	45,685	42,417	—	0	0	—	—	2	3	9	73	62
Alabama§	—	473	622	11,438	13,039	N	0	0	N	N	—	1	6	20	23
Kentucky	421	245	458	6,098	5,738	N	0	0	N	N	—	1	4	20	14
Mississippi	497	440	841	12,553	9,786	N	0	0	N	N	—	0	2	4	7
Tennessee§	582	565	796	15,596	13,854	N	0	0	N	N	2	1	5	29	18
W.S. Central	1,748	2,914	5,098	79,738	77,377	—	0	1	—	2	1	8	271	76	102
Arkansas§	231	278	418	7,533	7,279	N	0	0	N	N	1	1	10	16	17
Louisiana	148	435	1,134	12,570	11,095	—	0	1	—	2	—	1	5	10	23
Oklahoma	—	184	2,732	6,009	6,664	N	0	0	N	N	—	2	16	36	20
Texas§	1,369	1,961	2,528	53,626	52,339	N	0	0	N	N	—	3	258	14	42
Mountain	539	1,309	2,145	30,422	37,972	47	95	364	3,425	2,316	2	9	38	184	189
Arizona	60	412	627	6,955	12,635	46	92	362	3,382	2,252	—	1	10	19	22
Colorado	56	340	845	8,908	9,229	N	0	0	N	N	2	2	12	57	37
Idaho§	—	67	314	1,766	2,008	N	0	0	N	N	—	1	5	24	31
Montana§	33	59	88	1,552	1,567	N	0	0	N	N	—	0	4	15	26
Nevada§	192	174	365	4,992	5,152	1	1	3	34	32	—	0	4	7	8
New Mexico§	115	159	540	3,562	3,622	—	0	2	2	21	—	2	23	43	37
Utah	13	82	251	1,578	3,021	—	0	2	7	9	—	0	6	6	18
Wyoming§	70	33	97	1,109	738	—	0	1	—	2	—	0	2	13	10
Pacific	1,820	3,620	4,616	93,953	97,783	41	39	172	1,244	1,109	6	11	19	290	184
Alaska	—	90	199	2,138	2,404	N	0	0	N	N	—	0	1	2	1
California	1,358	2,863	3,592	74,844	76,005	41	39	172	1,244	1,109	5	6	14	165	101
Hawaii	—	114	247	2,805	3,011	N	0	0	N	N	—	0	1	1	1
Oregon§	204	193	631	4,996	5,288	N	0	0	N	N	—	2	8	86	41
Washington	258	393	557	9,170	11,075	N	0	0	N	N	1	2	7	36	40
American Samoa	—	0	3	—	70	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	3	8	—	103	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	129	334	3,812	3,714	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	8	17	205	366	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 and 2009 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.
† Chlamydia refers to genital infections caused by *Chlamydia trachomatis*.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 11, 2009, and July 5, 2008 (27th week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive All ages, all serotypes†				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	258	318	641	7,386	7,845	2,833	5,616	7,164	132,167	169,389	33	50	124	1,446	1,630
New England	—	26	64	472	672	101	97	301	2,536	2,580	—	3	16	85	89
Connecticut	—	6	14	113	158	34	48	275	1,160	1,149	—	0	12	29	18
Maine§	—	4	12	88	64	3	2	9	74	48	—	0	2	12	8
Massachusetts	—	10	27	150	285	61	37	112	1,045	1,127	—	1	5	32	46
New Hampshire	—	2	10	44	58	—	1	6	53	64	—	0	2	6	6
Rhode Island§	—	1	8	23	44	3	6	19	181	173	—	0	7	3	4
Vermont§	—	3	15	54	63	—	1	4	23	19	—	0	1	3	7
Mid. Atlantic	38	59	116	1,346	1,527	339	592	1,138	15,210	16,736	5	10	25	302	306
New Jersey	—	7	21	85	250	—	92	127	2,056	2,740	—	1	7	31	48
New York (Upstate)	28	24	81	586	503	97	111	664	2,673	3,099	1	2	20	71	89
New York City	—	15	30	334	424	118	209	577	5,634	5,213	—	2	11	73	54
Pennsylvania	10	16	46	341	350	124	189	267	4,847	5,684	4	4	10	127	115
E.N. Central	20	44	90	1,028	1,216	369	1,117	1,627	25,362	35,363	3	7	27	185	263
Illinois	—	9	32	171	331	—	360	499	7,332	10,207	—	2	9	63	81
Indiana	N	0	11	N	N	101	152	256	3,854	4,555	—	1	22	40	45
Michigan	5	12	22	284	265	177	294	493	7,712	8,721	1	0	3	13	16
Ohio	14	16	31	391	394	31	245	482	4,237	8,587	2	1	6	60	81
Wisconsin	1	9	19	182	226	60	100	149	2,227	3,293	—	0	4	9	40
W.N. Central	43	25	143	673	758	55	296	393	6,965	8,588	6	3	15	85	117
Iowa	5	6	18	139	142	22	32	53	851	787	—	0	0	—	2
Kansas	—	3	11	60	59	18	39	83	1,042	1,132	—	0	2	11	15
Minnesota	37	0	106	174	191	—	46	78	961	1,655	3	0	10	21	27
Missouri	—	7	22	183	211	—	140	184	3,232	4,119	—	1	4	31	49
Nebraska§	1	3	10	75	99	10	25	51	656	699	3	0	2	17	16
North Dakota	—	0	16	8	10	—	2	7	29	60	—	0	4	5	8
South Dakota	—	2	11	34	46	5	8	20	194	136	—	0	0	—	—
S. Atlantic	72	66	108	1,775	1,304	659	1,246	2,142	27,134	41,519	7	14	30	427	411
Delaware	1	0	3	16	22	21	16	35	455	595	—	0	2	3	4
District of Columbia	—	0	5	—	31	—	50	89	1,403	1,304	—	0	2	—	3
Florida	46	32	57	888	573	242	415	507	10,530	12,540	4	5	10	149	102
Georgia	14	14	67	505	300	1	266	876	4,304	7,404	2	3	9	87	85
Maryland§	8	5	10	123	122	133	119	212	2,887	3,139	1	1	6	52	67
North Carolina	N	0	0	N	N	—	54	542	—	6,174	—	1	17	48	41
South Carolina§	2	2	8	45	60	163	167	419	3,800	4,997	—	1	5	29	36
Virginia§	1	8	31	178	163	94	153	308	3,484	4,979	—	1	6	41	59
West Virginia	—	1	5	20	33	5	11	26	271	387	—	0	3	18	14
E.S. Central	3	8	22	163	210	404	520	771	13,078	15,349	2	3	7	88	88
Alabama§	—	4	12	71	116	—	152	216	3,188	5,184	—	0	4	23	14
Kentucky	N	0	0	N	N	92	80	153	1,747	2,223	—	0	5	15	6
Mississippi	N	0	0	N	N	173	143	253	3,906	3,609	—	0	1	—	11
Tennessee§	3	4	13	92	94	139	162	301	4,237	4,333	2	2	5	50	57
W.S. Central	13	8	22	183	157	531	929	1,319	23,219	26,563	4	2	22	72	76
Arkansas§	8	2	8	65	58	96	85	134	2,300	2,351	—	0	2	13	8
Louisiana	—	2	10	55	60	43	162	420	4,062	4,969	—	0	1	11	8
Oklahoma	5	3	18	63	39	—	70	610	2,314	2,464	4	1	20	48	54
Texas§	N	0	0	N	N	392	570	725	14,543	16,779	—	0	1	—	6
Mountain	17	25	62	557	620	90	181	313	3,812	6,203	6	5	11	142	190
Arizona	—	3	10	91	55	7	51	82	821	1,827	—	1	7	52	79
Colorado	14	9	27	194	227	9	58	159	1,379	1,906	6	1	5	47	36
Idaho§	2	3	14	58	70	—	2	13	46	86	—	0	2	2	8
Montana§	—	2	9	46	33	1	2	6	42	58	—	0	1	1	2
Nevada§	1	2	8	42	54	40	32	86	888	1,262	—	0	2	10	11
New Mexico§	—	2	8	38	45	28	23	52	512	724	—	1	3	15	28
Utah	—	7	18	68	118	1	4	15	82	286	—	0	2	15	26
Wyoming§	—	1	4	20	18	4	2	8	42	54	—	0	2	—	—
Pacific	52	53	130	1,189	1,381	285	559	755	14,851	16,488	—	2	7	60	90
Alaska	—	2	10	33	34	—	14	24	338	256	—	0	3	8	11
California	33	35	59	849	956	242	474	657	12,698	13,569	—	0	3	12	32
Hawaii	—	0	4	5	19	—	12	19	295	310	—	0	2	13	11
Oregon§	—	7	17	147	219	21	20	48	526	655	—	1	3	24	34
Washington	19	7	74	155	153	22	48	81	994	1,698	—	0	2	3	2
American Samoa	—	0	0	—	—	—	0	0	—	3	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	1	15	—	45	—	0	0	—	—
Puerto Rico	—	3	15	48	83	—	4	16	109	147	—	0	1	1	—
U.S. Virgin Islands	—	0	0	—	—	1	2	7	63	67	N	0	0	N	N

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 and 2009 are provisional.
† Data for *H. influenzae* (age <5 yrs for serotype b, nonserotype b, and unknown serotype) are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 11, 2009, and July 5, 2008 (27th week)*

Reporting area	Hepatitis (viral, acute), by type† A: Current week	A: Previous 52 weeks Med	A: Previous 52 weeks Max	A: Cum 2009	A: Cum 2008	B: Current week	B: Previous 52 weeks Med	B: Previous 52 weeks Max	B: Cum 2009	B: Cum 2008	Legionellosis: Current week	Legionellosis: Previous 52 weeks Med	Legionellosis: Previous 52 weeks Max	Legionellosis: Cum 2009	Legionellosis: Cum 2008
United States	18	37	89	845	1,406	21	72	197	1,545	1,894	64	48	152	939	1,123
New England	—	2	8	34	67	—	1	4	16	43	3	2	18	34	66
Connecticut	—	0	4	12	14	—	0	3	7	16	3	1	5	22	12
Maine§	—	0	5	1	4	—	0	2	6	8	—	0	2	—	1
Massachusetts	—	1	3	14	33	—	0	2	1	12	—	1	6	6	31
New Hampshire	—	0	2	3	5	—	0	2	2	3	—	0	5	3	8
Rhode Island§	—	0	2	3	10	—	0	1	—	3	—	0	14	2	10
Vermont§	—	0	1	1	1	—	0	1	—	1	—	0	1	1	4
Mid. Atlantic	1	5	13	94	151	1	6	17	144	242	31	14	60	275	295
New Jersey	—	0	5	5	35	—	1	5	22	70	—	1	14	11	38
New York (Upstate)	—	1	4	26	32	—	1	11	33	34	17	5	24	102	77
New York City	—	2	6	28	48	—	1	4	29	52	—	2	12	35	43
Pennsylvania	1	1	4	35	36	1	2	8	60	86	14	6	35	127	137
E.N. Central	—	4	12	91	197	—	10	21	216	255	13	8	41	157	241
Illinois	—	1	4	21	75	—	2	7	24	90	—	1	13	8	35
Indiana	—	0	3	7	10	—	1	18	51	22	—	0	6	8	20
Michigan	—	1	5	34	71	—	2	8	64	74	3	2	16	40	65
Ohio	—	1	4	24	22	—	2	13	57	57	10	4	18	96	109
Wisconsin	—	0	3	5	19	—	0	4	20	12	—	0	6	5	12
W.N. Central	1	2	16	59	172	—	2	16	69	43	—	2	8	31	51
Iowa	—	0	3	14	83	—	0	3	11	12	—	0	2	10	8
Kansas	—	0	1	6	11	—	0	2	4	6	—	0	1	2	1
Minnesota	—	0	12	12	18	—	0	11	11	4	—	0	4	5	4
Missouri	—	0	3	14	21	—	1	5	33	18	—	1	7	9	28
Nebraska§	1	0	2	11	37	—	0	2	9	3	—	0	3	4	9
North Dakota	—	0	2	—	—	—	0	1	—	—	—	0	3	1	—
South Dakota	—	0	1	2	2	—	0	1	1	—	—	0	1	—	1
S. Atlantic	7	7	15	206	184	10	18	31	486	476	11	9	22	212	209
Delaware	—	0	1	3	4	U	0	1	U	U	—	0	4	7	5
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	—	7
Florida	3	4	8	99	73	4	6	11	162	166	6	3	7	77	70
Georgia	1	1	4	32	27	2	3	9	75	87	1	1	5	27	17
Maryland§	2	0	4	21	20	—	2	6	42	45	4	2	10	50	55
North Carolina	—	1	7	22	33	3	1	19	122	47	—	0	7	30	11
South Carolina§	1	0	3	14	6	—	1	5	22	37	—	0	1	2	4
Virginia§	—	1	6	15	18	1	2	10	40	55	—	1	5	19	27
West Virginia	—	0	1	—	3	—	1	6	23	39	—	0	3	—	13
E.S. Central	1	1	5	22	42	3	8	13	152	185	1	2	5	46	67
Alabama§	—	0	2	6	5	—	2	7	46	49	—	0	2	5	8
Kentucky	—	0	2	4	15	—	2	7	41	51	—	1	3	22	32
Mississippi	—	0	1	5	4	—	0	3	6	18	—	0	1	1	1
Tennessee§	1	0	4	7	18	3	2	8	59	67	1	0	4	18	26
W.S. Central	—	3	43	73	136	3	11	99	218	382	—	2	21	42	35
Arkansas§	—	0	1	4	4	—	1	5	14	26	—	0	2	3	5
Louisiana	—	0	2	2	7	—	1	4	22	53	—	0	2	2	5
Oklahoma	—	0	6	1	3	—	2	17	50	43	—	0	6	3	3
Texas§	—	3	37	66	122	3	6	76	132	260	—	1	19	34	22
Mountain	4	3	8	81	133	—	3	10	68	96	1	2	8	49	38
Arizona	1	1	6	39	70	—	1	4	27	39	—	0	3	21	10
Colorado	3	0	5	23	23	—	0	3	12	14	—	0	2	4	3
Idaho§	—	0	1	1	14	—	0	2	4	3	—	0	1	—	2
Montana§	—	0	1	4	—	—	0	1	—	—	—	0	2	4	3
Nevada§	—	0	3	6	3	—	0	3	15	22	1	0	2	7	6
New Mexico§	—	0	1	5	14	—	0	2	5	7	—	0	2	—	3
Utah	—	0	2	3	6	—	0	3	3	7	—	0	5	12	11
Wyoming§	—	0	0	—	3	—	0	1	2	4	—	0	1	1	—
Pacific	4	8	25	185	324	4	7	36	176	172	4	3	12	93	121
Alaska	—	0	1	3	3	—	0	1	3	6	—	0	1	2	1
California	4	6	25	142	262	4	5	28	131	120	2	3	9	71	91
Hawaii	—	0	2	4	6	—	0	1	3	3	—	0	1	1	5
Oregon§	—	0	2	10	20	—	1	4	23	24	—	0	2	6	11
Washington	—	1	4	26	33	—	1	8	16	19	2	0	4	13	13
American Samoa	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	2	15	17	—	0	5	10	26	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 and 2009 are provisional.
† Data for acute hepatitis C, viral are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 11, 2009, and July 5, 2008 (27th week)*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All groups				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	439	461	1,915	6,268	11,556	20	22	46	463	496	12	17	48	493	734
New England	4	50	799	664	4,705	—	1	5	15	25	—	0	4	15	21
Connecticut	—	6	264	—	1,851	—	0	4	4	5	—	0	1	1	1
Maine§	4	6	73	160	88	—	0	1	1	1	—	0	1	2	4
Massachusetts	—	13	375	117	1,995	—	0	4	6	14	—	0	3	9	13
New Hampshire	—	13	143	267	607	—	0	1	1	2	—	0	1	1	2
Rhode Island§	—	0	78	33	105	—	0	1	1	1	—	0	1	1	1
Vermont§	—	5	41	87	59	—	0	1	2	2	—	0	1	1	—
Mid. Atlantic	373	229	1,401	3,869	4,230	3	5	17	110	126	2	2	5	52	77
New Jersey	—	25	231	509	1,858	—	0	4	—	26	—	0	1	2	10
New York (Upstate)	144	87	1,368	1,298	943	1	0	10	25	14	2	0	2	14	19
New York City	—	1	54	—	237	—	3	11	61	68	—	0	2	9	15
Pennsylvania	229	53	338	2,062	1,192	2	1	4	24	18	—	1	4	27	33
E.N. Central	2	15	155	270	900	1	3	6	56	79	2	3	8	84	125
Illinois	—	0	11	4	55	—	1	5	20	38	—	1	6	17	45
Indiana	—	0	8	9	8	—	0	1	8	3	—	0	4	20	16
Michigan	—	1	10	19	10	—	0	3	10	9	—	0	4	16	17
Ohio	1	0	6	13	8	1	0	2	15	19	2	0	3	25	30
Wisconsin	1	12	140	225	819	—	0	2	3	10	—	0	1	6	17
W.N. Central	3	6	336	77	153	2	1	10	29	21	1	1	9	40	66
Iowa	—	1	7	30	62	—	0	3	5	2	—	0	1	4	13
Kansas	—	0	4	10	5	—	0	2	2	3	—	0	2	8	3
Minnesota	—	2	326	28	81	1	0	8	13	6	1	0	4	9	18
Missouri	—	0	1	2	2	—	0	2	5	5	—	0	2	13	21
Nebraska§	3	0	2	6	2	1	0	1	3	5	—	0	1	4	9
North Dakota	—	0	10	—	—	—	0	0	—	—	—	0	3	—	1
South Dakota	—	0	1	1	1	—	0	1	1	—	—	0	1	2	1
S. Atlantic	53	64	223	1,256	1,444	9	6	15	158	138	2	2	9	94	103
Delaware	14	12	36	346	416	—	0	1	1	1	—	0	1	2	1
District of Columbia	—	0	5	—	29	—	0	2	—	1	—	0	0	—	—
Florida	2	1	6	19	16	4	1	7	42	24	1	1	4	32	36
Georgia	—	0	6	20	19	3	1	4	36	30	—	0	2	19	13
Maryland§	36	30	163	611	670	2	1	8	41	39	1	0	1	5	12
North Carolina	1	1	7	35	2	—	0	5	18	15	—	0	5	16	9
South Carolina§	—	0	3	13	12	—	0	1	1	5	—	0	1	7	15
Virginia§	—	12	61	178	209	—	1	4	18	22	—	0	2	9	13
West Virginia	—	1	17	34	71	—	0	1	1	1	—	0	2	4	4
E.S. Central	—	0	5	10	22	2	0	3	17	8	1	0	3	17	37
Alabama§	—	0	1	1	8	—	0	3	6	3	—	0	1	4	4
Kentucky	—	0	2	1	1	2	0	2	7	3	—	0	1	3	7
Mississippi	—	0	0	—	1	—	0	1	—	—	—	0	1	1	9
Tennessee§	—	0	3	8	12	—	0	2	4	2	1	0	1	9	17
W.S. Central	—	2	21	18	41	—	1	10	11	23	2	1	12	44	76
Arkansas§	—	0	0	—	—	—	0	1	—	—	—	0	2	5	11
Louisiana	—	0	1	—	—	—	0	1	1	2	—	0	3	9	17
Oklahoma	—	0	2	—	—	—	0	2	1	2	1	0	3	4	10
Texas§	—	2	21	18	41	—	1	10	9	19	1	1	9	26	38
Mountain	—	1	13	15	17	—	0	3	7	13	—	1	4	41	40
Arizona	—	0	2	2	2	—	0	2	2	5	—	0	2	8	5
Colorado	—	0	1	1	2	—	0	1	2	3	—	0	2	13	8
Idaho§	—	0	2	5	3	—	0	1	1	—	—	0	1	5	4
Montana§	—	0	13	1	2	—	0	1	1	—	—	0	2	4	4
Nevada§	—	0	2	6	2	—	0	1	—	4	—	0	2	3	7
New Mexico§	—	0	2	—	5	—	0	1	—	1	—	0	1	3	5
Utah	—	0	1	—	—	—	0	1	1	—	—	0	1	1	5
Wyoming§	—	0	1	—	1	—	0	0	—	—	—	0	2	4	2
Pacific	4	3	13	89	44	3	2	10	60	63	2	4	14	106	189
Alaska	—	0	2	1	1	—	0	1	1	3	—	0	2	2	3
California	4	2	6	79	28	3	2	8	48	50	2	2	8	71	144
Hawaii	N	0	0	N	N	—	0	1	1	2	—	0	1	3	2
Oregon§	—	0	3	6	15	—	0	2	5	4	—	0	7	21	22
Washington	—	0	12	3	—	—	0	3	5	4	—	0	6	9	18
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	2	—	1	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	1	2	—	0	1	—	2
U.S. Virgin Islands	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 and 2009 are provisional.
† Data for meningococcal disease, invasive caused by serogroups A, C, Y, and W-135; serogroup B; other serogroup; and unknown serogroup are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 11, 2009, and July 5, 2008 (27th week)*

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	101	243	1,697	5,651	4,022	43	69	128	1,677	2,040	34	29	179	570	681
New England	—	16	33	232	474	7	8	15	173	197	—	0	2	4	3
Connecticut	—	0	4	13	32	6	3	10	79	96	—	0	0	—	—
Maine†	—	1	10	57	14	—	1	5	27	31	—	0	2	4	—
Massachusetts	—	10	26	105	376	—	0	0	—	—	—	0	1	—	1
New Hampshire	—	1	6	38	16	1	1	7	19	19	—	0	0	—	1
Rhode Island†	—	1	6	11	30	—	0	3	20	17	—	0	2	—	1
Vermont†	—	0	2	8	6	—	1	6	28	34	—	0	0	—	—
Mid. Atlantic	14	24	64	507	459	6	16	30	316	423	1	1	29	22	56
New Jersey	—	3	12	56	96	—	0	0	—	—	—	0	6	—	38
New York (Upstate)	5	6	41	99	141	6	8	20	198	217	1	0	29	3	6
New York City	1	0	21	48	45	—	0	2	—	10	—	0	4	12	6
Pennsylvania	8	11	33	304	177	—	7	17	118	196	—	0	2	7	6
E.N. Central	34	46	238	1,246	718	4	2	28	74	77	—	1	15	23	46
Illinois	—	14	45	234	92	—	1	20	26	30	—	1	10	9	34
Indiana	—	3	158	113	22	—	0	6	6	2	—	0	3	1	1
Michigan	5	9	21	278	99	—	1	9	23	27	—	0	1	3	2
Ohio	29	15	57	564	453	4	0	7	19	18	—	0	3	10	9
Wisconsin	—	4	10	57	52	N	0	0	N	N	—	0	0	—	—
W.N. Central	3	32	872	931	357	6	5	17	132	134	—	3	33	59	165
Iowa	—	5	21	82	60	—	0	5	9	10	—	0	1	1	5
Kansas	1	3	12	104	31	—	1	6	49	43	—	0	1	2	—
Minnesota	—	0	808	165	99	6	0	11	26	18	—	0	0	—	—
Missouri	—	14	51	479	123	—	1	8	17	18	—	3	32	52	154
Nebraska†	1	4	32	88	32	—	0	2	—	20	—	0	4	4	3
North Dakota	1	0	24	2	1	—	0	9	4	13	—	0	1	—	—
South Dakota	—	0	10	11	11	—	1	4	27	12	—	0	0	—	3
S. Atlantic	32	26	71	826	378	10	25	101	730	948	3	15	54	279	210
Delaware	1	0	3	7	5	—	0	0	—	—	—	0	3	3	12
District of Columbia	—	0	2	—	1	—	0	0	—	—	—	0	1	—	4
Florida	12	8	33	268	94	—	0	85	85	138	—	0	3	4	3
Georgia	—	3	11	106	37	—	5	52	154	206	1	1	5	21	33
Maryland†	4	3	10	53	50	—	6	13	146	238	—	1	7	24	26
North Carolina	—	0	65	199	76	N	4	4	N	N	2	10	36	190	77
South Carolina†	12	3	16	107	52	—	0	0	—	—	—	0	9	12	15
Virginia†	2	3	24	79	57	6	11	24	282	307	—	2	15	23	34
West Virginia	1	0	2	7	6	4	1	6	63	59	—	0	1	2	6
E.S. Central	5	12	33	356	142	—	3	7	63	90	3	4	23	97	104
Alabama†	—	3	19	127	19	—	0	0	—	—	—	1	7	20	30
Kentucky	3	4	15	110	29	—	1	4	29	16	—	0	0	—	1
Mississippi	—	1	4	24	61	—	0	2	—	2	—	0	3	4	4
Tennessee†	2	2	14	95	33	—	2	6	34	72	3	3	19	73	69
W.S. Central	1	40	389	785	458	4	0	9	31	52	27	2	161	72	81
Arkansas†	—	2	38	35	43	1	0	5	23	34	—	0	61	22	8
Louisiana	—	2	7	50	27	—	0	0	—	—	—	0	2	2	3
Oklahoma	1	0	45	16	13	3	0	9	7	16	27	0	98	37	54
Texas†	—	33	304	684	375	—	0	1	1	2	—	1	6	11	16
Mountain	3	15	31	410	475	1	2	9	51	32	—	1	3	12	14
Arizona	—	3	8	95	136	N	0	0	N	N	—	0	2	2	5
Colorado	3	4	12	151	78	—	0	0	—	—	—	0	1	—	—
Idaho†	—	1	5	41	20	—	0	2	—	2	—	0	1	—	—
Montana†	—	0	4	9	61	—	0	4	14	1	—	0	2	7	2
Nevada†	—	0	3	7	18	1	0	5	2	3	—	0	2	1	—
New Mexico†	—	1	10	30	26	—	0	2	15	18	—	0	1	1	1
Utah	—	3	19	76	128	—	0	6	3	2	—	0	1	1	2
Wyoming†	—	0	2	1	8	—	0	4	17	6	—	0	2	—	4
Pacific	9	19	98	358	561	5	4	13	107	87	—	0	1	2	2
Alaska	—	3	21	28	48	—	0	2	9	12	N	0	0	N	N
California	—	5	19	58	283	5	4	12	98	73	—	0	1	2	—
Hawaii	—	0	3	16	6	—	0	0	—	—	N	0	0	N	N
Oregon†	—	3	14	110	88	—	0	2	—	2	—	0	1	—	2
Washington	9	6	76	146	136	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	1	—	—	1	5	22	30	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N

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U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 and 2009 are provisional.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 11, 2009, and July 5, 2008 (27th week)*

Reporting area	Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†					Shigellosis				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	652	778	2,324	16,959	19,012	39	74	255	1,482	1,821	179	388	1,268	7,395	8,995
New England	1	26	215	755	1,218	1	3	30	77	119	—	3	21	69	112
Connecticut	—	0	189	189	491	—	0	30	30	47	—	0	16	16	40
Maine§	—	2	8	52	68	—	0	3	9	3	—	0	6	2	3
Massachusetts	—	17	51	263	510	—	1	11	15	45	—	2	9	40	58
New Hampshire	1	3	42	160	67	1	1	3	18	12	—	0	1	1	3
Rhode Island§	—	2	9	63	41	—	0	1	—	7	—	0	1	7	7
Vermont§	—	1	7	28	41	—	0	6	5	5	—	0	2	3	1
Mid. Atlantic	66	85	201	1,867	2,376	3	6	27	99	191	25	54	93	1,349	1,157
New Jersey	—	12	55	122	571	—	1	12	14	64	—	18	38	249	318
New York (Upstate)	40	24	65	531	563	3	3	12	47	51	4	6	23	103	337
New York City	—	18	49	453	555	—	1	5	32	25	—	9	23	209	436
Pennsylvania	26	29	78	761	687	—	0	8	6	51	21	18	47	788	66
E.N. Central	45	87	168	2,058	2,370	7	12	74	242	280	42	84	132	1,414	1,607
Illinois	—	25	50	460	704	—	1	10	34	44	—	15	34	284	512
Indiana	—	6	50	127	240	—	1	14	23	19	—	1	21	26	401
Michigan	7	18	38	454	434	3	3	43	67	61	2	5	24	126	53
Ohio	38	27	52	721	631	4	3	15	60	69	40	42	80	741	472
Wisconsin	—	13	30	296	361	—	3	16	58	87	—	11	42	237	169
W.N. Central	32	50	148	1,243	1,211	11	12	58	253	290	6	14	49	376	437
Iowa	4	7	16	198	216	4	3	21	76	72	—	3	12	43	79
Kansas	6	7	29	176	189	2	1	7	22	22	3	3	11	129	9
Minnesota	14	12	69	299	278	1	2	21	67	53	2	3	25	36	113
Missouri	—	11	48	209	317	—	2	11	41	82	—	3	33	151	134
Nebraska§	8	5	41	205	124	4	2	30	36	37	1	0	3	12	—
North Dakota	—	0	30	32	21	—	0	28	3	1	—	0	9	3	28
South Dakota	—	4	22	124	66	—	0	4	8	23	—	0	1	2	74
S. Atlantic	258	238	457	4,623	4,524	1	13	48	295	320	25	48	85	1,172	1,764
Delaware	2	2	9	36	66	—	0	2	8	7	—	0	8	41	7
District of Columbia	—	0	2	—	37	—	0	1	—	4	—	0	2	—	8
Florida	148	100	174	1,997	1,948	—	2	10	81	75	2	10	26	217	478
Georgia	60	39	96	833	824	—	1	8	33	38	9	13	30	325	707
Maryland§	26	16	35	348	368	—	2	11	41	48	5	5	12	183	33
North Carolina	11	29	106	695	388	1	2	21	67	33	2	6	27	235	54
South Carolina§	8	16	57	275	394	—	0	3	9	21	4	4	17	69	367
Virginia§	3	19	88	345	394	—	3	27	47	70	3	4	59	97	90
West Virginia	—	4	23	94	105	—	0	3	9	24	—	0	3	5	20
E.S. Central	31	51	140	1,036	1,197	2	5	12	103	122	13	22	58	497	1,092
Alabama§	3	15	49	277	316	—	1	4	23	39	1	4	12	83	259
Kentucky	3	10	18	216	196	1	2	7	33	28	3	2	25	128	193
Mississippi	5	12	57	235	367	—	0	1	6	3	1	1	6	16	240
Tennessee§	20	14	62	308	318	1	2	6	41	52	8	13	48	270	400
W.S. Central	46	84	1,334	1,326	2,348	3	5	139	59	156	33	88	967	1,395	1,860
Arkansas§	21	12	39	246	230	2	1	5	14	26	5	10	25	182	222
Louisiana	10	16	54	277	396	—	0	1	—	5	1	5	26	76	340
Oklahoma	15	14	102	258	263	1	0	82	10	15	6	4	61	116	52
Texas§	—	51	1,205	545	1,459	—	3	55	35	110	21	60	889	1,021	1,246
Mountain	36	56	109	1,263	1,515	2	10	40	192	212	14	28	54	563	351
Arizona	11	20	43	450	421	—	1	4	23	33	9	17	35	418	158
Colorado	21	12	23	301	392	1	3	18	78	59	4	2	11	45	39
Idaho§	—	3	12	77	79	—	2	15	28	41	—	0	2	4	5
Montana§	—	2	7	60	48	—	0	3	9	20	—	0	5	13	2
Nevada§	3	4	12	118	112	1	0	3	12	10	1	2	13	32	103
New Mexico§	1	6	25	110	280	—	1	4	16	22	—	3	12	46	30
Utah	—	7	19	125	144	—	2	9	25	20	—	0	3	5	11
Wyoming§	—	1	5	22	39	—	0	2	1	7	—	0	1	—	3
Pacific	137	121	537	2,788	2,253	9	10	31	162	131	21	29	82	560	615
Alaska	—	1	4	25	22	—	0	1	—	3	—	0	1	2	—
California	106	94	516	2,166	1,641	2	5	15	96	73	17	25	75	448	532
Hawaii	—	5	15	113	111	—	0	2	2	5	—	1	3	13	21
Oregon§	—	7	20	181	204	—	1	7	12	17	—	1	10	17	28
Washington	31	11	85	303	275	7	3	16	52	33	4	2	12	80	34
American Samoa	—	0	1	—	1	—	0	0	—	—	—	0	2	3	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	—	8	—	0	0	—	—	—	0	1	—	14
Puerto Rico	—	13	40	185	303	—	0	0	—	—	—	0	4	5	10
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 and 2009 are provisional.
† Includes *E. coli* O157:H7; Shiga toxin-positive, serogroup non-O157; and Shiga toxin-positive, not serogrouped.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 11, 2009, and July 5, 2008 (27th week)*

Reporting area	Streptococcal diseases, invasive, group A					*Streptococcus pneumoniae*, invasive disease, nondrug resistant† Age <5 years				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max		
United States	57	98	239	3,126	3,462	22	33	122	949	1,063
New England	—	5	28	169	253	—	1	12	24	53
Connecticut	—	0	21	49	66	—	0	11	—	—
Maine§	—	0	3	10	17	—	0	1	2	1
Massachusetts	—	2	10	60	123	—	1	2	15	41
New Hampshire	—	1	4	28	16	—	0	1	5	7
Rhode Island§	—	0	2	9	20	—	0	2	—	4
Vermont§	—	0	3	13	11	—	0	1	2	—
Mid. Atlantic	9	18	38	600	721	6	4	33	143	139
New Jersey	—	1	6	5	130	—	1	4	14	40
New York (Upstate)	7	6	25	231	228	1	2	17	72	63
New York City	—	4	12	124	134	5	0	31	57	36
Pennsylvania	2	6	18	240	229	N	0	2	N	N
E.N. Central	11	16	42	631	692	2	5	18	140	197
Illinois	—	4	12	163	189	—	1	5	15	57
Indiana	—	3	23	107	86	—	0	13	19	20
Michigan	—	3	11	106	118	—	1	5	43	53
Ohio	2	4	13	161	188	—	1	6	44	36
Wisconsin	9	2	10	94	111	2	1	4	19	31
W.N. Central	2	6	37	274	258	10	2	11	79	50
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	1	5	37	28	N	0	1	N	N
Minnesota	—	0	34	118	122	10	0	7	41	11
Missouri	—	2	8	61	62	—	0	4	26	23
Nebraska§	1	1	3	30	23	—	0	1	4	6
North Dakota	1	0	4	11	8	—	0	3	4	5
South Dakota	—	0	3	17	15	—	0	2	4	5
S. Atlantic	21	22	47	698	681	—	6	16	193	205
Delaware	—	0	1	8	6	—	0	0	—	—
District of Columbia	—	0	2	—	8	N	0	0	N	N
Florida	5	6	12	167	150	—	1	6	46	39
Georgia	3	5	13	164	154	—	2	6	49	55
Maryland§	8	3	10	108	125	—	1	3	40	40
North Carolina	3	2	12	76	86	N	0	0	N	N
South Carolina§	2	1	5	43	40	—	1	6	32	32
Virginia§	—	3	9	104	85	—	0	4	18	34
West Virginia	—	1	4	28	27	—	0	2	8	5
E.S. Central	1	4	10	126	115	2	1	6	37	56
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	5	23	25	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	2	—	7
Tennessee§	1	3	9	103	90	2	1	6	37	49
W.S. Central	7	9	79	273	290	—	6	46	172	158
Arkansas§	—	0	2	12	7	—	0	4	17	10
Louisiana	—	0	3	9	11	—	0	3	13	8
Oklahoma	3	2	20	95	68	—	1	7	33	47
Texas§	4	6	59	157	204	—	4	34	109	93
Mountain	6	10	22	276	375	2	4	16	143	173
Arizona	5	3	7	95	129	—	2	10	79	79
Colorado	1	3	9	97	95	2	1	4	30	40
Idaho§	—	0	2	3	12	—	0	2	6	3
Montana§	N	0	0	N	N	N	0	0	N	N
Nevada§	—	0	1	5	6	—	0	1	—	2
New Mexico§	—	2	7	49	93	—	0	4	15	25
Utah	—	1	6	26	34	—	0	4	13	23
Wyoming§	—	0	1	1	6	—	0	1	—	1
Pacific	—	3	9	79	77	—	0	3	18	32
Alaska	—	0	4	10	16	—	0	2	13	21
California	N	0	0	N	N	N	0	0	N	N
Hawaii	—	3	8	69	61	—	0	2	5	11
Oregon§	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	—	0	0	—	30	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N

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U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 and 2009 are provisional.
† Includes cases of invasive pneumococcal disease, in children aged <5 years, caused by *S. pneumoniae*, which is susceptible or for which susceptibility testing is not available (NNDSS event code 11717).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 11, 2009, and July 5, 2008 (27th week)*

Reporting area	*Streptococcus pneumoniae*, invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages					Aged <5 years									
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	23	58	276	1,732	1,983	4	9	21	267	290	134	265	452	6,461	6,316
New England	—	1	48	30	42	—	0	5	1	5	4	5	15	162	160
Connecticut	—	0	48	—	—	—	0	5	—	—	—	1	5	32	11
Maine§	—	0	2	8	14	—	0	1	—	—	—	0	2	1	6
Massachusetts	—	0	1	1	—	—	0	1	1	—	4	4	11	115	124
New Hampshire	—	0	3	5	—	—	0	0	—	—	—	0	2	10	8
Rhode Island§	—	0	6	7	15	—	0	1	—	3	—	0	5	4	6
Vermont§	—	0	1	9	13	—	0	0	—	2	—	0	2	—	5
Mid. Atlantic	2	4	14	104	201	—	0	3	19	16	25	33	51	928	875
New Jersey	—	0	0	—	—	—	0	0	—	—	—	4	13	101	109
New York (Upstate)	1	1	10	45	39	—	0	2	10	5	—	2	8	56	76
New York City	—	0	4	2	85	—	0	2	—	—	21	22	36	589	540
Pennsylvania	1	1	8	57	77	—	0	2	9	11	4	6	12	182	150
E.N. Central	5	10	41	388	435	2	1	7	55	59	3	24	44	488	565
Illinois	N	0	0	N	N	N	0	0	N	N	—	9	19	126	214
Indiana	—	2	32	124	150	—	0	6	18	18	1	2	10	76	70
Michigan	—	0	2	17	15	—	0	1	2	2	1	4	18	125	108
Ohio	5	7	18	247	270	2	1	4	35	39	1	6	15	137	147
Wisconsin	—	0	0	—	—	—	0	0	—	—	—	1	4	24	26
W.N. Central	—	2	161	87	145	—	1	3	20	28	1	6	14	155	213
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	12	10
Kansas	—	1	5	38	57	—	0	2	13	3	—	0	3	13	17
Minnesota	—	0	156	—	20	—	0	3	—	20	—	2	6	34	52
Missouri	—	1	5	37	63	—	0	1	5	2	—	3	10	76	127
Nebraska§	—	0	0	—	—	—	0	0	—	—	1	0	2	16	7
North Dakota	—	0	3	10	2	—	0	0	—	—	—	0	1	3	—
South Dakota	—	0	2	2	3	—	0	2	2	3	—	0	1	1	—
S. Atlantic	14	25	53	825	783	1	4	14	123	119	37	63	262	1,543	1,345
Delaware	—	0	2	10	2	—	0	0	—	—	3	0	3	20	8
District of Columbia	N	0	0	N	N	N	0	0	N	N	—	3	9	88	68
Florida	8	15	36	498	426	—	3	13	79	75	3	20	31	489	520
Georgia	6	8	25	239	272	1	1	5	37	37	—	13	227	303	250
Maryland§	—	0	1	4	4	—	0	0	—	1	4	6	16	150	171
North Carolina	N	0	0	N	N	N	0	0	N	N	16	8	19	280	145
South Carolina§	—	0	0	—	—	—	0	0	—	—	2	2	6	58	45
Virginia§	N	0	0	N	N	N	0	0	N	N	9	5	16	152	133
West Virginia	—	2	13	74	79	—	0	3	7	6	—	0	1	3	5
E.S. Central	1	5	25	182	223	1	1	3	27	41	14	22	36	575	535
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	16	222	231
Kentucky	—	1	5	51	55	—	0	2	7	9	2	1	10	28	46
Mississippi	—	0	3	—	26	—	0	1	—	8	5	3	18	103	72
Tennessee§	1	3	22	131	142	1	0	3	20	24	7	8	19	222	186
W.S. Central	1	1	6	57	71	—	0	3	10	12	40	51	80	1,304	1,046
Arkansas§	1	0	5	34	13	—	0	3	7	3	8	4	35	107	73
Louisiana	—	1	5	23	58	—	0	1	3	9	6	14	40	297	260
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	7	29	42
Texas§	—	0	0	—	—	—	0	0	—	—	26	31	46	871	671
Mountain	—	2	7	57	82	—	0	3	11	9	3	8	18	155	335
Arizona	—	0	0	—	—	—	0	0	—	—	—	3	11	21	170
Colorado	—	0	0	—	—	—	0	0	—	—	—	1	5	48	91
Idaho§	N	0	1	N	N	N	0	1	N	N	—	0	2	3	2
Montana§	—	0	1	—	—	—	0	0	—	—	—	0	7	—	—
Nevada§	—	1	4	27	40	—	0	2	6	4	1	2	7	56	39
New Mexico§	—	0	0	—	—	—	0	0	—	—	1	1	5	25	17
Utah	—	1	6	23	42	—	0	3	4	5	—	0	2	—	14
Wyoming§	—	0	2	7	—	—	0	1	1	—	1	0	1	2	2
Pacific	—	0	1	2	1	—	0	1	1	1	7	46	67	1,151	1,242
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
California	N	0	0	N	N	N	0	0	N	N	4	43	60	1,056	1,123
Hawaii	—	0	1	2	1	—	0	1	1	1	—	0	3	16	13
Oregon§	N	0	0	N	N	N	0	0	N	N	2	0	4	23	7
Washington	N	0	0	N	N	N	0	0	N	N	1	2	9	56	99
American Samoa	N	0	0	N	N	N	0	0	N	N	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	—	3	11	107	88
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 and 2009 are provisional.
† Includes cases of invasive pneumococcal disease caused by drug-resistant *S. pneumoniae* (DRSP) (NNDSS event code 11720).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 11, 2009, and July 5, 2008 (27th week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive§				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	52	449	1,035	11,033	19,047	—	0	75	5	31	—	0	77	3	54
New England	—	13	46	164	1,002	—	0	2	—	—	—	0	1	—	2
Connecticut	—	0	21	—	501	—	0	2	—	—	—	0	1	—	2
Maine¶	—	0	11	—	160	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
New Hampshire	—	4	11	117	164	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	1	4	—	—	0	1	—	—	—	0	0	—	—
Vermont¶	—	3	17	43	177	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	13	38	58	941	1,499	—	0	8	—	—	—	0	4	—	—
New Jersey	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
New York (Upstate)	N	0	0	N	N	—	0	5	—	—	—	0	2	—	—
New York City	—	0	0	—	—	—	0	2	—	—	—	0	2	—	—
Pennsylvania	13	38	58	941	1,499	—	0	2	—	—	—	0	1	—	—
E.N. Central	11	151	254	3,938	4,653	—	0	8	—	—	—	0	3	—	—
Illinois	—	33	73	822	643	—	0	4	—	—	—	0	2	—	—
Indiana	4	0	19	172	—	—	0	1	—	—	—	0	1	—	—
Michigan	5	48	90	1,250	1,983	—	0	4	—	—	—	0	2	—	—
Ohio	2	42	91	1,344	1,503	—	0	3	—	—	—	0	1	—	—
Wisconsin	—	13	54	350	524	—	0	2	—	—	—	0	1	—	—
W.N. Central	2	22	114	631	740	—	0	6	—	3	—	0	21	2	13
Iowa	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
Kansas	1	6	22	176	295	—	0	2	—	2	—	0	3	—	4
Minnesota	—	0	0	—	—	—	0	2	—	—	—	0	4	—	—
Missouri	—	11	51	400	417	—	0	3	—	1	—	0	1	—	—
Nebraska¶	N	0	0	N	N	—	0	1	—	—	—	0	6	—	1
North Dakota	1	0	108	55	—	—	0	2	—	—	—	0	11	—	5
South Dakota	—	0	4	—	28	—	0	5	—	—	—	0	6	2	3
S. Atlantic	13	56	146	1,291	3,028	—	0	4	—	2	—	0	4	—	1
Delaware	—	0	4	2	22	—	0	0	—	—	—	0	1	—	—
District of Columbia	—	0	3	—	17	—	0	2	—	—	—	0	1	—	—
Florida	12	28	67	858	1,087	—	0	2	—	—	—	0	0	—	—
Georgia	N	0	0	N	N	—	0	1	—	—	—	0	1	—	1
Maryland¶	N	0	0	N	N	—	0	2	—	—	—	0	3	—	—
North Carolina	N	0	0	N	N	—	0	1	—	1	—	0	1	—	—
South Carolina¶	—	4	54	154	563	—	0	0	—	—	—	0	1	—	—
Virginia¶	—	6	119	28	902	—	0	0	—	—	—	0	1	—	—
West Virginia	1	9	32	249	437	—	0	0	—	1	—	0	0	—	—
E.S. Central	—	14	28	364	821	—	0	7	1	5	—	0	9	—	9
Alabama¶	—	14	28	363	811	—	0	3	—	—	—	0	2	—	1
Kentucky	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	1	1	10	—	0	4	—	2	—	0	8	—	6
Tennessee¶	N	0	0	N	N	—	0	2	1	3	—	0	3	—	2
W.S. Central	1	93	747	2,895	5,833	—	0	8	2	8	—	0	7	—	9
Arkansas¶	—	4	47	96	429	—	0	1	1	3	—	0	1	—	—
Louisiana	1	1	6	48	50	—	0	3	—	—	—	0	5	—	1
Oklahoma	N	0	0	N	N	—	0	1	—	2	—	0	1	—	3
Texas¶	—	85	721	2,751	5,354	—	0	6	1	3	—	0	4	—	5
Mountain	12	29	83	748	1,398	—	0	12	2	2	—	0	22	1	13
Arizona	—	0	0	—	—	—	0	10	1	1	—	0	8	—	—
Colorado	12	13	44	339	556	—	0	4	—	—	—	0	10	—	10
Idaho¶	N	0	0	N	N	—	0	1	1	1	—	0	6	—	1
Montana¶	—	3	20	105	213	—	0	0	—	—	—	0	2	—	—
Nevada¶	N	0	0	N	N	—	0	2	—	—	—	0	3	1	—
New Mexico¶	—	4	20	114	140	—	0	1	—	—	—	0	1	—	—
Utah	—	10	31	190	480	—	0	2	—	—	—	0	5	—	1
Wyoming¶	—	0	1	—	9	—	0	0	—	—	—	0	2	—	1
Pacific	—	2	7	61	73	—	0	38	—	11	—	0	23	—	7
Alaska	—	1	6	40	32	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	37	—	11	—	0	20	—	7
Hawaii	—	1	4	21	41	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	2	—	—	—	0	4	—	—
Washington	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	1	3	—	55	—	0	0	—	—	—	0	0	—	—
Puerto Rico	2	9	23	273	349	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 and 2009 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.
† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for California serogroup, eastern equine, Powassan, St. Louis, and western equine diseases are available in Table I.
§ Not reportable in all states. Data from states where the condition is not reportable are excluded from this table, except starting in 2007 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/epo/dphsi/phs/infdis.htm.
¶ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE III. Deaths in 122 U.S. cities,* week ending July 11, 2009 (27th week)

Reporting area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45–64	25–44	1–24	<1	
New England	555	378	123	28	15	11	50
Boston, MA	127	71	36	5	8	7	11
Bridgeport, CT	30	26	3	—	—	1	3
Cambridge, MA	11	9	2	—	—	—	2
Fall River, MA	23	17	4	2	—	—	4
Hartford, CT	47	29	13	4	—	1	2
Lowell, MA	23	13	5	4	1	—	1
Lynn, MA	10	6	3	1	—	—	1
New Bedford, MA	24	17	6	—	1	—	4
New Haven, CT	35	28	4	3	—	—	7
Providence, RI	79	58	16	3	1	1	4
Somerville, MA	2	1	1	—	—	—	—
Springfield, MA	32	20	9	1	2	—	3
Waterbury, CT	47	40	7	—	—	—	1
Worcester, MA	65	43	14	5	2	1	7
Mid. Atlantic	1,883	1,277	413	119	37	36	99
Albany, NY	36	28	7	—	1	—	2
Allentown, PA	24	15	6	1	1	1	2
Buffalo, NY	74	45	19	5	2	3	9
Camden, NJ	37	26	8	2	1	—	3
Elizabeth, NJ	14	7	4	1	2	—	—
Erie, PA	66	51	12	3	—	—	5
Jersey City, NJ	10	8	2	—	—	—	2
New York City, NY	1,068	731	236	66	18	16	36
Newark, NJ	54	22	11	15	—	6	2
Paterson, NJ	13	8	4	1	—	—	2
Philadelphia, PA	122	72	30	11	5	4	10
Pittsburgh, PA§	34	25	4	1	2	2	4
Reading, PA	28	18	7	1	—	2	1
Rochester, NY	155	111	36	5	2	1	10
Schenectady, NY	21	13	4	4	—	—	2
Scranton, PA	22	19	1	1	1	—	2
Syracuse, NY	50	35	13	—	1	1	3
Trenton, NJ	26	18	5	2	1	—	—
Utica, NY	16	13	3	—	—	—	3
Yonkers, NY	13	12	1	—	—	—	1
E.N. Central	1,978	1,280	457	132	49	53	120
Akron, OH	51	31	14	5	1	—	2
Canton, OH	38	23	10	3	1	1	6
Chicago, IL	384	174	124	47	17	16	30
Cincinnati, OH	95	54	21	7	5	8	7
Cleveland, OH	262	199	41	13	4	5	12
Columbus, OH	219	136	56	17	8	2	8
Dayton, OH	126	97	21	4	3	1	7
Detroit, MI	U	U	U	U	U	U	U
Evansville, IN	50	33	11	2	1	3	5
Fort Wayne, IN	50	31	14	3	—	2	3
Gary, IN	8	3	4	1	—	—	—
Grand Rapids, MI	33	20	10	1	1	1	1
Indianapolis, IN	203	133	51	9	2	8	13
Lansing, MI	45	37	6	2	—	—	—
Milwaukee, WI	102	69	24	6	3	—	7
Peoria, IL	48	34	6	3	1	4	3
Rockford, IL	45	30	11	2	2	—	4
South Bend, IN	61	45	12	2	—	1	3
Toledo, OH	94	71	18	5	—	—	4
Youngstown, OH	64	60	3	—	—	1	5
W.N. Central	544	329	147	35	18	15	24
Des Moines, IA	12	7	5	—	—	—	3
Duluth, MN	26	19	7	—	—	—	—
Kansas City, KS	28	16	9	2	1	—	—
Kansas City, MO	115	65	35	3	6	6	3
Lincoln, NE	28	23	4	—	—	1	2
Minneapolis, MN	50	27	14	7	1	1	2
Omaha, NE	81	53	20	6	2	—	3
St. Louis, MO	88	41	25	14	3	5	5
St. Paul, MN	48	35	7	2	3	1	2
Wichita, KS	68	43	21	1	2	1	4
S. Atlantic	1,261	779	317	98	40	27	75
Atlanta, GA	151	93	38	14	3	3	9
Baltimore, MD	135	78	32	14	5	6	18
Charlotte, NC	147	106	25	8	5	3	9
Jacksonville, FL	191	117	55	12	4	3	7
Miami, FL	119	74	28	9	3	5	6
Norfolk, VA	45	27	12	2	3	1	1
Richmond, VA	60	32	23	2	2	1	3
Savannah, GA	53	34	12	4	3	—	4
St. Petersburg, FL	62	48	8	3	2	1	5
Tampa, FL	208	132	51	17	6	2	12
Washington, D.C.	74	26	29	13	4	2	—
Wilmington, DE	16	12	4	—	—	—	1
E.S. Central	697	469	154	51	11	12	57
Birmingham, AL	170	109	42	14	3	2	21
Chattanooga, TN	93	62	23	6	2	—	4
Knoxville, TN	111	84	20	6	—	1	9
Lexington, KY	72	47	17	6	—	2	4
Memphis, TN	U	U	U	U	U	U	U
Mobile, AL	63	41	14	7	1	—	2
Montgomery, AL	42	23	12	3	2	2	6
Nashville, TN	146	103	26	9	3	5	11
W.S. Central	1,182	748	300	70	38	25	53
Austin, TX	66	39	17	6	4	—	3
Baton Rouge, LA	U	U	U	U	U	U	U
Corpus Christi, TX	U	U	U	U	U	U	U
Dallas, TX	178	106	52	13	3	4	6
El Paso, TX	69	51	14	—	3	1	3
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	400	233	115	26	17	9	15
Little Rock, AR	U	U	U	U	U	U	U
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	256	174	55	18	6	3	17
Shreveport, LA	69	47	14	3	1	4	4
Tulsa, OK	144	98	33	4	4	4	5
Mountain	1,112	731	247	96	20	18	63
Albuquerque, NM	126	88	26	10	2	—	3
Boise, ID	53	36	9	4	3	1	2
Colorado Springs, CO	99	63	25	8	1	2	—
Denver, CO	76	49	18	7	1	1	5
Las Vegas, NV	211	138	46	20	6	1	18
Ogden, UT	34	27	4	2	—	1	—
Phoenix, AZ	192	112	52	19	3	6	9
Pueblo, CO	46	33	11	1	1	—	1
Salt Lake City, UT	141	92	30	14	1	4	15
Tucson, AZ	134	93	26	11	2	2	10
Pacific	1,749	1,178	402	104	36	29	169
Berkeley, CA	15	12	1	1	—	1	5
Fresno, CA	119	79	25	8	5	2	14
Glendale, CA	34	25	7	1	—	1	7
Honolulu, HI	79	64	9	3	3	—	11
Long Beach, CA	69	46	18	2	3	—	7
Los Angeles, CA	263	146	74	23	9	11	29
Pasadena, CA	20	14	5	1	—	—	2
Portland, OR	121	93	24	2	1	1	6
Sacramento, CA	208	142	56	8	1	1	13
San Diego, CA	171	117	38	13	2	1	17
San Francisco, CA	100	65	22	10	2	1	16
San Jose, CA	194	134	36	12	7	5	26
Santa Cruz, CA	32	21	11	—	—	—	4
Seattle, WA	118	76	33	5	1	3	6
Spokane, WA	81	55	18	6	—	2	3
Tacoma, WA	125	89	25	9	2	—	3
Total¶	**10,961**	**7,169**	**2,560**	**733**	**264**	**226**	**710**

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. 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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