

## Presumptive Abortive Human Rabies — Texas, 2009

Rabies is a serious zoonotic disease. Recovery has been well documented in only six human patients worldwide (1,2). Five of those patients had received rabies vaccinations before illness; one had not received rabies vaccination but survived infection after prolonged intensive care. In most of these survivors, moderate to profound neurologic sequelae occurred (2,3). In all six survivors, rabies was diagnosed based on exposure history, compatible clinical symptoms, and detection of rabies virus-neutralizing antibodies (VNA). This report describes the clinical course and laboratory findings of an adolescent girl with encephalitis who had not had rabies vaccination and who had been exposed to bats 2 months before illness. Antibodies to rabies virus were detected in specimens of the girl's serum and cerebrospinal fluid (CSF) by indirect fluorescent antibody test (IFA). However, the presence of rabies VNA was not detected until after she had received single doses of rabies vaccine and human rabies immune globulin (HRIG). Although the patient required multiple hospitalizations and follow-up visits for recurrent neurologic symptoms, she survived without intensive care. No alternate etiology was determined, and abortive human rabies (defined in this report as recovery from rabies without intensive care) was diagnosed. Public education should emphasize avoiding exposure to bats and other potentially rabid wildlife and seeking prompt medical attention after exposure to such animals. Rabies is preventable if rabies immune globulin and vaccine are administered soon after an exposure; however, this case also suggests the rare possibility that abortive rabies can occur in humans and might go unrecognized.

### Case Report

On February 25, 2009, an adolescent girl aged 17 years went to a community hospital emergency department with severe frontal headache, photophobia, emesis, neck pain, dizziness, and paresthesia of face and forearms. The headaches had begun approximately 2 weeks before she went to the hospital (Figure). Her examination was significant for intermittent disorientation, with a Glasgow Coma Score of 14, nuchal rigidity, and fever to 102.0°F (38.9°C). Computed tomography of her head was

normal. A lumbar puncture (LP) was performed and revealed a white blood cell (WBC) count of 163/mm<sup>3</sup>, no red blood cells (RBC), 97% lymphocytes, 3% monocytes, and glucose of 61 mg/dL (Table 1). The patient was treated with intravenous ceftriaxone and dexamethasone, but when CSF bacterial cultures produced no growth, these medications were discontinued. After 3 days in the hospital, the girl's symptoms resolved, and she was discharged home.

Subsequently, her headaches recurred and intensified; on March 6, she went to another local hospital with photophobia, emesis, and myalgias, particularly of the neck and back. Magnetic resonance imaging (MRI) of her head demonstrated enlarged lateral ventricles for her age; another LP was performed and revealed a protein level of 160 mg/dL, WBC count of 185/mm<sup>3</sup>, and RBC count of 1/mm<sup>3</sup> with 95% lymphocytes and 5% macrophages (Table 1). She was transferred to a tertiary-care children's hospital that same day.

On admission to the hospital (Figure), she was afebrile, alert, and oriented. Fundoscopic examination demonstrated a blurring of disk margins bilaterally. She was photophobic with transient limitation of vision in the left visual field. Initially, she had decreased strength of the left lower and upper extremities, but it resolved during subsequent examinations. She also had a new papular pruritic rash on her arms and back. She received a diagnosis of suspected infectious encephalitis and was treated during the hospitalization with intravenous acyclovir, ceftriaxone, ethambutol, isoniazid, pyrazinamide, and rifampin. On March 10, the girl reported loss of sensation and strength of the right extremities, and weakness was confirmed on examination. Emesis increased, and she became agitated and combative. But these

### INSIDE

- 191 [Multistate Outbreak of Human \*Salmonella\* Typhimurium Infections Associated with Pet Turtle Exposure — United States, 2008](#)
- 197 [Announcement](#)
- 199 [QuickStats](#)



symptoms resolved the next day. Repeat LP demonstrated increased intracranial pressure (Table 1).

An extensive workup for potential etiologies of encephalitis/aseptic meningitis was performed, but no definitive etiology was determined (Table 2). On March 10, the medical team elicited a history of bat exposure, and rabies was considered in the differential diagnosis. The patient recalled that approximately 2 months before her headaches began she had entered a cave while on a camping trip in Texas and came into contact with flying bats. Although several bats hit her body, she did not notice any bites or scratches. The patient also reported owning pet ferrets and a dog; all were in good health and under routine veterinary care.

The patient reportedly had never received rabies prophylaxis. On March 11, serologic tests of serum and CSF for antirabies virus antibodies, polymerase chain reaction (PCR) tests of saliva and nuchal skin biopsy for the presence of rabies virus RNA, and direct fluorescent antibody tests of the nuchal biopsy for rabies virus antigen were performed at CDC. No rabies virus antigens or RNA were detected. However, four serum and CSF samples tested positive for rabies virus

antibodies by IFA. Serum immunoglobulin G (IgG) reactivity increased to a peak dilution of 1:8192 and immunoglobulin M (IgM) to 1:32. The CSF IgG was positive up to dilution 1:32 through March 19 and by April 3 had decreased to 1:8. The CSF IgM remained negative (Table 1). The positive IFA results were corroborated by a Western blot assay performed in blinded fashion by an independent investigator. Although rabies virus can crossreact serologically with other members of the *Lyssavirus* genus, Kern Canyon virus (KCV) is the only other rhabdovirus associated with bats in North America that potentially could demonstrate a limited serologic crossreactivity with rabies virus. KCV RNA was not detected in the patient's skin biopsy, saliva, and CSF by nested PCR.

On March 14, after notification of positive rabies serology results, the girl received 1 dose of rabies vaccine and 1,500 IU of HRIG. Additional doses of vaccine were not administered because of concern over possible adverse effects from potentiating the immune response. On March 19 and March 29, the patient's serum tested positive for rabies VNA by the rapid fluores-

The *MMWR* series of publications is published by the Office of Surveillance, Epidemiology, and Laboratory Services, Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, Atlanta, GA 30333.

**Suggested citation:** Centers for Disease Control and Prevention. [Article title]. *MMWR* 2010;59:[inclusive page numbers].

#### Centers for Disease Control and Prevention

Thomas R. Frieden, MD, MPH, *Director*

Peter A. Briss, MD, MPH, *Acting Associate Director for Science*

James W. Stephens, PhD, *Office of the Associate Director for Science*

Stephen B. Thacker, MD, MSc, *Deputy Director for Surveillance, Epidemiology, and Laboratory Services*

#### MMWR Editorial and Production Staff

Frederic E. Shaw, MD, JD, *Editor, MMWR Series*

Christine G. Casey, MD, *Deputy Editor, MMWR Series*

Robert A. Gunn, MD, MPH, *Associate Editor, MMWR Series*

Teresa F. Rutledge, *Managing Editor, MMWR Series*

Douglas W. Weatherwax, *Lead Technical Writer-Editor*

Donald G. Meadows, MA, Jude C. Rutledge, *Writer-Editors*

Martha F. Boyd, *Lead Visual Information Specialist*

Malbea A. LaPete, Stephen R. Spriggs, Terraye M. Starr,  
*Visual Information Specialists*

Kim L. Bright, Quang M. Doan, MBA, Phyllis H. King,  
*Information Technology Specialists*

#### MMWR Editorial Board

William L. Roper, MD, MPH, Chapel Hill, NC, *Chairman*

Virginia A. Caine, MD, Indianapolis, IN

Jonathan E. Fielding, MD, MPH, MBA, Los Angeles, CA

David W. Fleming, MD, Seattle, WA

William E. Halperin, MD, DrPH, MPH, Newark, NJ

King K. Holmes, MD, PhD, Seattle, WA

Deborah Holtzman, PhD, Atlanta, GA

John K. Iglehart, Bethesda, MD

Dennis G. Maki, MD, Madison, WI

Sue Mallonee, MPH, Oklahoma City, OK

Patricia Quinlisk, MD, MPH, Des Moines, IA

Patrick L. Remington, MD, MPH, Madison, WI

Barbara K. Rimer, DrPH, Chapel Hill, NC

John V. Rullan, MD, MPH, San Juan, PR

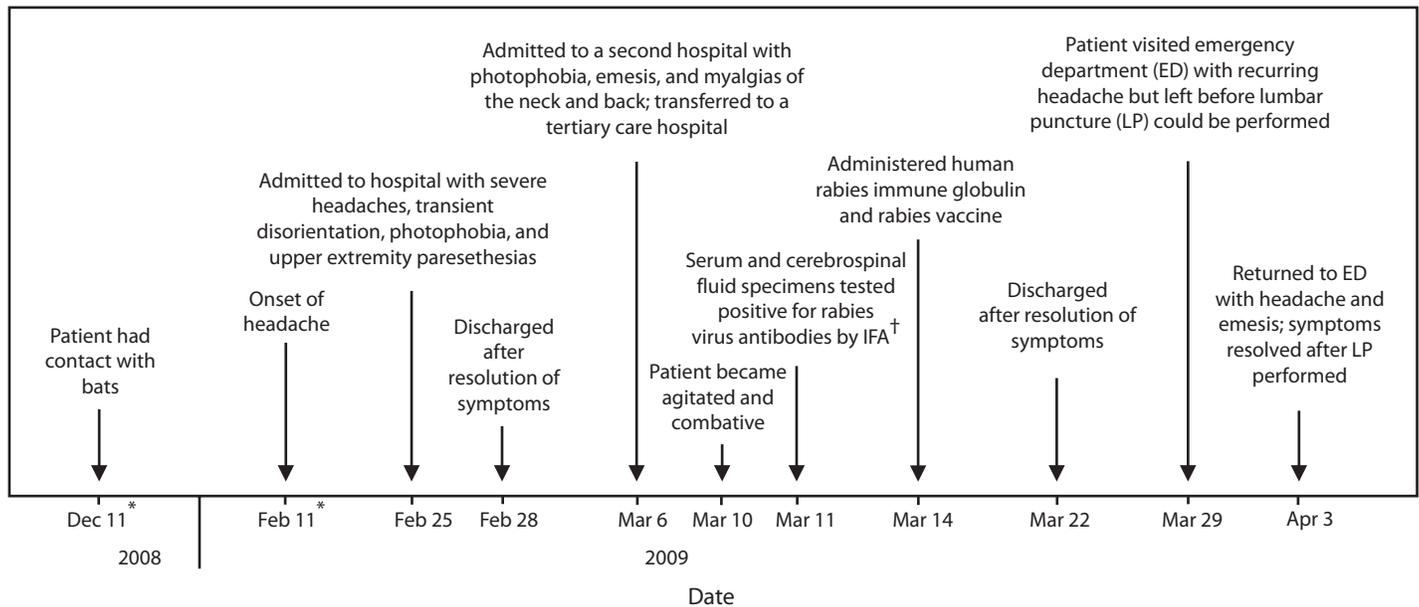
William Schaffner, MD, Nashville, TN

Anne Schuchat, MD, Atlanta, GA

Dixie E. Snider, MD, MPH, Atlanta, GA

John W. Ward, MD, Atlanta, GA

FIGURE. Timeline of course for a patient with presumptive abortive human rabies — Texas, 2009



\* Approximate date.

† Indirect fluorescent antibody.

cent focus inhibition test (RFFIT), whereas her CSF remained negative for rabies VNA (Table 1).

The patient was managed supportively and never required intensive care. She was discharged on March 22 with clinical symptom resolution but returned to the emergency department on March 29 with recurring headache. She left before an LP could be performed, but returned to the emergency department again on April 3 with headache and emesis. At that time, an LP was performed, and her CSF opening pressure was still elevated (Table 1). After the LP, her headache resolved. She was not rehospitalized and did not return for follow up in the outpatient clinic.

Questionnaires were administered to close friends and family members of the girl and to health-care workers to assess indications for postexposure prophylaxis (PEP). Only the girl's boyfriend met the criteria and received PEP (4). The current clinical status of the patient or her boyfriend is unknown.

#### Reported by

G Holzmann-Pazgal, MD, A Wanger, PhD, G Degaffe, MD, C Rose, MD, G Heresi, MD, R Amaya MD, Univ of Texas School of Medicine Dept of Pediatrics; A Eshofonie, MD, H Lee-Han, PhD, A Awosika-Olumo, MD, Bur of Epidemiology, Office of Surveillance and Public Health Preparedness, Houston Dept of Health and Human Svcs, Houston, Texas. I Kuzmin, MD, PhD, CE Rupprecht, VMD, PhD, Div of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases, CDC.

#### Editorial Note

This is the first reported case in which certain clinical and serologic findings indicate abortive human rabies and in which, despite an extensive medical investigation, no alternate etiology for the illness was determined. The patient's positive serologic results offer evidence of rabies virus infection; IFA and Western blot assays indicated the presence of antibodies capable of binding to rabies virus antigens before the patient received rabies PEP. Rabies virus can crossreact serologically with other members of the *Lyssavirus* genus, distributed in Australia, Eurasia, and Africa (5) or, theoretically, with as yet uncharacterized rhabdoviruses. However, this patient had no history of foreign travel and no evidence of infection with KCV, the only other rhabdovirus associated with bats in North America.

Laboratory diagnosis of rabies antemortem is based typically on routine detection of viral antigen in a full-thickness skin biopsy, viral RNA in the skin biopsy or saliva, or antibodies in serum and CSF. Only antibodies were found in this patient. However, viral antigen and RNA often are not detected in infected humans antemortem because of limited virus replication and intermittent viral excretion in saliva (1,4,6). Notably, the diagnosis of rabies in all human survivors has been based solely on serologic findings, including the presence of VNA, but without virus isolation or detection of viral antigens or RNA (2,6).

TABLE 1. Cerebrospinal fluid (CSF) and rabies virus antibody test results for a patient with presumptive abortive human rabies — Texas, 2009

Date	CSF						Serum			
	WBC/ mm <sup>3</sup> *	WBC differential <sup>†</sup>	RBC/ mm <sup>3</sup> §	Glucose (mg/ dL <sup>¶</sup> )	Protein (mg/ dL <sup>**</sup> )	Opening pressure (cm H <sub>2</sub> O <sup>††</sup> )	Rabies IFA IgG/IgM <sup>§§</sup>	Rabies VNA (RFFIT) <sup>¶¶</sup>	Rabies IFA IgG/IgM	Rabies VNA (RFFIT)
February 25	163	97% lymphocytes 3% monocytes	0	61	NP***	NP	NP	NP	NP	NP
March 6	185	95% lymphocytes 5% macrophages	1	56	160	NP	NP	NP	NP	NP
March 9	318	95% lymphocytes 5% monocytes	0	50	152	28	NP	NP	NP	NP
March 10	500	2% neutrophils 89% lymphocytes 9% monocytes	350	58	146	38	NP	NP	NP	NP
March 11	254	7% neutrophils 79% lymphocytes 14% monocytes	1775	55	164	23	1:32/negative	<1:5	1:2048/8	<1:5
March 15	395	95% lymphocytes 5% monocytes	37	51	198	NP	1:32/negative	<1:5	1:8192/8	<1:5
March 19	82	89% lymphocytes 11% monocytes	80	62	146	25	1:32/negative	<1:5	1:8192/32	1:14
March 29	NP	NP	NP	NP	NP	NP	NP	NP	1:8192/32	>1:5
April 3	63	96% lymphocytes 4% monocytes	3	60	53	29	1:8/negative	<1:5	NP	NP

\* Normal: white blood cells 0–5/mm<sup>3</sup>.

† Normal: neutrophils: 0–6%, lymphocytes 40%–80%, monocytes 15%–45%, macrophages (no reference range).

§ Normal: red blood cells 0/mm<sup>3</sup>.

¶ Normal: 45–80 mg/dL.

\*\* Normal: 15–45 mg/dL.

†† Normal: <20 cm H<sub>2</sub>O.

§§ Indirect fluorescent antibody test (serum or CSF dilutions); immunoglobulin G/immunoglobulin M.

¶¶ Viral neutralizing antibodies (serum or CSF dilutions); rapid fluorescent focus inhibition test.

\*\*\* Not performed.

Certain other clinical and laboratory findings also support a diagnosis of abortive rabies in the patient described in this report. First, the onset of acute encephalopathy approximately 2 months after exposure to bats is compatible with documented incubation periods after rabies virus exposure. Second, central nervous system (CNS) findings (e.g., fever, photophobia, emesis, neck pain, dizziness, paresthesia, limitation of visual field, and altered behavior with agitation and combativeness) are compatible with clinical aspects of rabies. Although this patient did not have classic symptoms such as laryngeal spasms (manifested as hydrophobia) or autonomic instability, the lack of such symptoms has been documented in other rabies patients (1,2,6). Finally, despite an extensive medical workup, no alternate infectious etiology was identified for the patient's neurologic symptoms, increased intracranial pressure, and CSF pleocytosis.

In animal models, both cellular and humoral immune responses are important indicators in survivorship after rabies virus infection (7–9). In this report, the patient's serologic profile suggests that her

immune system cleared the rabies virus before production of VNA. This might help explain the patient's atypical (i.e., waxing and waning) neurologic course. In more typical rabies cases, infected persons who have not received rabies PEP experience a rapid neurologic decline, resulting in death. Human survivors of rabies have demonstrated a vigorous immune response to the virus, as measured by serum and CSF antibody levels (2,4). However, CSF IgG in the patient in this report never exceeded a dilution of 1:32, with serum IgG reaching 1:8192, not nearly as high as values reported in previous survivors (1). Another patient, given experimental treatment, showed evidence for neurologic recovery, with high serum but low CSF VNA, but died shortly after therapy (10).

Detection of viral antibodies in serum can be indicative of previous vaccination or exposure to a lyssavirus, but does not necessarily indicate the development of disease. Contact with virus does not ultimately constitute a productive infection (e.g., the virus can be inactivated by the host innate response or by other means before replication in host cells). Similarly, a productive infection does not necessarily

TABLE 2. Results of diagnostic testing for causative agents of encephalitis/aseptic meningitis in a patient with presumptive abortive human rabies — Texas, 2009

Test	Date	Result
<b>Cerebrospinal fluid (CSF)</b>		
Herpes simplex virus PCR*	March 6	Negative
Enterovirus PCR	March 6	Negative
Epstein Barr virus PCR	March 10	Negative
Cytomegalovirus PCR	March 15	Negative
Varicella zoster virus PCR	March 15	Negative
VDRL†	March 6	Nonreactive
Bacterial culture (five specimens)	March 6, 9, 10, 15, 19	No growth
AFB <sup>§</sup> culture (five specimens)	March 6, 9, 10, 15, 19	No growth
Fungal culture (five specimens)	March 6, 9, 10, 15, 19	No growth
Protein electrophoresis	March 9	No oligoclonal process
IgG <sup>¶</sup> index		0.5 (normal)
Cytopathology	March 9	Negative for malignancy
<b>Serum</b>		
HIV 1/HIV 2** antibodies	March 7	Negative
HIV 1 RNA PCR	March 7	Negative
Rapid plasma reagin	March 7	Nonreactive
West Nile virus	March 7	Negative
IgM <sup>††</sup>		0.00
IgG		0.00
Epstein Barr virus	March 8	
IgM		0.15 (negative)
IgG		3.42 (positive)
Nuclear antigen		6.53 (positive)
Arboviruses	March 11	Negative
St. Louis encephalitis		<1:16 <sup>§§</sup>
Eastern equine encephalitis		<1:16
Western equine encephalitis		<1:16
California encephalitis		<1:16
<i>Borrelia burgdorferi</i>	March 16	Negative
Human T-lymphotropic virus 1 and 2	March 16	Negative
Mycoplasma IgM	March 16	0.12 (negative)
Mycoplasma IgG		0.79 (positive)
<i>Ehrlichia</i> PCR	March 16	Negative
Fungal	March 11	
Coccidiomycosis		<1:2 (negative)
Blasomycosis		<1:8 (negative)
Histoplasmosis		<1:8 (negative)
Quantiferon-TB Gold	March 12	Negative
Antinuclear antibody	March 11	Negative
Anti-double stranded DNA		Negative
Anti-Ro antigen		Negative
Anti-Smith antigen		Negative
<b>Other</b>		
Viral culture (nasal wash)	March 6	No growth
Viral culture (oral sore)	March 10	No growth
Purified protein derivative (intradermal inoculation)	March 8	6 mm
	March 13	0 mm

\* Polymerase chain reaction.

† Venereal disease research laboratory.

§ Acid-fast bacilli.

¶ Immunoglobulin G.

\*\* Human immunodeficiency virus.

†† Immunoglobulin M.

§§ Dilution.

**What is already known on this topic?**

Only six human rabies survivors have been well documented after clinical onset, and none of the survivors had abortive rabies (i.e., recovery without intensive care).

**What is added by this report?**

This is the first reported case in which certain clinical and serologic findings indicate abortive human rabies and in which, despite an extensive medical investigation, no alternate etiology for the illness was determined.

**What are the implications for public health practice?**

Clinicians treating possible human rabies, indicated by acute, progressive infectious encephalitis, a compatible exposure history, and serologic evidence of a specific lyssavirus response, should contact their state health department for engagement with CDC; public education should continue to stress the importance of avoiding exposure to bats and seeking prompt medical attention after exposure to any potentially rabid animals.

result in transportation of virus to the CNS. An abortive infection can occur outside the CNS, with limited replication of the virus at the exposure site and further clearance by the host immune system (7,8).

Rabies virus is a highly neurotropic pathogen, transported from the exposure site to the CNS by peripheral nerves without significant local replication and avoiding or impairing the host immune response during the incubation period. Thereafter, when the virus reaches higher concentrations in the CNS and spreads peripherally, specific antibodies can be detected as the clinical course evolves. Typically, the detection of specific virus antibodies in the CSF indicates a CNS infection. Based on evidence to date with U.S. rabies patients, antibodies to the abundant viral nucleocapsid antigens detected by IFA are registered first, whereas VNA, directed to the outer viral glycoprotein, are only detected later by RFFIT, if VNA are detected at all. The patient described in this report did not have detectable rabies VNA in the serum until after receiving rabies vaccine and HRIG.

In all previous human survivors, rabies was diagnosed based on exposure histories, compatible clinical symptoms, and detection of rabies virus antibodies. However, in all of those patients, the clinical courses were substantially longer, with more severe neurologic compromise and more prominent stimulation of the immune system, including the induction of VNA. In the case presented here, the clinical manifestation was relatively mild, which might imply variables associated with viral dose, route, and type, with a more limited

virus replication and less apparent stimulation of the immune system. Clinicians treating possible cases of human rabies, indicated by acute, progressive infectious encephalitis, a compatible exposure history, and serologic evidence of a specific lyssavirus response, even in the absence of detectable VNA or fulminant neurologic decline, should contact their state health department for engagement with CDC.

**Acknowledgments**

This report is based, in part, on contributions by J Murphy, PhD, I Butler, MD, C Dreyer, MD, B Aalbers, MD, Univ of Texas School of Medicine; R Arafat, MD, Office of Surveillance and Public Health Preparedness, D Persse, MD, Houston Dept of Health and Human Svcs; P Grunenwald, DVM, Texas Dept of State Health Svcs, Region 6/5 South; C Kilborn, MPH, Harris County Public Health and Environmental Svcs, Houston; T Sidwa, DVM, Texas Dept of State Health Svcs, Austin, Texas; J Blanton, MPH, R Franka, DVM, PhD, M Niezgoda, MS, L Orciari, MS, A Velasco-Villa, PhD, X Wu, DVM, PhD, and P Yager, Div of Viral and Rickettsial Diseases, National Center for Emerging and Zoonotic Diseases, CDC.

**References**

1. Willoughby RE, Tieves KS, Hoffman GM, et al. Survival after treatment of rabies with induction of coma. *N Engl J Med* 2005;352:2508–14.
2. Hattwick MA, Weis TT, Stechschulte CJ, Baer GM, Gregg MB. Recovery from rabies: a case report. *Ann Intern Med* 1972;76:931–42.
3. Jackson AC, Warrell MJ, Rupprecht CE, et al. Management of rabies in humans. *Clin Infect Dis* 2003;36:60–3.
4. CDC. Human rabies prevention—United States, 2008: recommendations of the Advisory Committee on Immunization Practices. *MMWR* 2008;57(No. RR-3).
5. Calisher CH, Karabatsos N, Zeller H, et al. Antigenic relationships among rhabdoviruses from vertebrates and hematophagous arthropods. *Intervirology* 1989;30:241–57.
6. World Health Organization. WHO expert consultation on rabies: first report. WHO Technical Report Series 931. Geneva, Switzerland: World Health Organization; 2005. Available at [http://www.who.int/rabies/trs931\\_%2006\\_05.pdf](http://www.who.int/rabies/trs931_%2006_05.pdf). Accessed February 22, 2010.
7. Lodmell DL, Ewalt LC. Pathogenesis of street rabies virus infections in resistant and susceptible strains of mice. *J Virol* 1985;55:788–95.
8. Bell JF. Abortive rabies infection: experimental production in white mice and general discussion. *J Infect Dis* 1964;114:249–57.
9. Perry LL, Lodmell DL. Role of CD4 and CD8 T cells in murine resistance to street rabies virus. *J Virol* 1991;65:3429–34.
10. Rubin J, David D, Willoughby RE, Jr, et al. Applying the Milwaukee Protocol to treat canine rabies in Equatorial Guinea. *Scand J Infect Dis* 2009;41:372–5.

## Multistate Outbreak of Human *Salmonella* Typhimurium Infections Associated with Pet Turtle Exposure — United States, 2008

On September 4, 2008, the Philadelphia Department of Public Health (PDPH) and the Pennsylvania Department of Health (PADOH) notified CDC of an outbreak of possible turtle-associated human *Salmonella* Typhimurium infections detected by identifying strains with similar pulsed-field gel electrophoresis (PFGE) patterns in PulseNet. Turtles and other reptiles have long been recognized as sources of human *Salmonella* infections (1), and the sale or distribution of small turtles (those with carapace lengths <4 inches) has been prohibited in the United States since 1975 (2,3). CDC and state and local health departments conducted a multistate investigation during September–November 2008. This report summarizes the results of that investigation, which identified 135 cases in 25 states and the District of Columbia; 45% were in children aged ≤5 years. Among 70 patients with primary infection, 37% reported turtle exposure, of which 81% was to small turtles most commonly purchased from street vendors. A matched case-control study showed a significant association between illness and exposure to turtles (matched odds ratio [mOR] = 16.5). Increasing enforcement of existing local, state, and federal regulations against the sale of small turtles, increasing penalties for illegal sales, and enacting more state and local laws regulating the sale of small turtles (e.g., requiring *Salmonella* awareness education at the point-of-sale), could augment federal prevention efforts.

On July 9, 2008, a girl aged 2 years was brought to a Philadelphia physician's office after 3 days of diarrhea and fever. *S. Typhimurium* was isolated from her stool specimen. Three weeks before her illness began, the family had purchased two pet turtles with shell lengths <4 inches from a street vendor. The family reported that the child did not touch the turtles but touched the turtle aquarium. On July 28, PulseNet\* was notified that stool specimens from five additional Pennsylvania patients yielded *S. Typhimurium* with a PFGE *Xba*I pattern indistinguishable from the girl's isolate (JPXX01.0416) or different by a single

band (JPXX01.0006). Each of these PFGE patterns had been observed previously and comprised 1.1%–1.2% of the PulseNet *Salmonella* database. By mid-August, PulseNet had identified *S. Typhimurium* isolates matching the outbreak strain in 10 states.† Concomitantly, epidemiologic investigations led by PDPH and PADOH revealed that five of eight Philadelphia patients and two additional Pennsylvania patients reported exposure to a turtle in household settings.

### Multistate Investigation

On September 4, 2008, after a turtle aquarium water sample from a Philadelphia patient's home was positive for the outbreak strain, CDC and state and local health partners initiated a multistate investigation to determine the source of infections. A case was defined as a laboratory-confirmed infection of *S. Typhimurium* with the outbreak strain (PFGE *Xba*I pattern JPXX01.0416 or JPXX01.0006) in a person with an illness onset date§ on or after March 13, 2008 (earliest reported illness onset date). A case of secondary infection (secondary case) was defined as illness in a person occurring within 2 weeks after diarrheal illness in a household or day care contact, suggesting person-to-person transmission. All cases that were not identified as secondary cases were classified as primary cases.

A total of 135 cases in 25 states and the District of Columbia were identified in the national PulseNet database (Figure 1). Among 124 patients for whom demographic information was available, median age was 7 years (range: <1–94 years), and 54 (45%) patients were aged ≤5 years; 63 (51%) were female. Reported illness onset dates ranged from March 13 to October 7 (Figure 2); 78% of illnesses occurred during June–September.

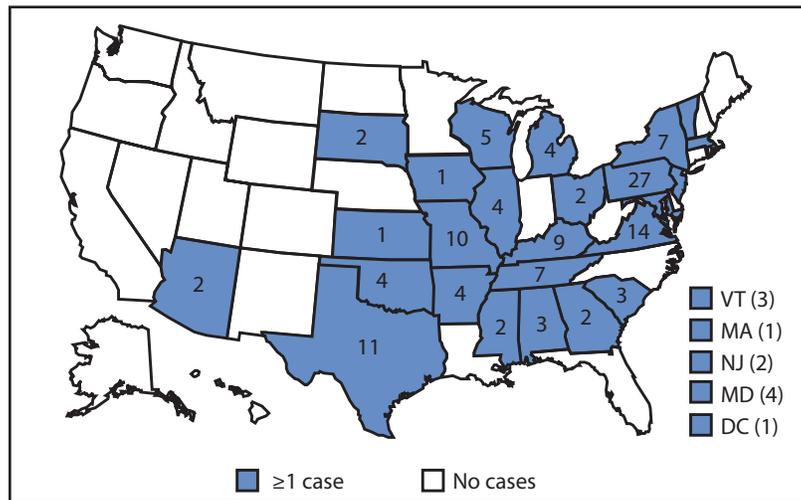
Eighty-three (61%) of 135 patients were interviewed using a more extensive questionnaire that asked

† Alabama, Illinois, New York, Ohio, Oklahoma, Pennsylvania, South Dakota, Texas, Vermont, and Virginia.

§ Date of outbreak strain isolation minus 3 days (account for the incubation period of *Salmonella*) was used to estimate illness onset date if that date was unknown.

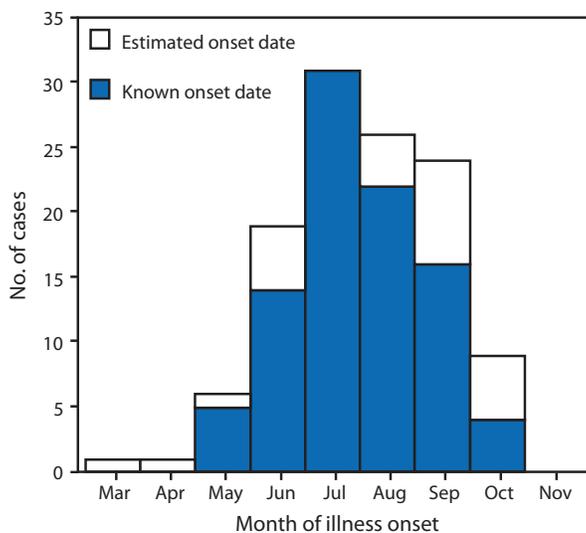
\*A national molecular subtyping network for foodborne disease surveillance.

FIGURE 1. Number of laboratory-confirmed cases (N = 135) of *Salmonella* Typhimurium infection with the outbreak strain — United States, March 13–November 17, 2008



about clinical symptoms, day-care attendance, reptile exposure (turtle size, species, acquisition source, and type and extent of turtle contact), and awareness of the association between reptile contact and *Salmonella* infection. Of the 83 patients, 35 (42%) had bloody diarrhea, and 29 (35%) were hospitalized; no deaths were reported. Twenty (24%) of 83 patients attended

FIGURE 2. Number of laboratory-confirmed cases (N = 135)\* of *Salmonella* Typhimurium infection with the outbreak strain, by month of illness onset and known (n = 94) or estimated† (n = 30) onset date — United States, 2008



\* Excludes 11 cases for which both onset date and isolation date were unknown.

† Onset date estimated by outbreak strain isolation date minus 3 days, if onset date not reported.

day care. Nine of those 20 children attended three Pennsylvania day-care centers, and they acquired secondary *Salmonella* infections through contact with laboratory-confirmed index cases, one in each day-care center. All the index patients acquired their infections through turtle exposure, and all 12 children were aged <2 years.

Investigators classified 70 of the 83 interviewed patients as having primary cases and 13 (16%) as secondary cases. The median age of these 70 patients was 8 years (range: <1–80 years); 43% were aged <5 years, and 36 (51%) were female. Of the 70 patients with primary cases, 26 (37%) reported exposure to turtles, and 21 reported exposures to small turtles. Among the 69% of patients who knew the source of the turtle, the majority of turtles were purchased from street vendors, flea markets, and nonpet stores (e.g., souvenir and gift shops) (Table). Seven (10%) of 70 primary patients reported other reptile exposures (e.g., snakes or iguanas). Three of six water samples from turtle habitats in patient households yielded the outbreak strain.

During September 18–October 10, 2008, a nationwide 1:1 matched case-control study was conducted to identify whether illness was associated with exposure to turtles or other reptiles. Data were collected through telephone interviews by local, state, and CDC epidemiologists using the outbreak questionnaire. For the case-control study, only primary cases with illness onset (or date of isolation of the outbreak strain, if the onset date was unknown) on or after March 13, 2008, were eligible. Controls were persons without diarrheal illness during August and were matched by case neighborhood (using reverse directory dialing) and age group (i.e., <1 year, 1–5 years, 6–17 years, ≥18 years). The questionnaire asked about history of reptile exposure for the week preceding illness onset for case-patients and during August for controls. Investigators chose August for controls to help decrease recall bias, reasoning that, without illness to delineate clearly a time period, controls might have more difficulty recalling the timing of exposures.

Thirty-seven cases and 47 controls were enrolled from 11 participating states. A total of 33 cases could not be enrolled in the case-control study because of refusal to participate, loss to follow-up, or inability to identify a matching control. Six cases had more than one matched control enrolled, and these were included in the analysis to increase study power. The median age of case-patients was 9 years

TABLE. Characteristics of primary cases,\* and of cases and controls in a matched case-control study, during an investigation of a multistate outbreak of *Salmonella* Typhimurium infections — United States, 2008

Characteristic	Outbreak primary cases (n = 70)		Case-control study†				mOR§	95% CI¶	p value
	No.	(%)	Cases (n = 37)		Controls (n = 47)				
	No.	(%)	No.	(%)	No.	(%)			
<b>Reptile exposure**</b>									
Turtles	26	(37)	18	(49)	9	(19)	16.5	(2.4–723.2)	<0.01
Nonturtle reptiles	7	(10)	3	(8)	4	(9)	1.0	(0.1–13.8)	1.00
Any reptiles	28	(40)	19	(51)	10	(21)	8.5	(1.8–79.3)	<0.01
<b>Turtle size</b>									
Carapace length <4 inches	21	(81)	16	(89)	5	(56)	1.0	(0.03–>999)	1.00
Carapace length ≥4 inches	2	(8)	1	(6)	3	(33)	—	—	—
Unknown/not reported	3	(12)	1	(6)	1	(11)	—	—	—
<b>Turtle species</b>									
Red-eared slider	7	(27)	6	(33)	0	—	5.9	(0.5–>999)	0.17
Other species††	6	(23)	5	(28)	4	(44)	—	—	—
Unknown/Not reported	13	(50)	7	(39)	5	(56)	—	—	—
<b>Kind of turtle exposure**</b>									
Touch	13	(50)	10	(56)	2	(22)	3.2	(0.33–>999)	0.33
Kiss	1	(4)	1	(6)	0	—	1.0	(0.03–>999)	1.00
Feed	13	(50)	11	(61)	0	—	6.5	(0.80–>999)	0.08
Environment contact	14	(54)	12	(67)	4	(44)	3.2	(0.33–>999)	0.33
Turtle roamed house	7	(27)	5	(28)	2	(22)	1.0	(0.33–>999)	1.00
Unknown/Not reported	0	—	0	—	1	(11)	—	—	—
<b>Location of turtle exposure**</b>									
Home	13	(50)	12	(67)	4	(44)	2.0	(0.1–118.0)	1.00
Friend/Relative	6	(23)	3	(17)	1	(11)	1.0	(0.01–78.5)	1.00
Outdoors	5	(19)	2	(11)	1	(11)	1.0	(0.03–>999)	1.00
Store	3	(12)	1	(6)	0	—	—	—	—
School	1	(4)	0	—	0	—	—	—	—
Zoo	0	—	0	—	1	(11)	—	—	—
Day care	0	—	0	—	0	—	—	—	—
Other§§	1	(4)	1	(6)	3	(33)	0.4	(0.01–7.8)	0.83
<b>Person cleaning turtle habitat**</b>									
Parent	9	(35)	8	(44)	3	(33)	1.0	(0.01–78.5)	1.00
Case-patient	3	(12)	3	(17)	0	—	—	—	—
Other¶¶	7	(27)	4	(22)	7	(78)	0.2	(<0.01–39)	1.00
<b>Where turtle acquired</b>									
Street vendor	7	(27)	7	(39)	1	(11)	—	—	—
Flea market	2	(8)	2	(11)	0	—	—	—	—
Nonpet store	4	(15)	2	(11)	1	(11)	—	—	—
Gift	1	(4)	1	(6)	0	—	—	—	—
Pet store	1	(4)	0	—	0	—	—	—	—
Outdoors	1	(4)	1	(6)	1	(11)	—	—	—
Other (not specified)	2	(8)	2	(11)	0	—	—	—	—
Unknown/Not reported	8	(31)	3	(17)	6	(67)	—	—	—
<b>Salmonella knowledge***</b>									
Yes	19	(27)	9	(24)	13	(28)	0.8	(0.2–2.7)	0.89
No	47	(67)	26	(70)	31	(66)	—	—	—
Unknown/Not reported	4	(6)	2	(5)	3	(6)	—	—	—

\* All cases that were not identified as secondary cases were classified as primary cases. A case of secondary infection (secondary case) was defined as illness in a person occurring within 2 weeks after diarrheal illness in a household or day-care contact, suggesting person-to-person transmission.

† Cases and controls were excluded from the analysis when questions were not answered or data were missing.

§ Matched odds ratio.

¶ Confidence interval.

\*\* Percentages might not sum to 100% because categories are not mutually exclusive.

†† Other species include the Florida cooter turtle, painter turtle, yellow-bellied slider, flat box turtle, and snapping turtle.

§§ Other locations of turtle exposure include a camp, a park, a tourist attraction, and a pool.

¶¶ Other relatives include grandparent, sibling, niece, aunt, and uncle.

\*\*\* Whether the respondent was aware of the association between *Salmonella* infection and reptile exposure.

(range: <1–80 years), compared with 14 years (range: <1–90 years) for controls ( $p = 0.44$ ); 51% of case-patients were female, compared with 40% of controls ( $p = 0.34$ ). Eighteen (49%) of 37 case-patients reported turtle exposure, compared with nine (19%) of 47 controls (mOR = 16.5) (Table). Sixteen (94%) of the 17 case-patients for whom information was available had exposure to a turtle with shell length <4 inches. Illness was not associated with exposure to nonturtle reptiles.

On October 20, 2008, PDPH issued a health advisory informing the public about the outbreak and providing recommendations for preventing illness.<sup>‡</sup> Attempts to trace back the source of the infected turtles were unsuccessful, partly because street or flea market vendors move frequently, complicating investigation efforts. In November 2008, the Food and Drug Administration reemphasized its warning to consumers against buying small turtles.\*\*

#### Reported by

C Burke, MSN, M Torres, Philadelphia Dept of Public Health; K Warren, MPH, C Sandt, PhD, Pennsylvania Dept of Health. J Adams, PulseNet Database Unit; J Webeck, DVM, G Ewald, MSPH, C Barton Behraves, DVM, Div of Foodborne, Bacterial, and Mycotic Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases; A Patel, MD, Career Epidemiology Field Officer; K Neil, MD, G Han, MD, EIS Officers, CDC.

#### Editorial Note

This *S. Typhimurium* outbreak is the third multistate, turtle-associated *Salmonella* outbreak in the United States since 2006. Before 2006, no large multistate turtle-associated *Salmonella* outbreaks were identified. One reason for this apparent increase might be PulseNet, which has improved the ability to detect multistate outbreaks. Increased pet turtle ownership in the United States also might contribute to the recurrent outbreaks: the proportion of households in the United States owning pet turtles doubled during 1996–2006, from 0.5% to 1.0% (4). Together, the three recent *Salmonella* outbreaks account for 258 laboratory-confirmed cases of salmonellosis (5–7) and many more unreported illnesses likely occurred. As with past outbreaks, most ill persons reporting turtle exposure were exposed to turtles with shell lengths

<4 inches; these turtles were mainly acquired from flea markets, street vendors, and souvenir shops. The case-control study found a significant association of *Salmonella* infection with turtle exposure; however, 63% of primary cases in the outbreak had no known-turtle exposure, and 60% had no reptile exposure. This might have resulted, in part, from failure to recall a turtle exposure. Parents or guardians were interviewed as proxies for young children and they might have been unaware of their child's turtle exposure outside of the home. In addition, certain patients might have had unknown indirect turtle exposure through environmental cross-contamination or unrecognized person-to-person transmission or have been sporadic or background cases.

The federal government prohibited sales of turtles with shell lengths <4 inches in 1975 (2,3), after investigations demonstrated that small turtles were a major source of human *Salmonella* infections, particularly in children (1). Implementation of the prohibition resulted in a substantial decline in turtle-associated human salmonellosis, preventing an estimated 100,000 *Salmonella* infections annually in U.S. children (8). However, because the prohibition is not fully enforced and contains exceptions (e.g., sales for bona fide scientific, educational, or exhibition purposes), turtle-associated human salmonellosis cases continue to occur. Street vendors and flea markets are a common source of illegal sales; these were common sources reported in this outbreak.

Despite recommendations from CDC to prevent turtle-associated salmonellosis in humans (Box),<sup>††</sup> recent outbreaks suggest public education efforts have not been successful. In this outbreak, <30% of respondents knew about the association between reptiles and *Salmonella*; this proportion has not increased substantially compared with the 20%–29% observed in the 2007–2008 outbreak (5). Although many reptiles carry *Salmonella*, small turtles pose a greater risk to young children because they are perceived as safe pets, are small enough to be placed in the mouth, or otherwise can be handled inappropriately. Persons having contact with reptiles, reptile habitats (including tank water), and other surfaces contaminated with reptile feces are at risk for *Salmonella* infection; direct reptile contact is not necessary (9). This outbreak documents that young children without direct turtle

<sup>‡</sup> Available at [https://hip.phila.gov/xv/portals/0/hip/health\\_alerts/2008/pdph-han\\_advisory\\_5\\_salmonellaturtleoutbreak\\_10\\_202008.pdf](https://hip.phila.gov/xv/portals/0/hip/health_alerts/2008/pdph-han_advisory_5_salmonellaturtleoutbreak_10_202008.pdf).

\*\* Available at <http://www.fda.gov/forconsumers/consumerupdates/ucm048081.htm>.

<sup>††</sup> Also available at [http://www.cdc.gov/healthypets/spotlight\\_an\\_turtles.htm](http://www.cdc.gov/healthypets/spotlight_an_turtles.htm).

**What is already known on this topic?**

A federal prohibition against sales of turtles with shell lengths <4 inches was enacted in 1975, after investigations demonstrated that small turtles were a major source of human *Salmonella* infections, particularly in children; despite this, outbreaks of *Salmonella* infection continue to be linked to these small turtles, in part due to illegal sales.

**What is added by this report?**

This report documents the third multistate *Salmonella* outbreak in the United States since 2006 associated with turtles, primarily those turtles with shell lengths <4 inches that were acquired through illegal sales; it also highlights that young children without direct turtle exposure are at risk for turtle-associated salmonellosis through person-to-person transmission in child-care settings.

**What are the implications for public health practice?**

Increasing enforcement of existing local, state, and federal regulations against the sale of small turtles, increasing penalties for illegal sales, and enacting more state and local laws regulating the sale of small turtles (e.g., requiring *Salmonella* awareness education [Box] at the point-of-sale), could augment federal prevention efforts and facilitate a more rapid public health response.

exposure are at risk for turtle-associated salmonellosis through person-to-person transmission in child-care settings. Direct or indirect reptile contact is associated with an estimated 6% of *Salmonella* infections in the United States and 11% of infections among persons aged <21 years (10).

Because of the particular hazard associated with small turtles, continuing federal prohibition against sales and distribution of small turtles is needed to prevent turtle-associated salmonellosis. Few states have laws regulating small turtles, and most of these laws prohibit turtles in day-care centers or require sellers to provide educational material. Increasing enforcement of existing local, state, and federal regulations against the sale of small turtles, increasing penalties for illegal sales, and enacting more state and local laws regulating the sale of small turtles (e.g., requiring *Salmonella* awareness education at the point-of-sale), could augment federal prevention efforts and facilitate a more rapid public health response.

**Acknowledgments**

This report is based, in part, on contributions by state and local health departments; G Badolato, Philadelphia Dept of Health; A Weltman, MD, V Dato, MD, Pennsylvania

**BOX. Existing recommendations to prevent turtle-associated *Salmonella* infections**

- Do not have a turtle in any household that includes children aged <5 years, the elderly, or persons who have lowered natural resistance to disease due to pregnancy, cancer, chemotherapy, organ transplants, diabetes, liver problems, or certain other diseases. A family expecting a child should remove any pet reptile or amphibian from the home before the infant arrives.
- Wash hands thoroughly with soap and water immediately after handling turtles or their cages, or after contact with pet feces. Do not touch your face, other persons, or any surface until hands are washed.
- Handle all turtles and surfaces that have come in contact with turtles as if they are contaminated with *Salmonella*, because they likely are.
- Wash surfaces that the turtle or its cage has contacted. Kitchen sinks should not be used to bathe turtles or to wash their dishes, cages, or aquariums. If bathtubs are used for these purposes, they should be cleaned thoroughly and disinfected with bleach before use.
- Separate the turtle from possible contact with food intended for humans. Do not allow turtles to roam freely about a home or living area, and especially do not allow them in food preparation areas. Do not allow food and drink to be present in animal contact areas. Do not use kitchen sinks to bathe turtles or to wash their dishes, cages, or aquariums. If bathtubs are used for these purposes, they should be cleaned thoroughly and disinfected with bleach.

**SOURCE:** CDC. Is a turtle the right pet for your family? Available at [http://www.cdc.gov/healthypets/spotlight\\_an\\_turtles.htm](http://www.cdc.gov/healthypets/spotlight_an_turtles.htm).

Dept of Health; and K Wannemuehler, PhD, and M Sotir, PhD, Div of Foodborne, Bacterial, and Mycotic Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases, CDC.

### References

1. Lamm S, Taylor A, Gangarosa E, et al. Turtle-associated salmonellosis. I. An estimation of the magnitude of the problem in the United States, 1970–1971. *Am J Epidemiol* 1972;95:511–7.
2. Food and Drug Administration. *Salmonella* and turtle safety. Available at <http://www.fda.gov/animalveterinary/guidancecomplianceenforcement/complianceenforcement/ucm090573.htm>. Accessed February 18, 2010.
3. Code of Federal Regulations. Turtles intrastate and interstate requirements (21 CFR 1240.62). Available at <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/cfrsearch.cfm?fr=1240.62>. Accessed February 18, 2010.
4. American Veterinary Medical Association. U.S. pet ownership and demographics sourcebook. Schaumburg, IL: American Veterinary Medical Association; 2007.
5. CDC. Multistate outbreak of human *Salmonella* infections associated with exposure to turtles—United States, 2007–2008. *MMWR* 2008;57:69–72.
6. Harris JR, Neil KP, Behravesh CB, et al. Recent multistate outbreaks of human *Salmonella* infections acquired from turtles: a continuing public health challenge. *Clin Infect Dis* 2010;50:554–9.
7. CDC. Turtle-associated salmonellosis in humans—United States, 2006–2007. *MMWR* 2007;56:649–52.
8. Cohen ML, Potter M, Pollard R, Feldman RA. Turtle-associated salmonellosis in the United States: effect of public health, 1970 to 1976. *JAMA* 1980;243:1247–9.
9. Mermin J, Hoar B, Angulo FJ. Iguanas and *Salmonella* Marina infection in children: a reflection of the increasing incidence of reptile-associated salmonellosis in the United States. *Pediatrics* 1997;99:399–402.
10. Mermin J, Hutwagner L, Vugia D, et al. Reptiles, amphibians, and human *Salmonella* infection: a population-based, case-control study. *Clin Infect Dis* 2004;38:S253–61.

## Announcement

---

### Epi Info Training Courses — May 2010

Emory University's Rollins School of Public Health and CDC's National Center of Public Health Informatics will cosponsor two Epi Info training courses at Emory University in May 2010. A basic level course will be held May 17–19, and an intermediate to advanced level course will be held May 20–22. These courses are designed for practitioners of epidemiology and computing who wish to develop software applications using Epi Info for Windows.

The basic level course covers MakeView, Analysis, Enter, Epi Map, and Epi Report on a beginner's level. The intermediate to advanced level covers importing/converting other data formats; creating relational databases; advanced check-coding and using Epi Info functions; advanced analysis, including linear regression, logistic regression, Kaplan Meier, Cox proportional hazards, complex sample frequencies, tables, and means; special topics on Epi Map and Epi Report; and issues related to the enrollees' own projects.

Tuition is charged for these courses. Additional information and application forms are available from Emory University's Rollins School of Public Health by mail (attention: Pia Valeriano, 1518 Clifton Rd. NE, Rm. 746, Atlanta, GA 30322); by fax (404-727-4590); online (<http://www.sph.emory.edu/epicourses>); or by e-mail ([pvaleri@emory.edu](mailto:pvaleri@emory.edu)).

## Errata: Vol. 59, No. SS-1

---

In the Surveillance Summary, "Surveillance of Health Behaviors and Conditions Among States and Selected Local Areas — Behavioral Risk Factor Surveillance System, United States, 2007," on page 43, certain confidence limits were omitted on the first page of Table 12. The correct table appears on page 198.

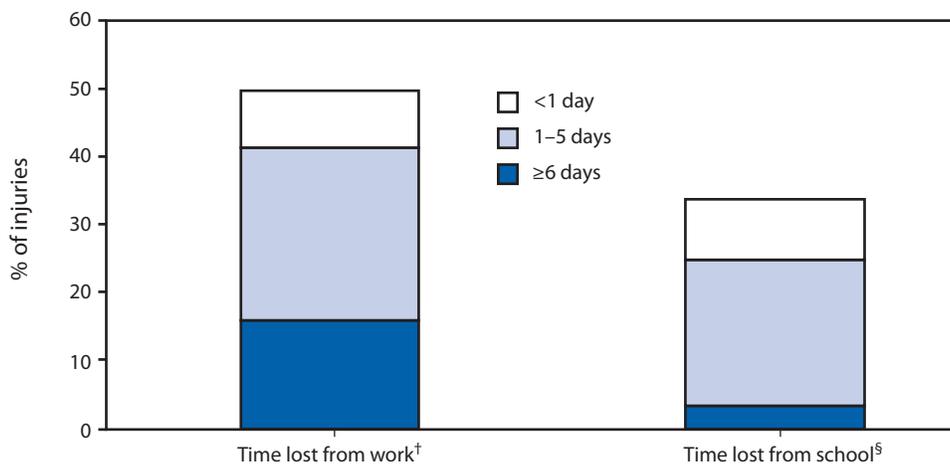
TABLE 12. Estimated prevalence of adults aged ≥65 years who had ever received a pneumococcal vaccination, by county—Behavioral Risk Factor Surveillance System (BRFSS), United States, 2007

County	Sample Size	%	SE*	95% CI†
Jefferson County, Alabama	176	65.0	4.2	(56.7–73.2)
Mobile County, Alabama	161	62.6	4.5	(53.7–71.4)
Montgomery County, Alabama	83	N/A	N/A	N/A
Tuscaloosa County, Alabama	112	N/A	N/A	N/A
Anchorage Municipality, Alaska	57	N/A	N/A	N/A
Maricopa County, Arizona	224	65.1	3.6	(58.0–72.1)
Pima County, Arizona	233	79.4	3.0	(73.5–85.2)
Pinal County, Arizona	140	N/A	N/A	N/A
Santa Cruz County, Arizona	128	N/A	N/A	N/A
Yuma County, Arizona	193	70.1	3.7	(62.8–77.3)
Benton County, Arkansas	113	65.4	4.8	(55.9–74.8)
Pulaski County, Arkansas	182	69.3	3.7	(62.0–76.5)
Washington County, Arkansas	82	N/A	N/A	N/A
Alameda County, California	58	N/A	N/A	N/A
Los Angeles County, California	165	56.1	4.7	(46.8–65.3)
Riverside County, California	114	N/A	N/A	N/A
San Bernardino County, California	66	N/A	N/A	N/A
San Diego County, California	138	66.7	4.9	(57.0–76.3)
Adams County, Colorado	163	68.4	4.1	(60.3–76.4)
Arapahoe County, Colorado	247	76.8	2.9	(71.1–82.4)
Boulder County, Colorado	156	70.5	4.1	(62.4–78.5)
Denver County, Colorado	341	74.8	2.6	(69.7–79.8)
Douglas County, Colorado	75	86.7	3.9	(79.0–94.3)
El Paso County, Colorado	278	70.7	3.0	(64.8–76.5)
Jefferson County, Colorado	305	78.8	2.6	(73.7–83.8)
Larimer County, Colorado	176	73.9	3.6	(66.8–80.9)
Weld County, Colorado	106	71.6	4.9	(61.9–81.2)
Fairfield County, Connecticut	654	63.2	2.5	(58.3–68.1)
Hartford County, Connecticut	501	65.2	2.5	(60.3–70.1)
Middlesex County, Connecticut	88	N/A	N/A	N/A
New Haven County, Connecticut	583	63.7	2.5	(58.8–68.6)
New London County, Connecticut	158	68.4	4.1	(60.3–76.4)
Tolland County, Connecticut	82	N/A	N/A	N/A
Kent County, Delaware	307	73.5	2.7	(68.2–78.7)
New Castle County, Delaware	314	68.9	3.0	(63.0–74.7)
Sussex County, Delaware	410	76.5	2.4	(71.7–81.2)
District of Columbia, District of Columbia	925	55.1	1.9	(51.3–58.8)
Alachua County, Florida	160	67.6	4.5	(58.7–76.4)
Baker County, Florida	119	N/A	N/A	N/A
Bay County, Florida	141	58.9	4.9	(49.2–68.5)
Brevard County, Florida	197	69.8	3.9	(62.1–77.4)
Broward County, Florida	150	55.0	4.5	(46.1–63.8)
Citrus County, Florida	257	66.9	3.4	(60.2–73.5)
Clay County, Florida	117	N/A	N/A	N/A
Collier County, Florida	273	71.6	3.5	(64.7–78.4)
Columbia County, Florida	157	66.8	4.7	(57.5–76.0)
DeSoto County, Florida	270	78.7	4.9	(69.0–88.3)
Duval County, Florida	443	64.0	2.6	(58.9–69.0)
Escambia County, Florida	146	64.6	4.3	(56.1–73.0)
Flagler County, Florida	189	69.0	3.9	(61.3–76.6)
Gadsden County, Florida	115	N/A	N/A	N/A
Gilchrist County, Florida	107	N/A	N/A	N/A
Hardee County, Florida	204	N/A	N/A	N/A
Hendry County, Florida	148	N/A	N/A	N/A
Hernando County, Florida	230	71.0	3.3	(64.5–77.4)
Highlands County, Florida	379	67.0	3.3	(60.5–73.4)
Hillsborough County, Florida	140	56.2	4.8	(46.7–65.6)
Jefferson County, Florida	129	67.9	4.9	(58.2–77.5)
Lake County, Florida	271	69.0	3.3	(62.5–75.4)
Lee County, Florida	199	67.5	3.8	(60.0–74.9)
Leon County, Florida	117	75.6	5.0	(65.8–85.4)
Manatee County, Florida	210	76.2	3.1	(70.1–82.2)

## QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

### Percentage of Injuries\* that Resulted in Time Lost from Work or School — National Health Interview Survey, United States, 2004–2007



\* An injury refers to physical damage to the body from an external cause resulting from a traumatic event or poisoning. Estimates are based on responses to a series of questions asked during a household interview of a sample of the civilian, noninstitutionalized U.S. population and are for nonfatal, medically attended injuries (i.e., injuries that were serious enough that a medical professional was consulted) occurring during the 5 weeks preceding the interview.

<sup>†</sup> Time lost from work among those aged ≥13 years who were employed at the time of injury.

<sup>§</sup> Time lost from school among those aged ≥5 years who were attending school at the time of injury.

During 2004–2007, an average of 15.7 million injuries were reported per year among employed persons. Half of these injuries resulted in time lost from work: 8% resulted in <1 day of time lost, 26% resulted in 1–5 days lost, and 16% resulted in ≥6 days lost. An average of 8.7 million injuries were reported per year among persons who attended school. Approximately one third of these injuries resulted in time lost from school: 9% resulted in <1 day of time lost, 22% resulted in 1–5 days lost, and 3% resulted in ≥6 days lost.

**SOURCE:** Chen LH, Warner M, Fingerhut L, Makuc D. Injury episodes and circumstances: National Health Interview Survey, 1997–2007. *Vital Health Stat* 2009;10(241). Available at [http://www.cdc.gov/nchs/data/series/sr\\_10/sr10\\_241.pdf](http://www.cdc.gov/nchs/data/series/sr_10/sr10_241.pdf).

## Notifiable Diseases and Mortality Tables

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending February 20, 2010 (7th week)\*

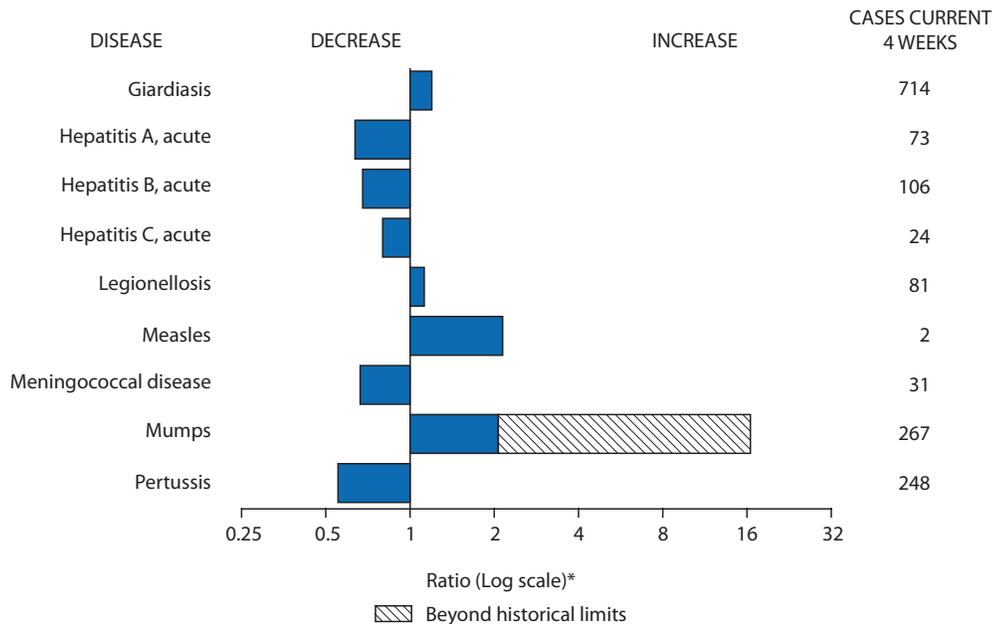
Disease	Current week	Cum 2010	5-year weekly average <sup>†</sup>	Total cases reported for previous years					States reporting cases during current week (No.)
				2009	2008	2007	2006	2005	
Anthrax	—	—	0	—	—	1	1	—	
Botulism, total	—	6	2	96	145	144	165	135	
foodborne	—	—	0	11	17	32	20	19	
infant	—	5	2	62	109	85	97	85	
other (wound and unspecified)	—	1	1	23	19	27	48	31	
Brucellosis	2	6	1	110	80	131	121	120	FL (1), CA (1)
Chancroid	—	11	1	46	25	23	33	17	
Cholera	—	—	—	8	5	7	9	8	
Cyclosporiasis <sup>§</sup>	1	7	1	127	139	93	137	543	FL (1)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases <sup>§,¶</sup> :									
California serogroup virus disease	—	—	0	47	62	55	67	80	
Eastern equine encephalitis virus disease	—	—	—	4	4	4	8	21	
Powassan virus disease	—	—	—	4	2	7	1	1	
St. Louis encephalitis virus disease	—	—	0	11	13	9	10	13	
Western equine encephalitis virus disease	—	—	—	—	—	—	—	—	
<i>Haemophilus influenzae</i> ,** invasive disease (age <5 yrs):									
serotype b	—	1	1	27	30	22	29	9	
nonserotype b	—	16	5	215	244	199	175	135	
unknown serotype	2	35	4	230	163	180	179	217	OH (1), GA (1)
Hansen disease <sup>§</sup>	—	6	2	62	80	101	66	87	
Hantavirus pulmonary syndrome <sup>§</sup>	—	1	0	13	18	32	40	26	
Hemolytic uremic syndrome, postdiarrheal <sup>§</sup>	3	11	2	228	330	292	288	221	NY (2), NE (1)
HIV infection, pediatric (age <13 yrs) <sup>††</sup>	—	—	3	—	—	—	—	380	
Influenza-associated pediatric mortality <sup>§,§§</sup>	3	38	4	360	90	77	43	45	NY (1), GA (1), TN (1)
Listeriosis <sup>¶¶</sup>	4	51	8	783	759	808	884	896	NY (2), TX (1), CA (1)
Measles <sup>¶¶¶</sup>	1	2	1	65	140	43	55	66	CA (1)
Meningococcal disease, invasive <sup>***</sup> :									
A, C, Y, and W-135	2	21	8	282	330	325	318	297	FL (1), OK (1)
serogroup B	1	9	4	148	188	167	193	156	OK (1)
other serogroup	—	—	1	23	38	35	32	27	
unknown serogroup	2	57	15	477	616	550	651	765	OH (1), FL (1)
Mumps	60	354	15	1,444	454	800	6,584	314	NY (60)
Novel influenza A virus infections <sup>†††</sup>	—	—	0	43,771	2	4	NN	NN	
Plague	—	—	0	8	3	7	17	8	
Poliomyelitis, paralytic	—	—	—	—	—	—	—	1	
Polio virus Infection, nonparalytic <sup>§</sup>	—	—	—	—	—	—	NN	NN	
Psittacosis <sup>§</sup>	—	1	0	9	8	12	21	16	
Q fever, total <sup>§,§§§</sup>	2	4	2	101	120	171	169	136	
acute	2	3	1	85	106	—	—	—	CA (2)
chronic	—	1	0	16	14	—	—	—	
Rabies, human	—	—	—	4	2	1	3	2	
Rubella <sup>¶¶¶¶</sup>	—	1	0	3	16	12	11	11	
Rubella, congenital syndrome	—	—	0	1	—	—	1	1	
SARS-CoV <sup>§,****</sup>	—	—	—	—	—	—	—	—	
Smallpox <sup>§</sup>	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome <sup>§</sup>	—	11	4	134	157	132	125	129	
Syphilis, congenital (age <1 yr)	—	10	7	302	431	430	349	329	
Tetanus	—	—	0	16	19	28	41	27	
Toxic-shock syndrome (staphylococcal) <sup>§</sup>	1	10	2	74	71	92	101	90	CA (1)
Trichinellosis	—	—	0	11	39	5	15	16	
Tularemia	1	1	0	89	123	137	95	154	CA (1)
Typhoid fever	3	41	7	344	449	434	353	324	OH (1), FL (1), CA (1)
Vancomycin-intermediate <i>Staphylococcus aureus</i> <sup>§</sup>	—	4	0	71	63	37	6	2	
Vancomycin-resistant <i>Staphylococcus aureus</i> <sup>§</sup>	—	—	—	—	—	2	1	3	
Vibriosis (noncholera <i>Vibrio</i> species infections) <sup>§</sup>	1	14	2	654	588	549	NN	NN	FL (1)
Viral Hemorrhagic Fever <sup>††††</sup>	—	—	—	NN	NN	NN	NN	NN	
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 February 20, 2010 (7th week)\*

—: No reported cases. N: Not reportable. NN: Not Nationally Notifiable Cum: Cumulative year-to-date counts.  
 \* Incidence data for reporting years 2009 and 2010 are provisional, whereas data for 2005 through 2008 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. 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.  
 \*\* 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. Since April 26, 2009, a total of 278 influenza-associated pediatric deaths associated with 2009 influenza A (H1N1) virus infection have been reported. Since August 30, 2009, a total of 265 influenza-associated pediatric deaths occurring during the 2009–10 influenza season have been reported. A total of 132 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.  
 †††† CDC discontinued reporting of individual confirmed and probable cases of 2009 pandemic influenza A (H1N1) virus infections on July 24, 2009. CDC will report the total number of 2009 pandemic influenza A (H1N1) hospitalizations and deaths weekly on the CDC H1N1 influenza website (<http://www.cdc.gov/h1n1flu>). In addition, three cases of novel influenza A virus infections, unrelated to the 2009 pandemic influenza A (H1N1) virus, were reported to CDC during 2009.  
 ††††† In 2009, 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.  
 ††††† There were no cases of Viral Hemorrhagic Fever during week one. See Table II for Dengue Hemorrhagic Fever.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals February 20, 2010, 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.

**Notifiable Disease Data Team and 122 Cities Mortality Data Team**  
 Patsy A. Hall-Baker  
 Deborah A. Adams      Rosaline Dhara  
 Willie J. Anderson      Pearl C. Sharp  
 Jose Aponte              Michael S. Wodajo  
 Lenee Blanton

MMWR Morbidity and Mortality Weekly Report

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending February 20, 2010, and February 21, 2009 (7th week)\*

Reporting area	<i>Chlamydia trachomatis</i> infection					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max		
United States	9,345	23,118	27,379	111,424	168,868	43	115	260	531	552
New England	815	759	1,204	3,723	5,232	2	6	24	33	64
Connecticut	—	222	531	81	1,259	—	0	10	10	38
Maine†	43	47	75	332	380	1	1	4	10	3
Massachusetts	671	374	767	2,687	2,773	—	2	16	—	13
New Hampshire	2	39	60	35	304	—	1	5	4	6
Rhode Island†	71	65	244	444	368	—	0	8	1	1
Vermont†	28	23	63	144	148	1	1	9	8	3
Mid. Atlantic	1,511	2,983	4,296	18,844	20,642	6	14	37	52	54
New Jersey	444	398	630	1,833	3,546	—	0	5	—	4
New York (Upstate)	562	609	2,117	3,558	3,218	2	3	16	10	17
New York City	58	1,184	1,953	7,950	8,133	—	1	5	3	13
Pennsylvania	447	816	996	5,503	5,745	4	9	19	39	20
E.N. Central	1,491	3,339	4,281	13,204	27,794	8	26	54	113	138
Illinois	—	1,019	1,219	137	8,700	—	2	8	10	15
Indiana	—	396	694	685	2,870	—	3	9	—	24
Michigan	1,217	872	1,332	7,215	6,615	4	6	11	38	31
Ohio	80	478	1,025	2,807	6,845	1	7	16	33	36
Wisconsin	194	389	480	2,360	2,764	3	8	24	32	32
W.N. Central	166	1,316	1,700	5,829	9,607	1	19	61	67	52
Iowa	2	171	252	452	1,377	—	3	14	14	9
Kansas	18	187	561	1,069	1,494	—	2	6	8	5
Minnesota	—	268	338	539	2,032	—	5	34	22	11
Missouri	146	509	638	3,064	3,426	—	3	12	10	12
Nebraska†	—	107	236	602	641	1	2	9	8	8
North Dakota	—	31	92	103	211	—	0	5	—	—
South Dakota	—	49	80	—	426	—	1	10	5	7
S. Atlantic	1,792	4,619	6,207	19,285	32,096	14	18	47	123	129
Delaware	57	85	180	508	723	—	0	2	1	—
District of Columbia	52	121	178	614	1,011	—	0	1	—	1
Florida	571	1,413	1,671	8,375	9,919	6	7	24	48	39
Georgia	—	682	1,150	40	5,058	5	5	29	62	54
Maryland†	164	435	1,008	1,860	2,551	2	0	5	2	4
North Carolina	—	666	1,265	—	5,847	—	0	8	—	20
South Carolina†	420	523	1,421	3,584	3,144	—	1	7	4	4
Virginia†	507	608	926	3,893	3,287	1	1	7	4	6
West Virginia	21	67	136	411	556	—	0	2	2	1
E.S. Central	740	1,724	2,231	8,997	12,241	2	4	10	23	14
Alabama†	8	464	629	1,846	3,337	—	1	5	4	3
Kentucky	206	222	642	1,112	1,741	—	1	4	8	3
Mississippi	—	430	840	2,304	3,242	—	0	3	4	3
Tennessee†	526	579	808	3,735	3,921	2	1	5	7	5
W.S. Central	542	3,052	5,792	16,933	22,714	3	8	37	19	21
Arkansas†	302	269	416	1,721	2,157	1	1	5	6	2
Louisiana	12	511	928	1,936	4,601	—	0	6	—	2
Oklahoma	228	195	2,714	2,657	980	—	2	9	4	3
Texas†	—	2,025	2,989	10,619	14,976	2	5	22	9	14
Mountain	741	1,376	2,096	7,453	9,947	2	10	26	49	32
Arizona	244	491	755	2,408	3,160	—	0	3	2	4
Colorado	145	322	689	2,105	2,377	—	2	10	15	7
Idaho†	—	62	184	127	481	2	1	7	13	2
Montana†	30	55	86	335	435	—	1	4	7	2
Nevada†	123	173	478	1,086	1,456	—	0	2	1	—
New Mexico†	163	175	257	664	844	—	2	8	4	13
Utah	20	113	142	484	922	—	0	4	5	1
Wyoming†	16	36	69	244	272	—	0	2	2	3
Pacific	1,547	3,491	4,787	17,156	28,595	5	13	23	52	48
Alaska	—	98	128	468	779	—	0	1	1	1
California	1,172	2,640	3,890	12,905	22,324	2	6	17	27	28
Hawaii	—	119	147	483	787	—	0	1	—	—
Oregon	153	220	468	1,367	1,331	—	3	10	15	17
Washington	222	393	525	1,933	3,374	3	1	11	9	2
American Samoa	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	49	130	331	642	1,050	N	0	0	N	N
U.S. Virgin Islands	—	8	17	19	33	—	0	0	—	—

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

U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2009 and 2010 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.

† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

MMWR Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending February 20, 2010, and February 21, 2009 (7th week)\*

Reporting area	Dengue Virus Infection									
	Dengue Fever					Dengue Hemorrhagic Fever†				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
	Med	Max				Med	Max			
United States	—	0	2	5	NN	—	0	0	—	NN
New England	—	0	1	1	NN	—	0	0	—	NN
Connecticut	—	0	0	—	NN	—	0	0	—	NN
Maine <sup>§</sup>	—	0	1	1	NN	—	0	0	—	NN
Massachusetts	—	0	0	—	NN	—	0	0	—	NN
New Hampshire	—	0	0	—	NN	—	0	0	—	NN
Rhode Island <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
Vermont <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
Mid. Atlantic	—	0	1	1	NN	—	0	0	—	NN
New Jersey	—	0	0	—	NN	—	0	0	—	NN
New York (Upstate)	—	0	0	—	NN	—	0	0	—	NN
New York City	—	0	0	—	NN	—	0	0	—	NN
Pennsylvania	—	0	1	1	NN	—	0	0	—	NN
E.N. Central	—	0	1	1	NN	—	0	0	—	NN
Illinois	—	0	0	—	NN	—	0	0	—	NN
Indiana	—	0	0	—	NN	—	0	0	—	NN
Michigan	—	0	0	—	NN	—	0	0	—	NN
Ohio	—	0	1	1	NN	—	0	0	—	NN
Wisconsin	—	0	0	—	NN	—	0	0	—	NN
W.N. Central	—	0	0	—	NN	—	0	0	—	NN
Iowa	—	0	0	—	NN	—	0	0	—	NN
Kansas	—	0	0	—	NN	—	0	0	—	NN
Minnesota	—	0	0	—	NN	—	0	0	—	NN
Missouri	—	0	0	—	NN	—	0	0	—	NN
Nebraska <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
North Dakota	—	0	0	—	NN	—	0	0	—	NN
South Dakota	—	0	0	—	NN	—	0	0	—	NN
S. Atlantic	—	0	0	—	NN	—	0	0	—	NN
Delaware	—	0	0	—	NN	—	0	0	—	NN
District of Columbia	—	0	0	—	NN	—	0	0	—	NN
Florida	—	0	0	—	NN	—	0	0	—	NN
Georgia	—	0	0	—	NN	—	0	0	—	NN
Maryland <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
North Carolina	—	0	0	—	NN	—	0	0	—	NN
South Carolina <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
Virginia <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
West Virginia	—	0	0	—	NN	—	0	0	—	NN
E.S. Central	—	0	0	—	NN	—	0	0	—	NN
Alabama <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
Kentucky	—	0	0	—	NN	—	0	0	—	NN
Mississippi	—	0	0	—	NN	—	0	0	—	NN
Tennessee <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
W.S. Central	—	0	0	—	NN	—	0	0	—	NN
Arkansas <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
Louisiana	—	0	0	—	NN	—	0	0	—	NN
Oklahoma	—	0	0	—	NN	—	0	0	—	NN
Texas <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
Mountain	—	0	0	—	NN	—	0	0	—	NN
Arizona	—	0	0	—	NN	—	0	0	—	NN
Colorado	—	0	0	—	NN	—	0	0	—	NN
Idaho <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
Montana <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
Nevada <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
New Mexico <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
Utah	—	0	0	—	NN	—	0	0	—	NN
Wyoming <sup>§</sup>	—	0	0	—	NN	—	0	0	—	NN
Pacific	—	0	2	2	NN	—	0	0	—	NN
Alaska	—	0	0	—	NN	—	0	0	—	NN
California	—	0	0	—	NN	—	0	0	—	NN
Hawaii	—	0	0	—	NN	—	0	0	—	NN
Oregon	—	0	0	—	NN	—	0	0	—	NN
Washington	—	0	2	2	NN	—	0	0	—	NN
American Samoa	—	0	0	—	NN	—	0	0	—	NN
C.N.M.I.	—	—	—	—	NN	—	—	—	—	NN
Guam	—	0	0	—	NN	—	0	0	—	NN
Puerto Rico	—	0	0	—	NN	—	0	0	—	NN
U.S. Virgin Islands	—	0	0	—	NN	—	0	0	—	NN

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

U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2009 and 2010 are provisional.

† DHF includes cases that meet criteria for dengue shock syndrome (DSS), a more severe form of DHF.

§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

MMWR Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending February 20, 2010, and February 21, 2009 (7th week)\*

Reporting area	Ehrlichiosis/Anaplasmosis†														
	<i>Ehrlichia chaffeensis</i>					<i>Anaplasma phagocytophilum</i>					Undetermined				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
	Med	Max				Med	Max				Med	Max			
United States	—	11	64	9	16	1	13	56	6	7	—	2	13	1	1
New England	—	0	4	—	1	—	1	21	3	3	—	0	2	—	—
Connecticut	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Maine§	—	0	1	—	—	—	0	3	1	—	—	0	0	—	—
Massachusetts	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	0	1	—	—	—	0	3	—	1	—	0	1	—	—
Rhode Island§	—	0	4	—	1	—	0	20	2	2	—	0	1	—	—
Vermont§	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	—	2	16	—	—	1	3	21	1	—	—	0	2	—	—
New Jersey	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
New York (Upstate)	—	1	16	—	—	1	3	20	1	—	—	0	1	—	—
New York City	—	0	3	—	—	—	0	1	—	—	—	0	2	—	—
Pennsylvania	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
E.N. Central	—	1	8	—	—	—	3	22	1	—	—	1	9	—	—
Illinois	—	0	4	—	—	—	0	1	—	—	—	0	1	—	—
Indiana	—	0	0	—	—	—	0	0	—	—	—	0	8	—	—
Michigan	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Ohio	—	0	2	—	—	—	0	1	—	—	—	0	1	—	—
Wisconsin	—	0	5	—	—	—	3	22	1	—	—	0	3	—	—
W.N. Central	—	2	24	1	1	—	0	38	—	—	—	0	5	1	—
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	2	—	—	—	0	0	—	—	—	0	0	—	—
Minnesota	—	0	3	—	1	—	0	38	—	—	—	0	5	—	—
Missouri	—	1	22	1	—	—	0	1	—	—	—	0	3	1	—
Nebraska§	—	0	2	—	—	—	0	1	—	—	—	0	0	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
S. Atlantic	—	3	24	8	12	—	0	2	1	3	—	0	2	—	—
Delaware	—	0	2	1	1	—	0	1	—	—	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Florida	—	0	1	1	1	—	0	1	—	—	—	0	0	—	—
Georgia	—	0	2	2	2	—	0	1	1	—	—	0	0	—	—
Maryland§	—	1	4	4	4	—	0	1	—	2	—	0	1	—	—
North Carolina	—	0	4	—	4	—	0	1	—	1	—	0	0	—	—
South Carolina§	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Virginia§	—	0	14	—	—	—	0	1	—	—	—	0	2	—	—
West Virginia	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
E.S. Central	—	1	11	—	2	—	0	1	—	1	—	0	6	—	1
Alabama§	—	0	3	—	—	—	0	1	—	—	—	0	0	—	—
Kentucky	—	0	2	—	—	—	0	0	—	—	—	0	1	—	—
Mississippi	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Tennessee§	—	1	11	—	2	—	0	1	—	1	—	0	6	—	1
W.S. Central	—	0	9	—	—	—	0	1	—	—	—	0	0	—	—
Arkansas§	—	0	5	—	—	—	0	0	—	—	—	0	0	—	—
Louisiana	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oklahoma	—	0	8	—	—	—	0	1	—	—	—	0	0	—	—
Texas§	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
Mountain	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Arizona	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Colorado	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Idaho§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Montana§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Nevada§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
New Mexico§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Utah	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Wyoming§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Pacific	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
California	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Washington	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	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. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2009 and 2010 are provisional.

† Cumulative total *E. ewingii* cases reported as of this week = 0.

§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

MMWR Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending February 20, 2010, and February 21, 2009 (7th week)\*

Reporting area	Giardiasis					Gonorrhea					Haemophilus influenzae, invasive† All ages, all serotypes				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	170	325	503	1,595	1,991	2,130	5,515	6,883	26,288	41,984	18	55	127	319	481
New England	6	30	64	63	165	60	94	174	432	677	—	3	12	7	26
Connecticut	—	5	15	6	32	—	46	106	48	280	—	0	9	—	5
Maine <sup>§</sup>	6	4	13	23	26	—	3	11	38	13	—	0	2	1	2
Massachusetts	—	13	36	—	65	55	35	81	284	325	—	2	8	—	15
New Hampshire	—	3	12	14	15	—	2	6	19	13	—	0	2	4	3
Rhode Island <sup>§</sup>	—	1	6	2	10	4	6	19	37	40	—	0	2	2	—
Vermont <sup>§</sup>	—	4	14	18	17	1	1	5	6	6	—	0	1	—	1
Mid. Atlantic	19	61	100	284	363	320	590	840	3,960	4,185	3	12	26	84	80
New Jersey	—	1	12	—	62	103	86	124	517	653	—	2	7	4	12
New York (Upstate)	13	25	69	123	112	90	101	345	571	645	2	3	18	25	22
New York City	3	15	26	76	111	20	214	371	1,565	1,543	1	2	11	13	9
Pennsylvania	3	16	35	85	78	107	195	275	1,307	1,344	—	4	10	42	37
E.N. Central	23	45	74	250	282	506	1,029	1,338	3,715	8,827	3	11	29	41	125
Illinois	—	10	21	22	66	—	333	382	47	2,736	—	3	9	10	27
Indiana	N	0	0	N	N	—	124	209	227	1,047	—	1	5	2	14
Michigan	3	12	24	68	71	445	256	501	2,193	2,265	—	0	3	—	3
Ohio	17	16	28	118	88	26	153	333	767	2,049	3	2	6	23	18
Wisconsin	3	9	19	42	57	35	92	146	481	730	—	3	21	6	63
W.N. Central	15	25	145	132	156	47	273	359	1,200	2,136	—	2	21	14	25
Iowa	3	5	15	33	37	1	31	46	65	227	—	0	0	—	—
Kansas	—	3	14	24	19	2	42	85	181	370	—	0	2	2	3
Minnesota	—	0	124	—	1	—	42	64	71	322	—	0	17	—	4
Missouri	7	9	27	44	60	44	123	172	754	968	—	1	6	9	10
Nebraska <sup>§</sup>	5	3	9	25	23	—	23	55	121	175	—	0	4	1	7
North Dakota	—	0	8	—	2	—	2	14	8	12	—	0	2	2	1
South Dakota	—	1	5	6	14	—	4	14	—	62	—	0	0	—	—
S. Atlantic	39	70	107	393	517	509	1,344	1,785	5,582	9,799	8	12	31	77	117
Delaware	—	0	3	4	3	14	18	37	116	144	—	0	1	1	—
District of Columbia	—	0	2	—	12	26	47	88	238	422	—	0	1	—	—
Florida	31	37	59	222	243	157	408	476	2,404	2,930	3	4	10	22	37
Georgia	—	10	67	68	160	—	239	409	19	1,775	3	3	9	33	23
Maryland <sup>§</sup>	2	5	13	30	35	40	118	237	546	713	2	1	6	5	17
North Carolina	N	0	0	N	N	—	231	377	—	1,978	—	0	17	—	11
South Carolina <sup>§</sup>	—	2	8	12	12	117	160	412	1,077	958	—	1	7	15	6
Virginia <sup>§</sup>	6	8	21	53	48	154	155	272	1,133	785	—	0	3	—	14
West Virginia	—	1	5	4	4	1	9	18	49	94	—	0	2	1	9
E.S. Central	3	8	22	27	51	186	472	649	2,526	3,737	—	3	12	22	28
Alabama <sup>§</sup>	2	4	13	12	32	3	134	186	584	1,034	—	1	4	1	5
Kentucky	N	0	0	N	N	58	58	156	314	528	—	0	5	2	3
Mississippi	N	0	0	N	N	—	134	249	668	1,037	—	0	2	3	3
Tennessee <sup>§</sup>	1	4	18	15	19	125	153	220	960	1,138	—	2	10	16	17
W.S. Central	3	7	19	27	40	138	891	1,554	4,677	6,742	—	2	8	7	16
Arkansas <sup>§</sup>	1	3	9	14	8	71	86	139	500	669	—	0	3	1	3
Louisiana	—	0	7	—	26	1	163	299	604	1,564	—	0	1	—	4
Oklahoma	2	3	10	13	6	66	63	613	699	347	—	1	5	6	9
Texas <sup>§</sup>	N	0	0	N	N	—	562	906	2,874	4,162	—	0	2	—	—
Mountain	28	26	61	161	167	84	167	239	906	1,293	3	5	13	55	44
Arizona	4	4	7	17	21	29	57	93	304	388	1	1	9	19	22
Colorado	23	9	26	88	53	7	40	99	254	428	1	1	6	14	9
Idaho <sup>§</sup>	1	3	10	22	14	—	1	8	5	18	—	0	1	2	1
Montana <sup>§</sup>	—	2	11	8	14	4	1	5	16	10	—	0	1	—	1
Nevada <sup>§</sup>	—	1	10	5	4	26	27	94	204	255	—	0	2	4	2
New Mexico <sup>§</sup>	—	1	8	3	15	17	21	36	100	132	—	1	5	9	4
Utah	—	5	13	11	36	1	5	13	21	54	—	1	2	2	5
Wyoming <sup>§</sup>	—	1	5	7	10	—	1	7	2	8	1	0	2	5	—
Pacific	34	51	132	258	250	280	537	638	3,290	4,588	1	3	8	12	20
Alaska	—	2	7	7	6	—	19	32	100	115	—	0	3	3	3
California	26	33	60	178	187	235	439	531	2,784	3,822	—	0	4	—	7
Hawaii	—	0	2	—	3	—	11	24	56	76	—	0	3	—	5
Oregon	3	7	18	46	39	8	19	44	106	179	1	1	4	7	5
Washington	5	7	79	27	15	37	41	64	244	396	—	0	4	2	—
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	1	10	1	17	3	4	24	30	26	—	0	1	1	—
U.S. Virgin Islands	—	0	0	—	—	—	2	7	5	11	N	0	0	N	N

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

U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2009 and 2010 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).

MMWR Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending February 20, 2010, and February 21, 2009 (7th week)\*

Reporting area	Hepatitis (viral, acute), by type														
	A				B				C						
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
	Med	Max				Med	Max				Med	Max			
United States	11	34	57	144	268	29	59	89	249	484	5	17	38	64	107
New England	2	2	5	8	13	—	1	3	2	8	—	1	5	1	8
Connecticut	1	0	2	7	2	—	0	3	1	3	—	0	4	1	5
Maine†	1	0	0	1	1	—	0	2	1	1	—	0	2	—	—
Massachusetts	—	1	4	—	9	—	0	2	—	3	—	0	1	—	2
New Hampshire	—	0	1	—	1	—	0	1	—	1	—	0	0	—	—
Rhode Island†	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Vermont†	—	0	1	—	—	—	0	0	—	—	—	0	0	—	1
Mid. Atlantic	1	4	10	17	36	2	5	16	19	54	1	2	7	9	13
New Jersey	—	0	5	2	12	—	1	6	—	12	—	0	1	—	1
New York (Upstate)	1	1	3	3	6	1	1	6	6	12	—	1	4	4	4
New York City	—	2	5	6	9	—	1	5	6	9	—	0	0	—	—
Pennsylvania	—	1	6	6	9	1	2	8	7	21	1	1	4	5	8
E.N. Central	—	4	19	18	47	2	6	15	32	88	—	3	14	11	28
Illinois	—	2	13	—	18	—	1	7	—	20	—	0	1	—	3
Indiana	—	0	4	—	3	—	1	5	6	15	—	0	4	—	2
Michigan	—	1	4	6	11	1	2	6	11	17	—	3	12	11	13
Ohio	—	0	4	8	9	1	1	5	15	29	—	0	5	—	9
Wisconsin	—	0	2	4	6	—	0	4	—	7	—	0	2	—	1
W.N. Central	—	2	7	5	9	2	3	10	18	24	1	0	7	4	1
Iowa	—	0	3	3	—	—	0	3	1	6	—	0	4	1	—
Kansas	—	0	2	1	1	—	0	2	—	1	—	0	1	—	—
Minnesota	—	0	4	—	1	—	0	9	—	1	—	0	6	—	—
Missouri	—	0	3	1	4	1	1	5	13	10	1	0	2	3	1
Nebraska†	—	0	3	—	3	1	0	2	4	5	—	0	1	—	—
North Dakota	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	1	—	—	—	0	1	—	1	—	0	0	—	—
S. Atlantic	5	8	14	32	59	11	15	32	85	148	3	3	12	11	19
Delaware	—	0	1	1	—	U	0	0	U	U	U	0	0	U	U
District of Columbia	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
Florida	2	3	9	18	31	9	5	13	42	45	—	1	4	6	2
Georgia	2	1	3	5	10	1	3	7	24	29	1	0	3	1	5
Maryland†	—	0	3	1	7	1	1	4	4	20	—	0	3	2	4
North Carolina	—	0	7	—	6	—	0	19	2	40	—	0	10	—	2
South Carolina†	—	1	4	5	2	—	1	4	2	1	—	0	1	—	—
Virginia†	1	1	3	2	3	—	1	7	7	10	2	0	2	2	3
West Virginia	—	0	2	—	—	—	0	19	4	3	—	0	2	—	3
E.S. Central	—	1	3	5	8	3	7	13	40	52	—	2	5	14	17
Alabama†	—	0	2	2	1	1	1	5	11	15	—	0	2	1	1
Kentucky	—	0	2	1	1	2	2	6	17	10	—	1	5	12	10
Mississippi	—	0	1	—	3	—	0	2	—	4	—	0	0	—	—
Tennessee†	—	0	2	2	3	—	2	6	12	23	—	0	3	1	6
W.S. Central	—	3	13	8	25	2	9	18	15	52	—	1	6	3	4
Arkansas†	—	0	1	—	3	—	1	4	—	3	—	0	1	—	1
Louisiana	—	0	1	—	1	—	0	4	—	9	—	0	1	—	—
Oklahoma	—	0	3	—	1	1	2	8	3	7	—	0	4	1	—
Texas†	—	3	13	8	20	1	6	12	12	33	—	0	4	2	3
Mountain	1	3	7	23	18	1	2	6	6	26	—	1	4	3	8
Arizona	—	1	5	16	8	—	0	3	—	12	—	0	0	—	—
Colorado	—	1	5	4	4	—	0	2	1	6	—	0	3	—	6
Idaho†	1	0	1	2	—	1	0	2	1	—	—	0	1	1	—
Montana†	—	0	1	—	2	—	0	0	—	—	—	0	0	—	—
Nevada†	—	0	2	1	—	—	0	3	4	3	—	0	1	—	—
New Mexico†	—	0	1	—	1	—	0	1	—	3	—	0	2	—	2
Utah	—	0	2	—	3	—	0	1	—	2	—	0	2	2	—
Wyoming†	—	0	1	—	—	—	0	2	—	—	—	0	0	—	—
Pacific	2	5	16	28	53	6	5	24	32	32	—	1	5	8	9
Alaska	—	0	1	—	1	—	0	1	1	—	—	0	2	—	—
California	1	4	15	24	46	6	4	17	27	25	—	1	4	4	6
Hawaii	—	0	2	—	1	—	0	1	—	1	—	0	0	—	—
Oregon	—	0	2	2	2	—	1	4	4	4	—	0	3	3	2
Washington	1	0	3	2	3	—	0	7	—	2	—	0	4	1	1
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	2	2	6	—	0	5	—	1	—	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. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2009 and 2010 are provisional.

† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

MMWR Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending February 20, 2010, and February 21, 2009 (7th week)\*

Reporting area	Legionellosis					Lyme disease					Malaria				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	26	56	163	211	235	44	362	1,984	616	1,047	22	21	48	134	138
New England	—	3	18	6	10	2	70	492	21	175	—	1	4	—	7
Connecticut	—	1	5	3	4	—	0	0	—	—	—	0	3	—	—
Maine†	—	0	3	—	—	2	11	76	16	10	—	0	1	—	—
Massachusetts	—	1	9	—	5	—	29	327	—	101	—	0	3	—	6
New Hampshire	—	0	2	1	—	—	19	93	—	48	—	0	1	—	—
Rhode Island†	—	0	4	1	—	—	1	28	—	—	—	0	1	—	—
Vermont†	—	0	1	1	1	—	5	42	5	16	—	0	1	—	1
Mid. Atlantic	—	16	69	43	59	26	190	1,098	318	461	2	6	13	38	25
New Jersey	—	2	13	—	8	—	37	378	17	180	—	0	1	—	—
New York (Upstate)	—	5	29	19	19	20	53	310	83	77	1	1	4	11	7
New York City	—	3	20	7	2	—	2	25	—	8	1	4	11	21	13
Pennsylvania	—	6	25	17	30	6	99	639	218	196	—	1	4	6	5
E.N. Central	4	10	38	38	51	—	23	223	43	58	—	3	11	8	19
Illinois	—	1	10	1	1	—	1	11	—	1	—	1	5	4	6
Indiana	—	1	4	2	6	—	1	7	4	2	—	0	4	1	5
Michigan	—	2	11	7	10	—	1	10	2	—	—	0	3	2	2
Ohio	4	4	17	26	28	—	1	5	2	2	—	0	6	1	6
Wisconsin	—	1	5	2	6	—	20	205	35	53	—	0	1	—	—
W.N. Central	—	2	10	4	4	1	5	125	1	13	—	1	8	8	5
Iowa	—	0	2	—	2	—	1	14	—	4	—	0	1	1	2
Kansas	—	0	1	—	2	—	0	2	—	4	—	0	1	2	1
Minnesota	—	0	9	1	—	—	0	125	—	4	—	0	8	—	1
Missouri	—	1	5	1	—	—	0	1	—	—	—	0	2	2	1
Nebraska†	—	0	2	2	—	1	0	3	1	—	—	0	2	3	—
North Dakota	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	1	—	—	—	0	0	—	1	—	0	1	—	—
S. Atlantic	8	11	22	47	55	9	62	238	199	316	6	6	16	43	54
Delaware	—	0	5	3	—	—	13	65	56	59	1	0	1	1	1
District of Columbia	—	0	2	—	1	—	0	5	—	2	1	0	2	1	2
Florida	4	4	10	22	19	2	2	11	11	6	3	2	7	22	14
Georgia	—	1	4	4	13	—	1	5	1	11	—	1	5	2	7
Maryland†	1	3	12	9	9	5	25	127	90	195	—	1	13	8	17
North Carolina	—	0	5	—	12	—	0	14	—	6	—	0	3	—	8
South Carolina†	1	0	2	1	—	—	0	3	1	2	—	0	1	—	1
Virginia†	2	1	5	7	1	2	10	65	38	31	1	1	5	9	4
West Virginia	—	0	2	1	—	—	0	33	2	4	—	0	1	—	—
E.S. Central	—	2	12	11	15	—	1	4	6	3	—	0	3	3	6
Alabama†	—	0	2	—	2	—	0	1	—	—	—	0	3	1	1
Kentucky	—	1	3	5	5	—	0	1	1	—	—	0	3	2	—
Mississippi	—	0	2	—	—	—	0	0	—	—	—	0	1	—	—
Tennessee†	—	1	9	6	8	—	1	4	5	3	—	0	2	—	5
W.S. Central	—	2	7	5	4	—	3	13	—	2	12	1	10	14	4
Arkansas†	—	0	1	—	—	—	0	0	—	—	—	0	1	1	—
Louisiana	—	0	2	—	1	—	0	0	—	—	—	0	1	—	1
Oklahoma	—	0	2	—	—	—	0	0	—	—	—	0	1	1	—
Texas†	—	1	6	5	3	—	3	13	—	2	12	1	9	12	3
Mountain	1	3	8	12	17	—	1	4	3	2	—	0	6	4	3
Arizona	1	1	4	7	6	—	0	1	—	—	—	0	2	1	—
Colorado	—	0	4	2	1	—	0	1	1	—	—	0	3	—	1
Idaho†	—	0	2	—	1	—	0	3	1	1	—	0	1	—	—
Montana†	—	0	1	1	2	—	0	1	—	—	—	0	3	—	—
Nevada†	—	0	1	2	3	—	0	1	—	—	—	0	1	1	—
New Mexico†	—	0	2	—	—	—	0	1	—	—	—	0	0	—	—
Utah	—	0	4	—	4	—	0	1	1	1	—	0	1	2	2
Wyoming†	—	0	2	—	—	—	0	1	—	—	—	0	0	—	—
Pacific	13	3	19	45	20	6	3	10	25	17	2	2	17	16	15
Alaska	—	0	1	—	—	—	0	1	—	2	—	0	1	—	—
California	13	3	19	45	15	5	2	9	18	13	2	2	12	12	12
Hawaii	—	0	0	—	1	N	0	0	N	N	—	0	1	—	—
Oregon	—	0	2	—	2	1	1	4	7	2	—	0	2	—	2
Washington	—	0	4	—	2	—	0	3	—	—	—	0	4	4	1
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	1	—	—	N	0	0	N	N	—	0	1	1	1
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.  
 U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2009 and 2010 are provisional.

† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

MMWR Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending February 20, 2010, and February 21, 2009 (7th week)\*

Reporting area	Meningococcal disease, invasive <sup>†</sup>					Pertussis					Rabies, animal				
	All groups														
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
	Med	Max				Med	Max				Med	Max			
United States	5	16	33	87	125	62	269	1,201	732	1,673	16	62	138	191	494
New England	—	0	2	—	7	—	10	24	4	101	2	6	24	22	32
Connecticut	—	0	2	—	—	—	1	4	—	5	—	2	22	5	11
Maine <sup>§</sup>	—	0	1	—	1	—	1	10	1	21	1	1	4	7	6
Massachusetts	—	0	2	—	4	—	6	16	—	61	—	0	0	—	—
New Hampshire	—	0	1	—	1	—	1	7	1	8	—	0	3	2	4
Rhode Island <sup>§</sup>	—	0	1	—	1	—	0	7	—	2	—	1	7	—	5
Vermont <sup>§</sup>	—	0	1	—	—	—	0	1	2	4	1	1	5	8	6
Mid. Atlantic	—	2	6	10	11	11	21	38	50	147	8	10	23	51	73
New Jersey	—	0	2	—	—	—	2	11	—	35	—	0	0	—	—
New York (Upstate)	—	0	3	2	—	7	4	29	17	17	8	7	22	41	30
New York City	—	0	2	4	3	—	0	11	—	4	—	0	7	10	—
Pennsylvania	—	1	4	4	8	4	10	29	33	91	—	0	16	—	43
E.N. Central	1	2	10	14	34	26	52	100	260	433	—	2	19	4	6
Illinois	—	1	4	3	8	—	11	29	19	108	—	1	9	1	1
Indiana	—	0	3	5	6	—	6	15	13	65	—	0	7	—	1
Michigan	—	0	5	2	2	2	13	40	74	96	—	1	6	1	4
Ohio	1	1	3	4	10	24	19	49	153	143	—	0	5	2	—
Wisconsin	—	0	3	—	8	—	2	12	1	21	N	0	0	N	N
W.N. Central	—	1	6	4	10	1	30	453	73	305	—	7	18	17	22
Iowa	—	0	2	1	1	—	2	10	3	30	—	0	3	—	2
Kansas	—	0	2	—	3	—	4	12	13	26	—	1	6	8	11
Minnesota	—	0	2	—	2	—	0	448	—	—	—	0	11	5	2
Missouri	—	0	3	3	4	1	16	47	43	209	—	1	5	1	1
Nebraska <sup>§</sup>	—	0	1	—	—	—	2	9	11	35	—	1	6	3	2
North Dakota	—	0	1	—	—	—	0	12	—	—	—	0	7	—	2
South Dakota	—	0	1	—	—	—	0	6	3	5	—	0	4	—	2
S. Atlantic	2	3	10	22	18	9	29	71	95	236	5	22	102	83	305
Delaware	—	0	1	1	—	—	0	2	—	4	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	1	—	2	—	0	0	—	—
Florida	2	1	4	11	10	4	7	29	26	49	4	0	5	21	156
Georgia	—	0	2	2	2	—	4	22	19	32	—	0	72	—	61
Maryland <sup>§</sup>	—	0	2	—	1	3	3	8	18	10	—	7	15	23	32
North Carolina	—	0	10	—	3	—	0	65	—	102	N	0	4	N	N
South Carolina <sup>§</sup>	—	0	1	2	1	1	4	18	20	14	—	0	0	—	—
Virginia <sup>§</sup>	—	0	2	6	1	1	3	15	11	21	—	10	26	31	51
West Virginia	—	0	2	—	—	—	0	5	1	2	1	3	6	8	5
E.S. Central	—	0	4	4	2	3	13	30	68	111	—	1	6	—	22
Alabama <sup>§</sup>	—	0	2	1	—	—	4	19	17	20	—	0	0	—	—
Kentucky	—	0	1	2	—	—	3	15	24	59	—	1	2	—	10
Mississippi	—	0	1	1	—	—	1	6	2	13	—	0	1	—	—
Tennessee <sup>§</sup>	—	0	2	—	2	3	4	9	25	19	—	0	4	—	12
W.S. Central	2	1	8	5	11	2	64	584	68	109	—	0	13	—	4
Arkansas <sup>§</sup>	—	0	2	1	2	—	6	23	1	11	—	0	10	—	2
Louisiana	—	0	3	—	5	—	1	8	—	14	—	0	0	—	—
Oklahoma	2	0	2	3	—	—	0	32	—	5	—	0	13	—	2
Texas <sup>§</sup>	—	1	6	1	4	2	55	576	67	79	—	0	1	—	—
Mountain	—	1	4	5	10	5	17	34	76	161	—	1	6	3	16
Arizona	—	0	2	2	3	—	5	12	17	18	N	0	0	N	N
Colorado	—	0	3	1	2	—	4	10	13	38	—	0	0	—	—
Idaho <sup>§</sup>	—	0	1	—	3	5	1	19	35	12	—	0	0	—	—
Montana <sup>§</sup>	—	0	2	—	—	—	1	6	4	3	—	0	4	—	4
Nevada <sup>§</sup>	—	0	1	1	1	—	0	3	—	2	—	0	1	—	—
New Mexico <sup>§</sup>	—	0	1	1	—	—	1	6	7	22	—	0	2	—	6
Utah	—	0	1	—	1	—	2	10	—	66	—	0	2	—	—
Wyoming <sup>§</sup>	—	0	2	—	—	—	0	5	—	—	—	0	4	3	6
Pacific	—	3	13	23	22	5	22	43	38	70	1	4	13	11	14
Alaska	—	0	2	—	1	—	1	4	3	13	—	0	3	4	4
California	—	2	10	15	14	1	11	22	3	11	1	4	11	6	10
Hawaii	—	0	1	—	1	—	0	3	—	6	—	0	0	—	—
Oregon	—	1	6	7	3	3	4	13	26	37	—	0	3	1	—
Washington	—	0	6	1	3	1	5	27	6	3	—	0	0	—	—
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	0	—	—	—	0	1	—	—	—	1	3	7	5
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N

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

U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2009 and 2010 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).

MMWR Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending February 20, 2010, and February 21, 2009 (7th week)\*

Reporting area	Salmonellosis					Shiga toxin-producing <i>E. coli</i> (STEC) <sup>†</sup>					Shigellosis				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	192	883	1,368	2,741	4,491	17	81	152	175	422	112	273	494	1,188	2,072
New England	2	31	91	54	560	—	3	30	2	76	—	4	27	11	62
Connecticut	—	0	26	26	406	—	0	1	1	65	—	0	7	7	40
Maine <sup>§</sup>	1	2	7	5	13	—	0	3	—	—	—	0	2	1	2
Massachusetts	—	21	51	—	101	—	2	7	—	7	—	3	27	—	17
New Hampshire	—	3	44	10	18	—	1	3	1	4	—	0	4	2	1
Rhode Island <sup>§</sup>	1	2	11	12	13	—	0	26	—	—	—	0	7	1	2
Vermont <sup>§</sup>	—	1	5	1	9	—	0	3	—	—	—	0	1	—	—
Mid. Atlantic	15	90	206	310	462	4	6	21	19	26	17	52	87	209	408
New Jersey	—	13	46	5	77	—	0	4	—	7	—	7	27	9	146
New York (Upstate)	9	23	73	87	94	4	3	10	10	8	4	4	18	20	11
New York City	1	22	46	102	128	—	1	5	4	5	1	8	15	36	78
Pennsylvania	5	29	65	116	163	—	2	8	5	6	12	27	63	144	173
E.N. Central	16	89	152	244	642	—	14	36	17	89	3	40	78	83	528
Illinois	—	25	52	44	165	—	3	8	1	38	—	10	34	17	95
Indiana	—	5	19	—	41	—	1	8	—	6	—	1	5	—	15
Michigan	3	16	34	64	114	—	3	8	7	11	—	3	11	10	54
Ohio	13	24	52	109	190	—	2	11	4	12	3	15	46	47	286
Wisconsin	—	12	30	27	132	—	4	21	5	22	—	6	26	9	78
W.N. Central	6	47	86	175	247	2	12	39	31	35	33	28	86	359	76
Iowa	2	7	16	15	44	—	2	14	—	9	—	0	5	7	26
Kansas	—	6	22	20	34	—	1	5	3	2	—	3	13	15	24
Minnesota	—	12	30	45	58	—	2	19	10	10	—	1	7	5	10
Missouri	3	12	30	68	53	2	2	10	14	9	32	18	72	330	9
Nebraska <sup>§</sup>	1	5	41	19	30	—	1	6	4	5	1	0	3	2	6
North Dakota	—	0	21	2	5	—	0	3	—	—	—	0	2	—	—
South Dakota	—	1	22	6	23	—	0	12	—	—	—	0	1	—	1
S. Atlantic	84	276	453	1,048	1,150	5	12	22	42	72	19	42	79	185	313
Delaware	—	2	9	5	2	—	0	2	—	1	—	3	10	16	3
District of Columbia	—	0	5	2	9	—	0	0	—	1	—	0	2	1	3
Florida	54	133	278	515	477	2	3	7	16	24	10	9	18	70	75
Georgia	13	45	98	199	205	1	1	4	7	7	7	12	29	66	86
Maryland <sup>§</sup>	5	14	32	56	83	—	2	5	8	10	—	6	19	7	43
North Carolina	—	17	89	120	181	—	1	11	—	19	—	4	27	6	42
South Carolina <sup>§</sup>	1	16	67	58	85	—	0	3	—	2	—	2	8	10	23
Virginia <sup>§</sup>	11	20	48	82	98	2	2	7	11	7	2	3	9	9	34
West Virginia	—	4	23	11	10	—	0	5	—	1	—	0	3	—	4
E.S. Central	8	52	113	153	275	1	4	12	8	20	3	12	46	44	126
Alabama <sup>§</sup>	—	14	39	38	86	—	1	4	5	3	—	2	10	5	38
Kentucky	5	8	18	38	50	—	1	4	—	8	1	3	25	23	14
Mississippi	—	14	45	21	58	—	0	1	1	1	—	1	4	2	5
Tennessee <sup>§</sup>	3	14	33	56	81	1	1	10	2	8	2	6	16	14	69
W.S. Central	6	98	307	130	276	1	5	21	9	13	19	48	150	132	274
Arkansas <sup>§</sup>	1	10	25	16	46	1	1	4	4	4	1	5	14	7	23
Louisiana	—	5	43	—	52	—	0	0	—	—	—	1	7	—	36
Oklahoma	4	11	30	27	29	—	0	6	1	2	8	5	19	24	19
Texas <sup>§</sup>	1	57	288	87	149	—	4	21	4	7	10	32	124	101	196
Mountain	12	52	128	239	313	1	8	27	20	55	5	18	49	66	151
Arizona	3	18	50	87	121	1	1	4	4	1	2	13	42	35	100
Colorado	7	10	33	68	63	—	2	11	3	38	3	2	6	18	17
Idaho <sup>§</sup>	2	3	10	18	23	—	1	7	6	3	—	0	2	1	—
Montana <sup>§</sup>	—	1	7	19	16	—	0	7	1	1	—	0	5	1	—
Nevada <sup>§</sup>	—	3	11	13	20	—	0	3	1	1	—	1	7	1	14
New Mexico <sup>§</sup>	—	5	28	15	26	—	1	3	3	7	—	1	8	8	19
Utah	—	5	14	14	41	—	1	11	2	3	—	0	3	2	1
Wyoming <sup>§</sup>	—	1	9	5	3	—	0	2	—	1	—	0	1	—	—
Pacific	43	123	327	388	566	3	9	66	27	36	13	22	59	99	134
Alaska	—	1	7	6	7	—	0	0	—	—	—	0	2	—	1
California	35	93	200	318	438	2	4	22	19	32	13	18	40	92	114
Hawaii	—	4	59	—	47	—	0	2	—	1	—	0	4	—	5
Oregon	1	8	19	36	47	—	1	11	4	—	—	1	4	3	6
Washington	7	11	120	28	27	1	2	42	4	3	—	2	19	4	8
American Samoa	—	0	1	1	—	—	0	0	—	—	—	0	2	—	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	6	19	28	78	—	0	0	—	—	—	0	2	—	—
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. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.  
 \* Incidence data for reporting years 2009 and 2010 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).

MMWR Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending February 20, 2010, and February 21, 2009 (7th week)\*

Reporting area	Spotted Fever Rickettsiosis (including RMSF)†									
	Confirmed					Probable				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
	Med	Max				Med	Max			
United States	—	2	9	5	5	—	19	74	25	93
New England	—	0	1	—	—	—	0	2	—	1
Connecticut	—	0	0	—	—	—	0	0	—	—
Maine <sup>§</sup>	—	0	0	—	—	—	0	2	—	1
Massachusetts	—	0	0	—	—	—	0	1	—	—
New Hampshire	—	0	0	—	—	—	0	1	—	—
Rhode Island <sup>§</sup>	—	0	0	—	—	—	0	0	—	—
Vermont <sup>§</sup>	—	0	1	—	—	—	0	0	—	—
Mid. Atlantic	—	0	3	—	—	—	1	6	—	2
New Jersey	—	0	0	—	—	—	0	0	—	—
New York (Upstate)	—	0	1	—	—	—	0	3	—	—
New York City	—	0	1	—	—	—	0	4	—	1
Pennsylvania	—	0	2	—	—	—	0	2	—	1
E.N. Central	—	0	2	—	1	—	1	7	—	2
Illinois	—	0	0	—	—	—	0	6	—	1
Indiana	—	0	2	—	—	—	0	2	—	—
Michigan	—	0	1	—	1	—	0	1	—	—
Ohio	—	0	0	—	—	—	0	4	—	1
Wisconsin	—	0	0	—	—	—	0	1	—	—
W.N. Central	—	0	3	—	—	—	3	27	2	—
Iowa	—	0	1	—	—	—	0	1	—	—
Kansas	—	0	1	—	—	—	0	0	—	—
Minnesota	—	0	1	—	—	—	0	1	—	—
Missouri	—	0	1	—	—	—	3	26	2	—
Nebraska <sup>§</sup>	—	0	2	—	—	—	0	1	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	0	—	—
S. Atlantic	—	1	9	4	3	—	6	26	16	77
Delaware	—	0	0	—	—	—	0	3	—	1
District of Columbia	—	0	0	—	—	—	0	0	—	—
Florida	—	0	1	—	—	—	0	2	—	—
Georgia	—	0	7	4	3	—	0	0	—	—
Maryland <sup>§</sup>	—	0	2	—	—	—	0	3	—	6
North Carolina	—	0	1	—	—	—	3	24	15	58
South Carolina <sup>§</sup>	—	0	1	—	—	—	0	4	1	4
Virginia <sup>§</sup>	—	0	1	—	—	—	0	5	—	7
West Virginia	—	0	0	—	—	—	0	1	—	1
E.S. Central	—	0	2	—	1	—	3	15	—	7
Alabama <sup>§</sup>	—	0	2	—	—	—	1	7	—	3
Kentucky	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	0	—	1	—	0	1	—	—
Tennessee <sup>§</sup>	—	0	2	—	—	—	2	14	—	4
W.S. Central	—	0	3	—	—	—	1	25	1	2
Arkansas <sup>§</sup>	—	0	0	—	—	—	0	14	—	1
Louisiana	—	0	0	—	—	—	0	1	—	—
Oklahoma	—	0	3	—	—	—	0	24	—	—
Texas <sup>§</sup>	—	0	1	—	—	—	0	5	1	1
Mountain	—	0	2	1	—	—	0	4	6	2
Arizona	—	0	1	1	—	—	0	4	6	—
Colorado	—	0	1	—	—	—	0	0	—	—
Idaho <sup>§</sup>	—	0	0	—	—	—	0	1	—	—
Montana <sup>§</sup>	—	0	1	—	—	—	0	1	—	—
Nevada <sup>§</sup>	—	0	0	—	—	—	0	0	—	—
New Mexico <sup>§</sup>	—	0	0	—	—	—	0	1	—	1
Utah	—	0	0	—	—	—	0	0	—	1
Wyoming <sup>§</sup>	—	0	1	—	—	—	0	1	—	—
Pacific	—	0	1	—	—	—	0	0	—	—
Alaska	—	0	0	—	—	—	0	0	—	—
California	—	0	1	—	—	—	0	0	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—
Washington	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

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

U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2009 and 2010 are provisional.

† Illnesses with similar clinical presentation that result from Spotted fever group rickettsia infections are reported as Spotted fever rickettsioses. Rocky Mountain spotted fever (RMSF) caused by *Rickettsia rickettsii*, is the most common and well-known spotted fever.

§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

MMWR Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending February 20, 2010, and February 21, 2009 (7th week)\*

Reporting area	<i>Streptococcus pneumoniae</i> , <sup>†</sup> invasive disease										Syphilis, primary and secondary				
	All ages					Age <5									
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
	Med	Max				Med	Max				Med	Max			
United States	207	55	351	1,706	555	40	43	93	262	378	81	264	326	1,026	1,883
New England	7	1	50	55	7	1	1	23	4	10	5	6	21	40	44
Connecticut	—	0	50	—	—	—	0	22	—	—	—	1	9	1	6
Maine <sup>§</sup>	2	0	4	11	2	1	0	2	2	—	—	0	2	5	1
Massachusetts	—	0	1	—	—	—	0	5	—	7	—	4	12	25	32
New Hampshire	1	0	6	23	2	—	0	2	2	2	1	0	1	2	5
Rhode Island <sup>§</sup>	—	0	4	6	—	—	0	1	—	—	2	0	5	5	—
Vermont <sup>§</sup>	4	0	3	15	3	—	0	1	—	1	2	0	0	2	—
Mid. Atlantic	11	4	23	92	20	8	5	27	39	27	40	33	50	198	244
New Jersey	—	0	3	8	—	—	0	4	6	6	3	3	13	17	30
New York (Upstate)	7	2	18	30	7	7	2	17	22	15	3	2	9	8	10
New York City	—	0	1	—	1	—	0	11	—	4	25	20	39	133	161
Pennsylvania	4	2	19	54	12	1	0	5	11	2	9	6	14	40	43
E.N. Central	34	13	63	261	108	9	7	15	43	69	—	24	46	62	177
Illinois	—	0	0	—	—	—	1	4	—	11	—	11	33	3	92
Indiana	—	4	14	48	32	—	2	4	8	9	—	2	9	7	27
Michigan	10	0	25	83	6	4	1	4	13	11	—	4	13	31	29
Ohio	13	8	18	64	70	4	2	7	13	25	—	6	12	21	20
Wisconsin	11	0	13	66	—	1	1	3	9	13	—	0	3	—	9
W.N. Central	9	3	36	97	23	2	3	13	22	18	1	5	12	14	48
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	—	5
Kansas	—	1	5	4	14	—	0	2	1	5	—	0	3	—	1
Minnesota	—	0	25	38	—	—	0	10	9	4	—	1	3	2	15
Missouri	4	1	7	24	8	2	0	5	9	7	1	3	8	12	24
Nebraska <sup>§</sup>	5	0	6	28	—	—	0	2	2	1	—	0	3	—	3
North Dakota	—	0	3	—	1	—	0	3	—	—	—	0	1	—	—
South Dakota	—	0	2	3	—	—	0	2	1	1	—	0	1	—	—
S. Atlantic	70	26	105	529	293	10	10	21	68	117	8	63	139	249	376
Delaware	—	0	2	3	3	—	0	2	—	—	—	0	3	—	6
District of Columbia	1	0	1	5	—	1	0	1	3	—	2	3	8	15	28
Florida	29	14	54	249	178	1	4	11	24	37	1	19	32	80	160
Georgia	13	8	19	84	97	6	3	8	22	40	—	14	93	3	30
Maryland <sup>§</sup>	12	0	18	74	1	2	1	7	7	14	—	6	12	19	28
North Carolina	—	0	0	—	—	—	0	0	—	—	3	9	31	77	74
South Carolina <sup>§</sup>	15	0	24	99	—	—	1	4	10	14	—	2	6	19	8
Virginia <sup>§</sup>	—	0	0	—	—	—	0	4	—	9	2	6	15	36	41
West Virginia	—	1	13	15	14	—	0	3	2	3	—	0	2	—	1
E.S. Central	13	4	46	162	58	1	2	10	18	22	12	21	37	83	159
Alabama <sup>§</sup>	—	0	0	—	—	—	0	0	—	—	1	7	18	18	59
Kentucky	—	1	5	11	17	—	0	2	1	4	1	1	13	10	10
Mississippi	—	0	4	7	2	—	0	2	2	4	—	4	12	9	20
Tennessee <sup>§</sup>	13	2	40	144	39	1	2	9	15	14	10	8	14	46	70
W.S. Central	27	1	41	175	18	5	6	30	32	50	5	48	74	169	370
Arkansas <sup>§</sup>	5	1	5	18	9	—	0	4	4	8	—	6	16	36	7
Louisiana	—	0	5	—	9	—	0	3	—	10	3	11	27	18	137
Oklahoma	1	0	5	12	—	1	1	5	12	7	2	1	5	7	13
Texas <sup>§</sup>	21	0	34	145	—	4	3	26	16	25	—	31	46	108	213
Mountain	32	2	74	305	26	4	5	12	31	57	3	8	18	35	66
Arizona	15	0	48	177	—	2	2	6	16	27	1	3	9	12	28
Colorado	16	0	20	93	—	2	1	4	10	10	—	1	5	13	18
Idaho <sup>§</sup>	1	0	1	2	—	—	0	2	1	1	—	0	1	—	1
Montana <sup>§</sup>	—	0	1	1	—	—	0	0	—	—	—	0	1	—	—
Nevada <sup>§</sup>	—	1	4	9	5	—	0	2	2	—	1	1	10	8	12
New Mexico <sup>§</sup>	—	0	6	19	—	—	0	4	1	4	1	1	5	2	5
Utah	—	1	4	1	17	—	1	6	1	15	—	0	2	—	2
Wyoming <sup>§</sup>	—	0	2	3	4	—	0	1	—	—	—	0	1	—	—
Pacific	4	0	9	30	2	—	0	2	5	8	7	43	63	176	399
Alaska	—	0	6	14	—	—	0	2	4	6	—	0	0	—	—
California	4	0	9	16	—	—	0	1	1	—	4	39	56	155	362
Hawaii	—	0	1	—	2	—	0	2	—	2	—	0	2	2	7
Oregon	—	0	0	—	—	—	0	0	—	—	—	1	5	6	4
Washington	—	0	0	—	—	—	0	0	—	—	3	2	7	13	26
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	4	3	17	32	19
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. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2009 and 2010 are provisional.

<sup>†</sup> Includes drug resistant and susceptible cases of invasive *Streptococcus pneumoniae* disease among children <5 years and among all ages. Case definition: Isolation of *S. pneumoniae* from a normally sterile body site (e.g., blood or cerebrospinal fluid).

<sup>§</sup> Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

MMWR Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending February 20, 2010, and February 21, 2009 (7th week)\*

Reporting area	Varicella (chickenpox)					West Nile virus disease <sup>†</sup>									
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Neuroinvasive					Nonneuroinvasive <sup>§</sup>				
		Med	Max			Current week	Previous 52 weeks	Cum 2010	Cum 2009	Current week	Previous 52 weeks	Cum 2010	Cum 2009		
United States	128	273	665	1,261	3,398	—	1	44	1	—	—	0	48	—	—
New England	—	15	33	64	122	—	0	0	—	—	—	0	0	—	—
Connecticut	—	8	23	18	65	—	0	0	—	—	—	0	0	—	—
Maine <sup>¶</sup>	—	0	15	30	—	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	2	—	—	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	3	10	16	36	—	0	0	—	—	—	0	0	—	—
Rhode Island <sup>¶</sup>	—	0	1	—	2	—	0	0	—	—	—	0	0	—	—
Vermont <sup>¶</sup>	—	0	4	—	19	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	14	26	55	132	306	—	0	2	—	—	—	0	1	—	—
New Jersey	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
New York (Upstate)	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
New York City	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Pennsylvania	14	26	55	132	306	—	0	0	—	—	—	0	0	—	—
E.N. Central	71	105	206	665	1,339	—	0	4	—	—	—	0	3	—	—
Illinois	4	27	73	147	315	—	0	3	—	—	—	0	0	—	—
Indiana	—	7	30	40	70	—	0	1	—	—	—	0	1	—	—
Michigan	32	35	84	221	412	—	0	1	—	—	—	0	0	—	—
Ohio	29	30	85	204	436	—	0	0	—	—	—	0	2	—	—
Wisconsin	6	8	57	53	106	—	0	1	—	—	—	0	0	—	—
W.N. Central	13	11	62	59	213	—	0	5	—	—	—	0	11	—	—
Iowa	N	0	0	N	N	—	0	0	—	—	—	0	1	—	—
Kansas	—	2	19	—	49	—	0	1	—	—	—	0	2	—	—
Minnesota	—	0	0	—	—	—	0	1	—	—	—	0	1	—	—
Missouri	13	6	51	49	139	—	0	2	—	—	—	0	1	—	—
Nebraska <sup>¶</sup>	N	0	0	N	N	—	0	2	—	—	—	0	6	—	—
North Dakota	—	0	26	8	23	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	2	2	2	—	0	3	—	—	—	0	2	—	—
S. Atlantic	30	23	109	195	338	—	0	4	—	—	—	0	1	—	—
Delaware	—	0	2	1	2	—	0	0	—	—	—	0	0	—	—
District of Columbia	—	0	3	—	4	—	0	0	—	—	—	0	0	—	—
Florida	20	14	61	129	206	—	0	1	—	—	—	0	1	—	—
Georgia	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Maryland <sup>¶</sup>	N	0	0	N	N	—	0	0	—	—	—	0	1	—	—
North Carolina	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
South Carolina <sup>¶</sup>	—	0	54	—	36	—	0	2	—	—	—	0	0	—	—
Virginia <sup>¶</sup>	—	0	5	7	27	—	0	1	—	—	—	0	0	—	—
West Virginia	10	9	32	58	63	—	0	0	—	—	—	0	0	—	—
E.S. Central	—	8	29	15	85	—	0	6	1	—	—	0	4	—	—
Alabama <sup>¶</sup>	—	8	27	15	85	—	0	0	—	—	—	0	0	—	—
Kentucky	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	2	—	—	—	0	5	1	—	—	0	4	—	—
Tennessee <sup>¶</sup>	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
W.S. Central	—	69	261	29	633	—	0	17	—	—	—	0	6	—	—
Arkansas <sup>¶</sup>	—	0	23	—	35	—	0	1	—	—	—	0	0	—	—
Louisiana	—	0	7	—	13	—	0	2	—	—	—	0	4	—	—
Oklahoma	N	0	0	N	N	—	0	2	—	—	—	0	2	—	—
Texas <sup>¶</sup>	—	68	245	29	585	—	0	14	—	—	—	0	4	—	—
Mountain	—	19	62	99	333	—	0	12	—	—	—	0	17	—	—
Arizona	—	0	0	—	—	—	0	4	—	—	—	0	2	—	—
Colorado	—	8	33	50	108	—	0	7	—	—	—	0	14	—	—
Idaho <sup>¶</sup>	N	0	0	N	N	—	0	3	—	—	—	0	5	—	—
Montana <sup>¶</sup>	—	0	10	—	56	—	0	1	—	—	—	0	1	—	—
Nevada <sup>¶</sup>	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
New Mexico <sup>¶</sup>	—	0	12	8	54	—	0	2	—	—	—	0	1	—	—
Utah	—	8	32	41	115	—	0	1	—	—	—	0	1	—	—
Wyoming <sup>¶</sup>	—	0	0	—	—	—	0	1	—	—	—	0	2	—	—
Pacific	—	1	5	3	29	—	0	12	—	—	—	0	12	—	—
Alaska	—	0	4	3	21	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	8	—	—	—	0	6	—	—
Hawaii	—	0	4	—	8	—	0	0	—	—	—	0	0	—	—
Oregon	N	0	0	N	N	—	0	1	—	—	—	0	4	—	—
Washington	N	0	0	N	N	—	0	6	—	—	—	0	3	—	—
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	7	5	26	35	50	—	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. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2009 and 2010 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).

MMWR Morbidity and Mortality Weekly Report

TABLE III. Deaths in 122 U.S. cities,\* week ending February 20, 2010 (7th week)

Reporting area	All causes, by age (years)							P&I†	Reporting area	All causes, by age (years)							P&I†
	All Ages	≥65	45-64	25-44	1-24	<1	Total			All Ages	≥65	45-64	25-44	1-24	<1	Total	
New England	582	410	133	26	4	9	55	S. Atlantic	1,221	827	281	63	31	19	76		
Boston, MA	131	80	39	8	1	3	15	Atlanta, GA	109	69	24	12	2	2	12		
Bridgeport, CT	36	27	8	1	—	—	6	Baltimore, MD	101	66	26	8	1	—	11		
Cambridge, MA	23	18	5	—	—	—	5	Charlotte, NC	105	68	27	6	2	2	12		
Fall River, MA	33	30	2	1	—	—	3	Jacksonville, FL	169	106	51	4	7	1	10		
Hartford, CT	54	37	16	1	—	—	6	Miami, FL	146	106	30	4	4	2	6		
Lowell, MA	29	25	4	—	—	—	1	Norfolk, VA	52	36	12	1	2	1	1		
Lynn, MA	7	5	1	—	1	—	—	Richmond, VA	81	48	23	5	2	3	3		
New Bedford, MA	31	26	4	1	—	—	1	Savannah, GA	86	62	19	3	1	1	7		
New Haven, CT	33	23	5	3	—	2	5	St. Petersburg, FL	59	41	12	2	2	2	2		
Providence, RI	66	47	11	4	1	3	4	Tampa, FL	199	147	32	11	5	4	7		
Somerville, MA	3	2	1	—	—	—	—	Washington, D.C.	105	72	23	6	3	1	3		
Springfield, MA	33	15	15	2	1	—	2	Wilmington, DE	9	6	2	1	—	—	2		
Waterbury, CT	31	18	10	3	—	—	2	E.S. Central	927	618	218	56	19	16	93		
Worcester, MA	72	57	12	2	—	1	5	Birmingham, AL	202	129	51	13	4	5	22		
Mid. Atlantic	1,759	1,225	397	82	25	30	102	Chattanooga, TN	91	65	21	3	—	2	10		
Albany, NY	46	34	7	4	1	—	1	Knoxville, TN	106	72	22	7	2	3	8		
Allentown, PA	30	20	10	—	—	—	1	Lexington, KY	69	46	19	3	—	1	6		
Buffalo, NY	81	49	23	4	1	4	10	Memphis, TN	199	136	39	15	7	2	29		
Camden, NJ	37	21	7	3	—	6	—	Mobile, AL	57	43	10	3	1	—	4		
Elizabeth, NJ	14	9	5	—	—	—	—	Montgomery, AL	43	30	13	—	—	—	5		
Erie, PA	56	41	10	2	2	1	4	Nashville, TN	160	97	43	12	5	3	9		
Jersey City, NJ	29	24	5	—	—	—	4	W.S. Central	1,301	875	318	61	24	23	83		
New York City, NY	948	666	212	47	12	11	43	Austin, TX	95	66	22	6	—	1	5		
Newark, NJ	22	10	9	2	1	—	5	Baton Rouge, LA	62	42	11	7	2	—	—		
Paterson, NJ	5	1	4	—	—	—	—	Corpus Christi, TX	37	22	12	1	2	—	1		
Philadelphia, PA	132	79	36	8	5	4	2	Dallas, TX	247	147	74	13	5	8	14		
Pittsburgh, PA <sup>§</sup>	36	27	6	2	1	—	3	El Paso, TX	94	76	13	4	1	—	2		
Reading, PA	48	38	9	1	—	—	4	Fort Worth, TX	U	U	U	U	U	U	U		
Rochester, NY	66	42	17	5	1	1	8	Houston, TX	181	118	48	4	3	8	12		
Schenectady, NY	23	19	3	—	—	1	5	Little Rock, AR	113	79	24	7	2	1	7		
Scranton, PA	26	20	3	2	—	1	—	New Orleans, LA	U	U	U	U	U	U	U		
Syracuse, NY	98	74	23	—	1	—	8	San Antonio, TX	290	203	65	11	8	3	25		
Trenton, NJ	21	15	5	—	—	1	—	Shreveport, LA	42	28	11	2	—	1	6		
Utica, NY	19	16	3	—	—	—	1	Tulsa, OK	140	94	38	6	1	1	11		
Yonkers, NY	22	20	—	2	—	—	3	Mountain	1,126	705	300	73	24	22	91		
E.N. Central	2,084	1,423	483	98	34	46	138	Albuquerque, NM	87	54	27	6	—	—	11		
Akron, OH	52	36	11	—	3	2	3	Boise, ID	50	34	11	3	—	2	7		
Canton, OH	48	34	11	2	1	—	3	Colorado Springs, CO	89	58	16	5	5	5	2		
Chicago, IL	211	140	54	11	2	4	4	Denver, CO	86	50	29	2	1	4	3		
Cincinnati, OH	111	67	29	5	4	6	7	Las Vegas, NV	285	161	89	25	5	5	20		
Cleveland, OH	242	189	44	2	6	1	12	Ogden, UT	31	27	3	—	1	—	3		
Columbus, OH	359	242	88	25	3	1	39	Phoenix, AZ	176	97	53	17	5	3	14		
Dayton, OH	117	86	26	1	1	3	12	Pueblo, CO	40	29	9	2	—	—	5		
Detroit, MI	129	72	33	18	1	5	1	Salt Lake City, UT	129	91	26	4	5	3	19		
Evansville, IN	35	26	7	1	1	—	1	Tucson, AZ	153	104	37	9	2	—	7		
Fort Wayne, IN	55	42	9	2	—	2	3	Pacific	1,669	1,125	391	102	30	21	158		
Gary, IN	15	4	8	1	—	2	—	Berkeley, CA	11	4	4	1	2	—	1		
Grand Rapids, MI	67	43	18	3	—	3	4	Fresno, CA	134	88	33	9	1	3	17		
Indianapolis, IN	200	130	50	11	3	6	20	Glendale, CA	31	24	7	—	—	—	11		
Lansing, MI	49	31	13	2	2	1	3	Honolulu, HI	80	51	22	4	3	—	6		
Milwaukee, WI	95	67	21	4	1	2	10	Long Beach, CA	70	49	17	2	2	—	5		
Peoria, IL	65	46	14	—	2	3	4	Los Angeles, CA	258	162	65	18	8	5	36		
Rockford, IL	59	43	9	5	2	—	6	Pasadena, CA	30	19	5	5	1	—	3		
South Bend, IN	38	26	6	2	1	3	3	Portland, OR	114	79	26	8	1	—	8		
Toledo, OH	80	56	18	3	1	2	1	Sacramento, CA	198	136	38	19	2	3	15		
Youngstown, OH	57	43	14	—	—	—	2	San Diego, CA	155	105	32	11	2	5	13		
W.N. Central	550	364	123	35	14	14	29	San Francisco, CA	112	70	36	5	—	1	11		
Des Moines, IA	63	45	12	4	2	—	2	San Jose, CA	186	138	35	8	4	1	19		
Duluth, MN	33	22	8	3	—	—	1	Santa Cruz, CA	19	17	2	—	—	—	—		
Kansas City, KS	22	15	3	4	—	—	2	Seattle, WA	122	71	39	8	1	3	7		
Kansas City, MO	109	74	24	4	5	2	10	Spokane, WA	69	53	14	1	1	—	4		
Lincoln, NE	46	34	10	—	1	1	1	Tacoma, WA	80	59	16	3	2	—	2		
Minneapolis, MN	71	43	16	4	4	4	2	Total¶	11,219	7,572	2,644	596	205	200	825		
Omaha, NE	71	52	13	3	2	1	5										
St. Louis, MO	7	2	3	1	—	—	—										
St. Paul, MN	47	27	11	5	—	4	2										
Wichita, KS	81	50	23	7	—	1	4										

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.





The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format. To receive an electronic copy each week, visit *MMWR*'s free subscription page at <http://www.cdc.gov/mmwr/mmwrsubscribe.html>. Paper copy subscriptions are available through the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone 202-512-1800.

Data presented by the Notifiable Disease Data Team and 122 Cities Mortality Data Team in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. Address all inquiries about the *MMWR* Series, including material to be considered for publication, to Editor, *MMWR* Series, Mailstop E-90, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333 or to [mmwrq@cdc.gov](mailto:mmwrq@cdc.gov).

All material in the *MMWR* Series is in the public domain and may be used and reprinted without permission; citation as to source, however, is appreciated.

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

References to non-CDC sites on the Internet are provided as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of these sites. URL addresses listed in *MMWR* were current as of the date of publication.