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Deaths Related to 2009 Pandemic Influenza A (H1N1) Among American Indian/Alaska Natives — 12 States, 2009

Indigenous populations from Australia, Canada, and New Zealand have been found to have a three to eight times higher rate of hospitalization and death associated with infection with the 2009 pandemic influenza A (H1N1) virus (*1*). In October, two U.S. states (Arizona and New Mexico) observed a disproportionate number of deaths related to H1N1 among American Indian/Alaska Natives (AI/ANs). These observations, plus incomplete reporting of race/ethnicity at the national level, led to formation of a multidisciplinary workgroup comprised of representatives from 12 state health departments, the Council of State and Territorial Epidemiologists, tribal epidemiology centers, the Indian Health Service, and CDC. The workgroup assessed the burden of H1N1 influenza deaths in the AI/AN population by compiling surveillance data from the states and comparing death rates. The results indicated that, during April 15–November 13, AI/ANs in the 12 participating states had an H1N1 mortality rate four times higher than persons in all other racial/ethnic populations combined. Reasons for this disparity in death rates are unknown and need further investigation; however, they might include a high prevalence of chronic health conditions (e.g., diabetes and asthma) among AI/ANs that predisposes them to influenza complications, poverty (e.g., poor living conditions), and delayed access to care. Efforts are needed to increase awareness among AI/ANs and their health-care providers of the potential severity of influenza and current recommendations regarding the timely use of antiviral medications. Efforts to promote the use of 2009 H1N1 influenza monovalent vaccine in AI/AN populations should be expanded.

In November 2009, all state health departments were invited to participate in the workgroup investigation by providing data on influenza-related deaths among their residents. Twelve states (Alabama, Alaska, Arizona, Michigan, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming) chose to participate, representing 50% of the AI/AN population in the United States. An H1N1 death was defined as a death in a resident of a participating state reported during April 15–November 13 with any positive result from an influenza test, including rapid enzyme immunoassay, direct or indirect influenza fluorescent antibody, real-time reverse transcription–polymerase chain reaction assay (rRT-PCR), or viral culture. Because >99% of influenza specimens tested during the study period had been found to be H1N1, all cases with a positive influenza test were presumed to be H1N1 and not seasonal influenza. Race/ethnicity and influenza risk status* of decedents were determined through review of death certificates,

* CDC defined groups at high risk for influenza complications: children aged <2 years; persons aged ≥65 years; pregnant women and women up to 2 weeks postpartum (including after pregnancy loss); persons of any age with certain chronic medical or immunosuppressive conditions (i.e., chronic pulmonary [including asthma], cardiovascular [except hypertension], renal, hepatic, hematologic [including sickle cell disease], or metabolic disorders [including diabetes]); disorders that can compromise respiratory function or the handling of respiratory secretions or that can increase the risk for aspiration (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders); immunosuppression, including that caused by medications or by human immunodeficiency virus; and persons aged <19 years who are receiving long-term aspirin therapy. Available at http://www.cdc.gov/h1n1flu/recommendations.htm.

INSIDE

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medical records, or death investigation reports. CDC-defined groups at higher risk for influenza complications were used to classify decedents as at high risk for influenza complications. Bridged-race vintage 2008 postcensal population estimates[†] were used by all states to determine population data for rate calculations.[§] Death rates by race/ethnicity were age adjusted to the 2000 U.S. standard population. Using rate ratios, AI/AN death rates were compared with death rates for all other racial/ethnic populations, including deaths in persons of unknown race.

A total of 426 H1N1 deaths were reported by the 12 states during April 15–November 13 (Table 1). Forty-two deaths (9.9%) occurred among AI/ANs,[¶] although AI/ANs make up approximately 3% of the total population in the 12 states. The overall AI/AN H1N1-related death rate was 3.7 per 100,000 population, compared with 0.9 per 100,000 for all other racial/ethnic populations combined,[**] resulting in a mortality rate ratio of 4.0. Age group–specific H1N1-related death rates were 3.5 for persons aged 0–4 years, 1.1 for persons aged 5–24 years, 4.2 for persons aged 25–64 years, and 7.2 for persons aged ≥65 years. In all age groups, the AI/AN death rate was higher than the rate for all other racial/ethnic populations combined (Table 1).

Among the AI/AN deaths related to H1N1, 81.0% of decedents had high-risk health conditions, compared with 77.6% of persons in all other racial/ethnic populations combined (Table 2). In addition, greater percentages of AI/AN decedents had asthma (31.0%) and diabetes (45.2%) than decedents in all other racial/ethnic populations combined (14.1% asthma and 24.0% diabetes).

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[†] Race bridging is a method used to make multiple-race and single-race data collection systems sufficiently comparable to permit estimation and analysis of race-specific statistics.

[§] Available at http://wonder.cdc.gov/population.html.

[¶] Alabama (one death), Alaska (two), Arizona (16), Michigan (zero), New Mexico (eight), North Dakota (zero), Oklahoma (three), Oregon (one), South Dakota (four), Utah (two), Washington (four), and Wyoming (one).

[**] Death rates per 100,000 population for the other racial/ethnic populations were 1.4 for Hispanics, 1.1 for Asian or Pacific Islanders, 0.8 for whites, and 0.7 for blacks.

TABLE 1. Comparison of the number and rate of deaths related to 2009 pandemic influenza A (H1N1) among American Indian/Alaska Natives (AI/ANs)* and persons in non-AI/AN populations, by age group — 12 states, April 15–November 13, 2009

Age group (yrs)	Total deaths	AI/AN deaths	Rate†			Rate ratio AI/AN to non-AI/AN (95% CI¶)	
			All racial/ethnic populations	AI/AN	Non-AI/AN populations§		
0–4	18	4	0.6	3.5	0.5	7.2	(2.4–21.8)
5–24	51	5	0.4	1.1	0.4	2.7	(1.1–6.8)
25–64	273	26	1.2	4.2	1.1	3.7	(2.5–5.6)
≥65	84	7	1.6	7.2	1.4	5.0	(2.3–10.8)
Total	**426**	**42****	**1.0††**	**3.7††**	**0.9††**	**4.0**	**(2.9–5.6)**

* All AI/ANs were non-Hispanic.
† Per 100,000 population.
§ Includes 19 persons with unknown race/ethnicity.
¶ Confidence interval.
** Alabama (one death), Alaska (two), Arizona (16), Michigan (zero), New Mexico (eight), North Dakota (zero), Oklahoma (three), Oregon (one), South Dakota (four), Utah (two), Washington (four), and Wyoming (one).
†† Age adjusted to the 2000 U.S. standard population.

TABLE 2. Comparison of the number and percentage of deaths related to 2009 pandemic influenza A (H1N1) among American Indian/Alaska Natives (AI/ANs)* and persons in non-AI/AN populations with diabetes, asthma, and any high-risk health condition† — 12 states, April 15–November 13, 2009

Health condition	AI/AN deaths (n = 42)		Deaths in non-AI/AN populations§ (n =384)		Prevalence ratio	
	Number	%	Number	%	AI/AN % to non-Ai/AN %	(95% CI¶)
Diabetes	19	45.2%	92	24.0%	1.9	(1.3–2.8)
Asthma	13	31.0%	54	14.1%	2.2	(1.3–3.7)
Any high-risk health condition**	34	81.0%	298	77.6%	1.0	(0.9–1.2)

* All AI/ANs were non-Hispanic.
† CDC defined groups at high risk for influenza complications: children aged <2 years; persons aged ≥65 years; pregnant women and women up to 2 weeks postpartum (including after pregnancy loss); persons of any age with certain chronic medical or immunosuppressive conditions (i.e., chronic pulmonary [including asthma], cardiovascular [except hypertension], renal, hepatic, hematologic [including sickle cell disease], or metabolic disorders [including diabetes]); disorders that can compromise respiratory function or the handling of respiratory secretions or that can increase the risk for aspiration (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders); immunosuppression, including that caused by medications or by human immunodeficiency virus; and persons aged <19 years who are receiving long-term aspirin therapy. Available at http://www.cdc.gov/h1n1flu/recommendations.htm.
§ Includes 19 persons with unknown race/ethnicity.
¶ Confidence interval.
** Including diabetes and ashtma.

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Editorial Note: The AI/AN population is culturally diverse and spread among approximately 560 federally recognized tribal communities in 34 states and multiple urban areas (*2*). Health disparities between the AI/AN population and other racial/ethnic populations are well documented (*3*). Mortality rates and trends for respiratory diseases indicate that AI/ANs are at increased risk for death resulting from pneumonia and influenza (*4,5*). Although AI/AN death rates varied among the 12 participating states in this study, the aggregate AI/AN H1N1-related death rate from 12 states was four times higher than that of all other racial/ethnic groups combined.

The higher mortality rate among AI/ANs observed in this investigation is consistent with reports of increased influenza-related morbidity and mortality among indigenous populations in other parts of the world during the current H1N1 pandemic and also is consistent with observations from previous pandemics (*1,2*). After the influenza pandemic of 1918–19, U.S. government investigators reported that influenza-related mortality rates among AI/ANs were four times higher than the rates observed among persons in general urban populations (*2*).

The factors that produce a higher influenza mortality rate among AI/ANs are unknown but might include higher prevalence of underlying chronic illness such as diabetes. The age-specific prevalence of diabetes in AI/AN adults is two to three times higher than for all U.S. adults (*6*). In addition,

What is already known on this topic?

Increased rates of influenza-related morbidity and mortality among indigenous populations in other parts of the world have been reported during the current H1N1 pandemic.

What is added by this report?

This report demonstrates that American Indian/Alaska Natives (AI/ANs) in the participating 12 states had an H1N1 mortality rate that was four times higher than the rate for all other racial/ethnic groups combined.

What are the implications for public health practice?

Health professionals and agencies should expand community education regarding the risk for influenza mortality, ensure access to and early empiric use of influenza antiviral medication, promote H1N1 vaccination, and investigate factors contributing to a higher influenza-related mortality rate among AI/ANs.

AI/ANs are twice as likely to have unmet medical needs because of cost (*7*). AI/ANs also have the highest poverty rate (30%), which is twice the national rate and three times the rate for whites among households with children aged <18 years (*8*), suggesting that delayed access to medical care and living conditions associated with poverty might contribute to their higher influenza mortality rate.

The findings in this report are subject to at least five limitations. First, AI/AN decedents often are misclassified as persons of other races on death certificates, decreasing the number of A1/AN deaths by as much as 30% in some reports (*9*). Second, the time lags in reporting of deaths and the manner in which states collect death data and classify decedents as at high risk for influenza complications might vary and affect rate ratios in an unpredictable manner. Third, race and ethnicity were unknown for 19 deaths, although for a conservative comparison, these deaths were included with the combined group of all other racial/ethnic populations. Fourth, greater incidence of influenza disease among AI/ANs might have contributed to the higher mortality rate; however, the incidence of disease among AI/ANs is unlikely to be so much greater than all other populations that it could account for a mortality rate that is four times higher. Data on race/ethnicity are not collected consistently for influenza patients. Finally, although >99% of all identified influenza strains in the United States during the investigation period were thought to be H1N1, confirmation by rRT-PCR or viral culture was not required for inclusion in this analysis.

Effective public health responses to influenza will depend on accurate and complete reporting of race/ethnicity in all state and federal mortality surveillance systems. Community education regarding the risk for influenza mortality among AI/ANs should be expanded. Increased efforts should be made to promote awareness among AI/ANs and their health-care providers about the signs and symptoms of influenza and recommendations for vaccination and the use of influenza antiviral medications early in the course of suspected influenza illness for those at increased risk for complications. Finally, factors that might contribute to increased influenza-related mortality in the AI/AN population, including the role of underlying chronic medical conditions and social determinants of health, should be topics for future investigation.

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Fatal Poisoning Among Young Children from Diethylene Glycol-Contaminated Acetaminophen — Nigeria, 2008–2009

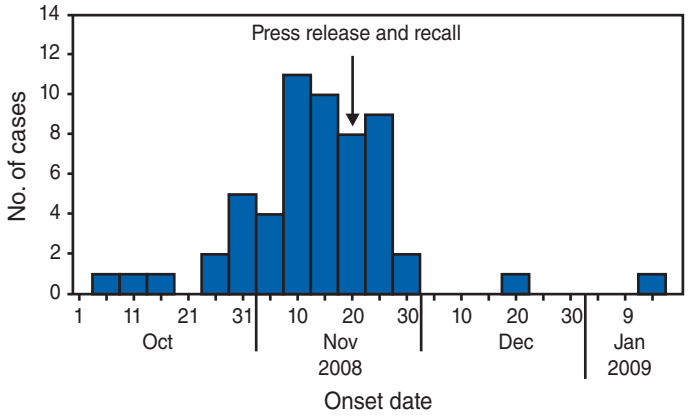
On November 18, 2008, the Nigerian Federal Ministry of Health (FMOH) received a report of 13 cases of unexplained acute renal failure among children from a hospital in Lagos state. Several of the patients had been exposed to a liquid acetaminophen-based teething medication. On November 21, officials from the Nigerian National Agency for Food and Drug Administration and Control (NAFDAC) discovered diethylene glycol (DEG) in four batches of the teething medication manufactured during August–October 2009. DEG is a toxic alcohol used in brake fluid, paint, and household cleaning products, and has been used illegally as a cheap substitute solvent in drug manufacturing. Previous DEG poisonings resulting from contamination of medications have been reported in the United States, Nigeria (1990), Panama, and other countries (*1–3*), and acute renal failure (ARF) is a known manifestation of DEG poisoning. An investigation was launched by the Nigeria Field Epidemiology and Laboratory Training Program (N-FELTP), CDC, and the Food and Drug Administration (FDA). This report summarizes the results of the investigation, which identified 57 cases of DEG poisoning among children aged ≤3 years during August 2008–January 2009, of whom 54 died. Of the 57 children with DEG poisoning, 96% had exposure to the acetaminophen-based teething medication (My Pikin). DEG contamination was identified in six bottles of the medication from patient households and four batches from the facility in which the medication was manufactured. Well-developed and strictly enforced pharmaceutical quality control measures and training programs can prevent DEG-associated large-scale poisoning events (*4,5*).

The initial 13 cases of ARF reported to FMOH occurred over a period of 2 weeks, and represented a large increase over the baseline incidence of ARF at the hospital of 1–2 cases per month. All the cases had occurred in children aged ≤3 years. Hospitals in Kaduna and Osun states reported similar clusters of ARF. Because several of the ill patients had been exposed to the acetaminophen-based teething medication before disease onset, the medication became the focus of the initial investigation. On November 21, after NAFDAC officials discovered DEG contamination in batches of the medication, a full product recall was initiated, and the manufacturing facility was shut down. FMOH requested assistance from CDC for the epidemiologic investigation, and NAFDAC asked FDA to inspect the facility that had manufactured the teething medication. CDC and FDA investigators arrived in mid-January, after the product recall had been issued, and after the outbreak had peaked (Figure).

To ascertain cases and determine the scope of the poisoning, N-FELTP and FMOH conducted active, hospital-based surveillance in the three states (Kaduna, Lagos, and Osun) to identify physician-diagnosed ARF cases of any etiology in children aged <18 years. No additional cases were detected from FMOH nationwide passive surveillance. By January 8, 2009, 111 physician-diagnosed ARF cases of any etiology had been identified, and four additional cases were identified by field investigators through hospital-based surveillance in the three states, for a total of 115 ARF cases.

To differentiate background cases of ARF (of any etiology) from ARF cases associated with DEG poisoning, investigators focused further investigations on ARF cases that were unexplained. A confirmed case of unexplained ARF was defined as acute-onset anuria or oliguria of unknown etiology lasting ≥24 hours, with onset after August 1, 2008 (the manufacturing date of the first known DEG-contaminated batch). Cases were classified solely on the clinical observation of urine output, and no laboratory confirmation of ARF was available. N-FELTP or CDC investigators used a standard questionnaire to interview 71 parents, guardians, or physicians of the 115 ARF patients; the remaining 44 families could not be contacted or located. Information collected included illness characteristics, underlying health conditions, medical evaluation, and medication exposures. During interviews, residual medications in households were collected and sent to FDA's Forensic Chemistry

FIGURE. Number of unexplained acute renal failure cases* (N = 56†), by onset date — Nigeria, October 2008–February 2009



* An unexplained case of acute renal failure was defined as acute-onset anuria or oliguria of unknown etiology lasting ≥24 hours, with onset after August 1, 2008.

† A total of 57 patients met the case definition, but the onset date was unknown for one patient.

Center for analysis by gas chromatography–mass spectrometry for DEG.

Based on 71 completed interviews, 57 (80%) patients met the confirmed case definition for unexplained ARF. Of these, 37 (65%) patients were male, and 56 (98%) were previously healthy (one patient had sickle cell disease). Median patient age was 12 months (range: 1 week–27 months). Of the 57 patients, 55 (96%) had exposure to the teething medication, and 16 (28%) had received the medication after the product recall in Nigeria was announced. A total of 54 patients (95%) died.

Of 46 (81%) patients with available information, the median time from exposure to ARF onset was 5.6 days (range: 0–24 days).* For 52 of the patients with information available, the mean interval between ARF onset and death was 6.8 days (range: 1–19 days). No biologic samples from patients could be obtained because of the high fatality rate and retrospective nature of the investigation. Among the 57 patients, 24 (42%) underwent dialysis and two (4%) received fomepizole, an antidote for ethylene glycol toxicity. No particular treatment combination appeared to improve survival.

During the interviews, 34 medication bottles from 13 different patients were collected, including seven bottles of the teething medication. DEG contamination (17%–21% DEG by weight)† was identified in six of those bottles. Laboratory analyses identified a second contaminated medication (0.5% DEG) in another acetaminophen-based syrup by a different manufacturer. One patient had exposure to both medications. The remaining 26 medications tested negative for DEG contamination. Although the exact mechanism of contamination was not identified, facility inspection revealed multiple errors common to previous DEG-associated large-scale poisoning events (*6*), including 1) use of unknown or unapproved raw material suppliers for propylene glycol, 2) lack of certificates of analysis from suppliers to certify the ingredient's identity and purity, 3) failure to perform propylene glycol identity testing, 4) failure to analyze finished product for DEG, and 5) failure to track the distribution of finished product. The product recall resulted in the confiscation of 7,616 bottles of the teething medication, representing 51% of approximately 15,000 contaminated bottles produced during August–October 2008. Investigators convened key stakeholders within FMOH and from national and international agencies in February to produce additional press releases for radio, television, and print media to support the product recall. In addition, investigators recommended further investigation of the second brand of syrup.

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Editorial Note: This report describes Nigeria's second and largest DEG-associated large-scale poisoning since 1990. The hallmark of DEG poisoning is ARF. The temporal association between ARF and reported exposure to the implicated medication among 96% of the children in this event, combined with discovery of DEG contamination in samples of the implicated medication from patients' homes, indicate that the medication was the poisoning source. A substantial proportion of the children with DEG poisoning (28%) were given the implicated teething medication after the product recall was announced, even though the recall targeted pharmacies and consumers. Product recalls will never completely eliminate the risk for harmful exposure after a product is distributed widely. Safety measures must be directed primarily at preventing contamination during manufacture and before sale of the product.

During the past 70 years, at least 12 occurrences of DEG contamination in oral and topical medications have resulted in at least 450 deaths (*1–3*). These large-scale poisonings have occurred predominantly in developing countries and have been associated with inadequate adherence to safe manufacturing practices, lack of enforcement of safe practices, or what appear to be intentionally deceptive drug manufacturing practices (*7*). In all but one of the 12 DEG mass-poisoning events (*7*), propylene glycol or glycerin was the intended diluent. Because these diluents have very different manufacturing methods and neither produces DEG as a byproduct, simple errors of cross-contamination during manufacturing cannot account for the frequent substitution of DEG in pharmaceuticals. Economically motivated substitution was suspected in several prior outbreaks, because DEG is less expensive than pharmaceutical-grade solvents.

Use of safe manufacturing practices might have prevented this event. Simple, rapid, and low-cost assays using thin-layer chromatography (TLC) have been developed to detect and

* One parent estimated the onset of oliguria or anuria occurred 1 day before exposure to the medication, which might reflect the difficulty of recalling precise use of over-the-counter medications.

† DEG is a clear, colorless, odorless, mildly sweet liquid, and an efficient solvent for water-insoluble active ingredients in medications. DEG is readily absorbed orally and transdermally. Although a safe level has not been established in humans, a safety limit of 0.1% DEG for screening substances used to manufacture pharmaceutical products (e.g., active ingredients and excipients), was set by the United States Pharmacopeia, the official standards authority for health products sold in the United States. Data from prior outbreaks suggest that the minimum toxic dose is <1 mL/kg. Although the mechanism for toxicity is still unclear, 2-hydroxyethoxyacetic acid, the metabolic product of the enzyme aldehyde dehydrogenase, is considered to be a renal toxin.

What is already known on this topic?

Large-scale poisonings resulting from medications contaminated with diethylene glycol (DEG) are a recurrent global public health problem.

What is added by this report?

During manufacturing, a liquid acetaminophen-based teething medication was contaminated with DEG, resulting in acute renal failure in 57 infants and toddlers in three Nigerian states, 54 of whom died.

What are the implications for public health practice?

Well-developed and strictly enforced pharmaceutical quality control measures and training programs can prevent DEG-associated large-scale poisoning events.

quantify DEG contamination (*8*). Direct visual inspection of TLC sheets can detect gross contamination at levels of 2% DEG in acetaminophen elixirs and 6% DEG in glycerin. The assay costs $1.00 or less per test, can be performed without laboratory facilities, and takes approximately 20 minutes. Although detection limits of 0.1% using TLC methods require more sophisticated equipment, these low-cost methods would have detected contamination and likely prevented many of the fatalities in this event.

Because DEG poisonings continue to occur, in 2000 the World Health Organization (WHO) introduced the first global training program for industry personnel on safe manufacturing practices.[§] In 2006, the International Medical Products Anti-Counterfeiting Taskforce was launched to strengthen regulatory enforcement and communication within and among countries.[¶] In 2008, a new monograph on the safe manufacturing of oral liquid preparations was added to *The International Pharmacopoeia*, in response to several DEG poisoning events involving liquid medications.[**] Globalization of pharmaceutical manufacturing and distribution has heightened the need for more uniform regulation and international cooperation. These measures address specific vulnerabilities in the production, inspection, and distribution of pharmaceuticals internationally. Countries that inadequately implement safe manufacturing standards, poorly enforce quality controls, or lack adequate training programs remain at risk for medication-associated poisonings.

[§] Additional information available at http://www.who.int/medicines/areas/quality_safety/quality_assurance/production/en/index.html.

[¶] Additional information available at http://www.who.int/impact/en.

[**] Available at http://www.who.int/medicines/publications/pharmacopoeia/overview/en/index.html.

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Outbreak of Erythema Nodosum of Unknown Cause — New Mexico, November 2007–January 2008

Erythema nodosum (EN) is a form of panniculitis, which has been associated with several infectious and noninfectious etiologies (*1,2*). EN clusters have been associated with outbreaks of *Coccidioides immitis* (*3*), *Histoplasma capsulatum* (*4*), and *Yersinia pseudotuberculosis* infections (*5*). In December 2007, a physician in a rural New Mexico community of approximately 10,000 persons reported to the New Mexico Department of Health (NMDOH) that 13 patients had been diagnosed with EN since mid-November. No EN outbreak had ever been detected in this community, and since 2006, only one diagnosis of EN had been made at the local health-care facility. NMDOH initiated an investigation to confirm the existence of the outbreak, determine the underlying etiology, and implement control measures. This report describes the results of that

investigation. Twenty-five EN cases were identified. Seventeen of 20 patients who answered a standard questionnaire reported being at a construction site with crowded and dusty conditions before EN onset. Nine of 15 chest radiographs were abnormal. Serologic test results were interpreted as negative for mycotic agents and inconclusive for *Mycoplasma pneumoniae* infection. No etiology of the outbreak could be found. During an EN outbreak, timely (acute and convalescent) specimen collection (ideally from case-patients and control subjects to determine baseline seropositivity) and sensitive tests (e.g., polymerase chain reaction [PCR]) are essential to differentiate among possible causes of EN.

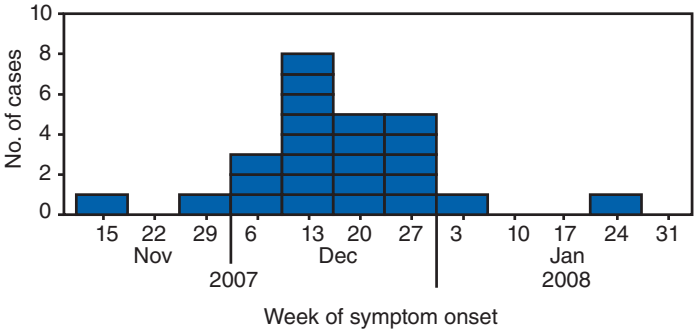
The rural community where the EN outbreak was identified is served by a single inpatient and outpatient health-care facility. Patients from this community do not have local access to dermatology or infectious disease specialty care. During mid-November to mid-December 2007, the town had been preparing for a festival, including construction of buildings where festivities would be held. Activities at the construction sites included building, digging, cooking (both inside and outside), and handling sheep. Among the initial 13 patients diagnosed with EN, nine complained of nodules on the extremities and five of cough.* Because of the clinical presentations, reported exposure to dirt, and published literature on EN outbreaks, the physicians and investigators hypothesized initially that this EN outbreak was caused by a mycotic agent (e.g., *C. immitis* or *H. capsulatum*), although these agents were not known to be endemic in this region (*C. immitis* is found to the south and west, and *H. capsulatum* to the east of the region where this EN outbreak occurred).

NMDOH initiated an investigation on December 20, 2007. A case was defined as physician-diagnosed EN in a person examined at the health care-facility during September 1, 2007–March 7, 2008. *International Classification of Disease, Ninth Revision* (ICD-9) codes were used to identify patients with EN in the facility's electronic database. Medical record reviews were conducted by physician-investigators to confirm each diagnosis. Additionally, investigators visited all patients who had illness meeting the case definition to complete a standardized in-person questionnaire about signs, symptoms, and previous activities, including time spent outdoors, occupation, dust exposure, travel, animal contacts, attendance at public events, residential proximity to any construction, and participation in construction activities. Beginning on December 20, 2007, all patients with newly diagnosed EN were recommended to undergo acute sera testing, erythrocyte sedimentation rate (ESR) testing, chest radiograph, tuberculin skin test (TST), and testing for group A streptococcus (GAS) infection (via antistreptolysin O titer [ASO] and throat swab for GAS rapid antigen detection test [RADT]). ASO titers were performed by a reference laboratory; titers >200 for adults and >150 for children were considered positive. No convalescent ASO titers were performed.

CDC tested all sera for the thermally dimorphic fungi *C. immitis*, *H. capsulatum*, *Blastomycosis dermatitidis*, and *Paracoccidioides brasiliensis* by using complement fixation and immunodiffusion. *Cryptococcus neoformans* antigen and *Sporothrix schenckii* antibody tests were performed using the latex agglutination method. Detection of antibody to *C. neoformans* was performed using the tube agglutination method. Convalescent sera were drawn 4–12 weeks after symptom onset to allow a significant (fourfold or greater) rise in antibodies against fungal antigens (if any), given the relatively long time needed for seroconversion (M. Lindsley, CDC, personal communication, 2008). CDC also tested sera for *M. pneumoniae* by using the nonquantitative immunoglobulin M (IgM)-specific Mycoplasma ImmunoCard (Meridian Bioscience, Cincinnati, Ohio). This test only provides qualitative results, so assessing changes in titer was not possible. The analysis included patients who provided at least one serum sample or completed the questionnaire.

A total of 25 patients met the case definition. All patients were from the community served by the health-care clinic, and some were from the same family or extended family. Illness onsets occurred during November 15, 2007–January 22, 2008 (Figure 1). The median age of patients was 42 years (range: 4–68 years), and 17 patients (68%) were female. Twenty-four

FIGURE 1. Number of erythema nodosum cases* (N = 25), by week of symptom onset — New Mexico, 2007–2008



* Defined as physician-diagnosed erythema nodosum in a person examined at one New Mexico health-care facility during September 1, 2007–March 7, 2008.

* The diagnosis of EN is clinical (i.e., the sudden eruption of erythematous tender nodules and plaques located predominantly on the lower extremities). Nodules are self-limited, typically resolving in 6 weeks. In doubtful cases, a punch biopsy may be performed to confirm the diagnosis (*6*).

patients (96%) had nodules on the lower extremities and 13 (52%) on the upper extremities. Ten of 19 patients had a temperature ≥100.4°F (≥38°C) (range: 98.4–102.7°F [36.9–39.3°C]), and 11 of 22 patients reported cough. Five patients had cough and a temperature ≥100.4°F (≥38°C) (Table), one patient had a diagnosis of pharyngitis. None of the 25 patients were hospitalized.

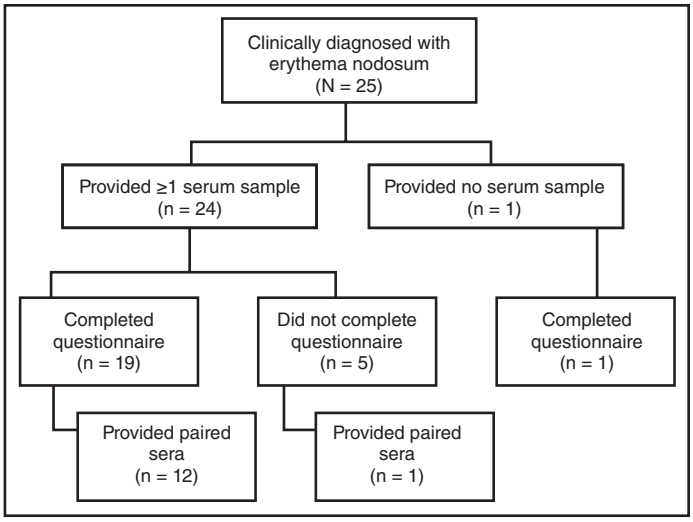
Twenty patients completed the questionnaire (Figure 2). After nodules, the most commonly self-reported symptoms were joint pain and fatigue (80%), muscle pain (70%), fever (65%), and cough (60%) (Table). Five patients (20%) reported one or more comorbid conditions, including lung disease and latent tuberculosis (one patient), kidney disease (one), and diabetes (four). Seventeen of 20 (85%) patients participated in the construction of one building to be used during the festival.

TABLE. Signs and symptoms, chest radiograph results, and laboratory results for patients with erythema nodosum* (N = 25) — New Mexico, 2007–2008

Characteristic (patients)	No.	(%)
Signs and symptoms (on examination)		
Nodules (N = 25)	25	(100)
Cough (n = 22)	11	(50)
Temperature ≥100.4ºF (≥38.0ºC) (n = 19)	10	(53)
Cough and temperature ≥100.4ºF (≥38.0ºC) (n = 19)	5	(26)
Self-reported symptoms (on questionnaire) (n = 20)		
Joint pain	16	(80)
Fatigue	16	(80)
Muscle pain	14	(70)
Fever	13	(65)
Cough	12	(60)
Headache	10	(50)
Runny nose	8	(40)
Shortness of breath	7	(35)
Chest pain	7	(35)
Sore throat	6	(30)
Chest radiograph (n = 15)		
Nodular infiltrates	8	(53)
Consolidation	6	(40)
Unilateral findings	3	(20)
Bilateral findings	6	(40)
Normal finding	6	(40)
Tuberculin skin test (n = 12)	0	—
Positive rapid antigen diagnostic test for group A streptococcus (n = 14)	2	(14)
Positive acute antistreptolysin O titers (n = 18)	6	(33)
Positive fungal complement fixation antibody tests (paired acute and convalescent sera) (n = 12)		
Coccidioides immitis	0	—
Histoplasma capsulatum mycelial	0	—
H. capsulatum yeast	0	—
Paracoccidioides brasiliensis	0	—
Blastomycosis dermatitidis	0	—
Positive fungal serum antibody (paired sera) (n = 9)		
Cryptococcus neoformans	0	—
Sporothrix schenckii	0	—
Positive fungal serum antigen (acute serum) (n = 9)		
C. neoformans	0	—
Positive immunoglobulin M *Mycoplasma pneumoniae* antibody (n = 22)	11	(50)

* Defined as physician-diagnosed erythema nodosum in a person examined at one New Mexico health-care facility during September 1, 2007–March 7, 2008.

FIGURE 2. Number of patients with erythema nodosum* (N = 25) who provided sera (single or paired) and/or completed a standardized questionnaire — New Mexico, 2007–2008



* Defined as physician-diagnosed erythema nodosum in a person examined at one New Mexico health-care facility during September 1, 2007–March 7, 2008.

A total of 15 patients had a chest radiograph. Nine radiographs were abnormal; three showed unilateral findings and six bilateral findings (Table). Five of the nine radiographs were interpreted as suggestive for pneumonia. All four ESR tests performed were elevated, and all 12 TST results were negative. Of 20 patients tested for GAS, 12 were tested by RADT and acute ASO titers, two by RADT only, and six by acute ASO titers only. Two patients of 14 had a positive RADT, and six of 18 patients had positive acute ASO titers (Table). The patient diagnosed with pharyngitis had positive GAS results.

Twenty-four patients provided at least one serum sample; of these, 13 provided paired sera (Figure 1). Twelve paired sera were tested for antibodies to possible fungal pathogens (Table). Although certain sera displayed elevated titers to the thermally dimorphic fungi, no significant (fourfold or greater) increase in antibody titer was observed when comparing complement fixation titers for *C. immitis*, *H. capsulatum*, *P. brasiliensis*, and *B. dermatitidis* (Table). Subsequent testing of acute sera for cryptococcal antigen and paired sera from 12 patients for *C. neoformans* and *S. schenckii* antibody was uniformly negative. Fifty percent (11 of 22) of patients tested for IgM against *M. pneumoniae* had at least one positive sample (Table). No

patients received a diagnosis of *M. pneumoniae* infection, but eight patients had clinical or radiologic signs compatible with *M. pneumoniae* infection (temperature ≥100.4°F [≥38.0°C] and cough, or clinical or radiologic diagnosis of pneumonia) (*7*). Of these eight patients, only four had a positive *M. pneumoniae* serology.

The absence of disease severity did not justify collection of more invasive specimens (e.g., via bronchoalveolar lavage or lung biopsy). No nodule biopsies were performed. Most patients received nonsteroidal anti-inflammatory drugs to treat symptoms and pain associated with EN. Six patients with respiratory signs, including three with diagnosis of pneumonia and four with positive RADT results received antibiotics.

Patients with EN were encouraged to be evaluated further at the local health-care facility to rule out any serious underlying conditions. In the absence of an identified etiology, specific recommendations for control measures could not be provided. Nonetheless, close follow-up for patients with pulmonary signs and abnormal chest radiographs was recommended. EN signs and symptoms resolved in all patients. No long-term complications among patients with EN have been reported. Construction activities were suspended at the site during the investigative period.

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Editorial Note: This investigation confirmed an EN outbreak in a rural community in New Mexico during the winter of 2007–2008. Despite extensive assessment for known etiologies and associated illnesses, no etiology for the outbreak could be found. Serology for mycotic pathogens did not support the initial hypothesis that the outbreak was caused by a mycotic agent. Most patients were exposed to dust, similar to previous outbreaks involving *C. immitis* (*3*) and *H. capsulatum* (*8*). However, these agents are not known to be endemic in the region where this outbreak occurred, and all *C. immitis* and *H. capsulatum* serologic results were negative. Other reported causes of EN were considered systematically, including those not previously known to be associated with clusters and those not associated with dust exposure (*1*). Investigators hypothesized that *M. pneumoniae* might be the etiologic agent because of respiratory signs and symptoms among patients and similarity to previous descriptions of community outbreaks of *M. pneumoniae* infection (*9*). Eleven (50%) cases had positive serology for *M. pneumoniae*. However, the general population can have a high positive serologic baseline for *M. pneumoniae* (*10*), and commercially available serologic tests have poor specificity (*7*). Also, diagnoses of *M. pneumoniae* infection in the community did not increase during the outbreak period, and of eight patients with a clinical presentation compatible with *M. pneumoniae* infection, only four had a positive serology. For these reasons, investigators concluded that *M. pneumoniae* likely was not the cause of this outbreak.

The estimated national EN incidence is one to five cases per 100,000 population annually (*6*). When associated with GAS infection, upper respiratory symptoms can precede EN by approximately 2–3 weeks. When associated with *C. immitis* infection, EN is preceded by upper respiratory symptoms, and its onset tends to occur before IgM antibody serology becomes positive (*6*). In this investigation, the negative TST results almost certainly ruled out *M. tuberculosis* infection. Likewise, GAS likely was not the etiologic agent. Only one patient with EN was diagnosed with acute pharyngitis, and the majority of tests for GAS were negative. Other known causes of EN outbreaks, such as *Y. pseudotuberculosis* infection, were unlikely (*5*).

This is the first reported EN cluster with unknown cause. Carrots contaminated with *Y. pseudotuberculosis* were the cause of a point-source outbreak of gastrointestinal illness and EN among school children (*5*). In a large outbreak of *H. capsulatum* in Indianapolis, 4.1% of patients initially had EN, with the majority of them having respiratory signs (*4*).

These findings are subject to at least three limitations. First, the size of the outbreak likely was larger than reported because only patients receiving EN diagnosis at the clinic were included.

What is already known on this topic?

Clusters of *erythema nodosum* (EN), a form of panniculitis, have been associated with outbreaks of *Coccidioides immitis*, *Histoplasma capsulatum*, and *Yersinia pseudotuberculosis* infections.

What is added by this report?

Investigation of an outbreak of 25 cases of EN in a rural community in New Mexico did not identify an etiology despite an extensive search for known causative agents.

What are the implications for public health practice?

During an EN outbreak, timely specimen collection and sensitive tests (e.g., polymerase chain reaction) are essential to differentiate among possible causes of EN.

Second, PCR assays for *M. pneumonia*, which are particularly sensitive during the 21 days after symptom onset (*9*), were not used in combination with serologic test because *M. pneumoniae* infection was not considered in the differential diagnosis when patients were acutely ill. Finally, an analytic investigation (e.g., case-control study), which might have helped identify the etiology of the cluster and determine baseline seropositivity levels in controls, could not be conducted.

This report highlights the difficulties of defining an EN outbreak etiology when multiple possible infectious causes are possible. If a similar EN outbreak occurred in a community, appropriate (nasopharyngeal and/or oropharyngeal) and timely specimen collection for PCR assays and serologic tests (acute and convalescent) should be used to confirm the cause of the outbreak.

Acknowledgments

This report is based, in part, on contributions by the public health nurses, laboratory personnel, and other health-care workers involved in this investigation.

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Safety of Influenza A (H1N1) 2009 Monovalent Vaccines — United States, October 1–November 24, 2009

On December 4, this report was posted as an MMWR Early Release *on the* MMWR *website* (http://www.cdc.gov/mmwr).

The Food and Drug Administration (FDA) licensed the first 2009 influenza A (H1N1) monovalent vaccines ("H1N1 vaccines") on September 15, 2009 (*1*). The H1N1 vaccines are available as a live, attenuated monovalent vaccine (LAMV) for intranasal administration and as monovalent, inactivated, split-virus or subunit vaccines for injection (MIV). The licensure and manufacturing processes for the monovalent H1N1 vaccines were the same as those used for seasonal trivalent inactivated (TIV) or trivalent live, attenuated influenza vaccine (LAIV); none of these vaccines contains an adjuvant (*1*). Vaccine safety monitoring is an important component of all vaccination programs. To assess the safety profile of H1N1 vaccines in the United States, CDC reviewed vaccine safety results for the H1N1 vaccines from 3,783 reports received through the U.S. Vaccine Adverse Event Reporting System (VAERS) and electronic data from 438,376 persons vaccinated in managed-care organizations in the Vaccine Safety Datalink (VSD), a large, population-based database with administrative and diagnostic data, in the first 2 months of reporting (as of November 24). VAERS data indicated 82 adverse event reports per 1 million H1N1 vaccine doses distributed, compared with 47 reports per 1 million seasonal influenza vaccine doses distributed. However, no substantial differences between H1N1 and seasonal influenza vaccines were noted in the proportion or types of serious adverse events reported. No increase in any adverse events under surveillance has been seen in VSD data. Many agencies are using multiple systems to monitor H1N1 vaccine safety (*2*). Health-care providers and the public are encouraged to report adverse health events that occur after vaccination.

Reports to VAERS

Health-care providers and manufacturers are required to report to VAERS certain adverse events in vaccinees brought to their attention after vaccination with licensed U.S. vaccines;*

* Food and Drug Administration. 21 CFR Part 600.80. Postmarketing reporting of adverse experiences. Federal Register 1997;62:52252–3. National Childhood Vaccine Injury Act of 1986 (42 USC 300aa-25).

however, health-care providers and members of the public also may report other adverse events voluntarily. VAERS enables early detection of potential new, rare, or unusual patterns of adverse events, which then can be investigated using other methods and systems to determine whether an actual association with vaccination exists (*3*). With the initiation of the federal H1N1 vaccination program, VAERS was enhanced by providing VAERS contact information on influenza vaccination record cards, advertising in medical journals, utilizing state vaccine safety coordinators, and increasing the number of staff members who code reports and obtain and review medical records; these changes were made to encourage VAERS reporting and to increase the capacity to analyze additional reports to rapidly identify any safety signals.

CDC and FDA staff members searched the VAERS database to identify all U.S. reports of adverse events after vaccination with H1N1 vaccines and 2009–10 seasonal influenza vaccines during July 1–November 24. The first doses of H1N1 LAMV became available to the public in the United States on October 5, and H1N1 MIV became available the following week. VAERS reports were coded as fatal or nonfatal serious adverse events (defined by federal regulation as those resulting in death, life-threatening illness, hospitalization, prolongation of hospitalization, persistent or significant disability, or congenital anomaly) or as nonserious,[†] and reporting rates per 1 million doses distributed as of November 20 were calculated.[§]

VAERS reports coded as serious adverse events are reviewed by medical officers and assigned to predetermined broad diagnostic categories. To verify the reported event, medical records are requested and reviewed for all serious adverse event reports and for any reports (both serious and nonserious) that describe patients with possible Guillain-Barré syndrome or anaphylaxis. Cause of death is determined as stated in medical or autopsy records. Reports to VAERS indicate only that health events occurred after vaccination; causality generally cannot be determined solely by reports to VAERS. Excluded were 62 reports with insufficient information.

Through November 24, VAERS received 3,783 reports of adverse events after receipt of H1N1 vaccine, of which 204 were categorized as serious, and 4,672 reports after receipt of seasonal influenza vaccines, of which 283 were serious. During October 5–November 20, a total of 46.2 million doses of H1N1 vaccines (11.3 million LAMV and 34.9 million MIV doses) and 98.9 million doses of seasonal influenza vaccines were distributed to U.S states and territories. The overall VAERS adverse event reporting rates were 82 per 1 million H1N1 vaccine doses distributed and 47 per 1 million seasonal influenza vaccine doses distributed. The serious adverse event reporting rates were 4.4 and 2.9 serious adverse events per 1 million doses distributed for H1N1 vaccines and seasonal influenza vaccines, respectively. However, the percentage of serious adverse events among all adverse events reported after receipt of seasonal influenza vaccines was slightly higher (6.1%), compared with the percentage of serious adverse events after receipt of H1N1 vaccines (5.4%), and this finding was consistent for inactivated (5.8% versus 5.5%) and live attenuated (7.3% versus 4.7%) vaccines (Table 1).

VAERS received 13 reports of deaths occurring after receipt of H1N1 vaccine; three deaths occurred after receipt of LAMV and 10 after receipt of MIV (Table 2). In nine of these deaths, significant underlying illness (including illness that might be indication for vaccination) was present; one death resulted from a motor vehicle crash, and the remaining three deaths await review of final autopsy results or death certificates by CDC.

As of November 24, VAERS had received 10 reports of Guillain-Barré syndrome, and two additional reports of possible Guillain-Barré syndrome were identified by medical officers reviewing other reports to VAERS describing neurologic events. After chart review, four of these 12 reports (all after receipt of MIV) met Brighton Collaboration criteria[¶] for Guillain-Barré syndrome, four did not meet the criteria, and four are under review. VAERS also received 11 reports of anaphylaxis, and an additional eight reports of possible anaphylaxis were identified by medical officers reviewing reports to VAERS of serious allergic events. Of these 19 cases, 13 met Brighton Collaboration criteria, five had an anaphylaxis diagnosis on medical record review, and one has not been confirmed. Three of the Guillain-Barré syndrome cases and 15 of the anaphylaxis cases were coded as serious adverse events, in accordance with federal regulation.

The remaining 173 nonfatal serious adverse events after vaccination with H1N1 vaccines are under chart review. These reports fall into the following diagnostic categories: neurologic or muscular condition other than Guillain-Barré syndrome (49 [28%]); pneumonia or influenza-like illness (27 [16%]); other noninfectious conditions, including multiple medical symptoms (19 [11%]); respiratory or ear, nose, and throat condition (17 [10%]); allergic conditions other than anaphylaxis (16 [9%]); pregnancy complications** (15 [9%]); other infectious symptoms (10 [6%]); gastrointestinal (eight [5%]);

[†] Nonserious events are defined as all others not categorized as serious adverse events.

[§] Because not all distributed doses of vaccine are administered, the reporting rate per million doses distributed will underestimate the true reporting rate; however, use of this standard denominator enables comparisons with rates per million doses distributed for other vaccines. National data on numbers of doses administered are not available, and survey-based coverage estimates are available only with a time delay.

[¶] Additional information available at http://www.brightoncollaboration.org/internet/en/index.html. Accessed November 27, 2009.

TABLE 1. Adverse events reported after receipt of influenza A (H1N1) 2009 monovalent vaccines and seasonal influenza vaccines — Vaccine Adverse Event Reporting System (VAERS), United States, July 1– November 24, 2009

Influenza vaccine received	All reports of adverse events*	Serious adverse events†						Nonserious events†	
		Total		Fatal		Nonfatal			
		No.	(%)	No.	(%)	No.	(%)	No.	(%)
H1N1 total	**3,783**	**204**	**(5.4)**	**13**	**(0.3)**	**191**	**(5.0)**	**3,579**	**(94.6)**
Live, attenuated monovalent vaccine	1,115	52	(4.7)	3	(0.3)	49	(4.4)	1,063	(95.3)
Monovalent inactivated, split-virus or subunit	2,439	135	(5.5)	9	(0.4)	126	(5.2)	2,304	(94.5)
Unknown	229	17	(7.4)	1	(0.4)	16	(7.0)	212	(92.6)
Seasonal total	**4,672**	**283**	**(6.1)**	**16**	**(0.3)**	**267**	**(5.7)**	**4,389**	**(93.9)**
Live, attenuated influenza vaccine	480	35	(7.3)	0	—	35	(7.3)	445	(92.7)
Trivalent inactivated	4,028	232	(5.8)	15	(0.4)	217	(5.4)	3,796	(94.2)
Unknown	164	16	(9.8)	1	(0.6)	15	(9.1)	148	(90.2)

* An adverse event reported to VAERS might occur by chance after vaccination or might be related causally to vaccine; VAERS generally does not determine whether a vaccine caused an adverse event. Excluding 62 reported with insufficient information, of which two were serious adverse events: one allergic and one local reaction (i.e., cellulitis at the injection site).

† Serious adverse events are defined as those resulting in death, life-threatening illness, hospitalization, prolongation of hospitalization, persistent or significant disability, or congenital anomaly. All other events are categorized as nonserious. Food and Drug Administration. 21 CFR Part 600.80. Postmarketing reporting of adverse experiences. Federal Register 1997;62:52252–3.

cardiovascular (six [3%]); and psychiatric (six [3%]). Each category includes a variety of diagnoses; no patterns were identified.

VSD Data

VSD is a collaboration between CDC and eight managed-care organizations with a total of 9.5 million members, which utilizes administrative data and electronic medical records to collect information on vaccinations and health-care encounters to monitor vaccine safety. VSD is monitoring H1N1 vaccine safety using historical and other appropriate comparison groups, with weekly data analyses (*4*). As of November 21, 438,376 doses of H1N1 vaccines (323,345 MIV and 115,031 LAMV) had been administered to patients under VSD surveillance. During October 1–November 21, no cases of Guillain-Barré syndrome and one case of anaphylaxis were observed among vaccinated persons in VSD. In addition, VSD has detected no increase in rates for other monitored conditions: demyelinating disease, peripheral nervous system disease, seizure, encephalomyelitis, Bell's palsy, other cranial nerve disorders, ataxia, allergic reactions, and myocarditis. VSD will continue H1N1 vaccine safety monitoring throughout the vaccination campaign.

Reported by: *State and local health departments. K Broder, MD, C Vellozzi, MD, CDC Influenza Vaccine Safety Response Team, National Center for Preparedness, Detection, and Control of Infectious Diseases; C Weinbaum, MD, Emergency Operations Center Vaccine Task Force; Y Zheteyeva, MD, P Tosh, MD, A Rao, MD, S Hocevar, MD, D Esposito, MD, EIS officers, CDC.*

Editorial Note: Seasonal influenza vaccines consistently have had excellent safety profiles, as documented in recent multiyear studies (*5*). However, in 1976, a vaccine against a swine-origin influenza virus was associated with a small, but statistically significant, increased risk for Guillain-Barré syndrome among adult vaccinees in the 8 weeks after vaccination (attributable risk: 1 per 100,000 vaccinees). The reasons for this association remain unknown. Vaccine production has changed since 1976, with increased use of vaccines which are treated with solvents to produce split-virus vaccines, or with detergents to produce subunit vaccines, resulting in fewer adverse reactions. However, the historical association with the swine-origin influenza virus of 1976, high public expectations for the H1N1 vaccine program, and the federal commitment to ensure vaccine safety all have contributed to efforts to enhance vaccine safety monitoring systems for H1N1 vaccines.

In clinical trials of the four H1N1 vaccine products licensed in the United States in September 2009, most adverse events were mild and similar to those described after receipt of seasonal influenza vaccines (Sanofi Pasteur, Inc.; Novartis Vaccines and Diagnostics, Inc; CSL Limited; and MedImmune LLC; unpublished data, 2009) (*5,6*). However, these clinical trials were limited in size and not designed to detect rare adverse events after vaccination. Moreover, they generally included only healthy volunteers. Additional vaccine trials of the H1N1 vaccines are being conducted by the National Institute of Allergy and Infectious Diseases (NIAID) in approximately 4,000 persons aged 6 months to >65 years, including approximately 200 pregnant women.†† To date, no serious adverse events associated with receipt of these vaccines have been identified by independent safety monitoring committees (C. Heilman, personal communication, NIAID, 2009).

** Stillbirth, spontaneous abortion, or preterm delivery.

†† Additional information available at http://clinicaltrials.gov/ct2/search. Accessed November 27, 2009.

TABLE 2. Patient age, sex, and clinical characteristics regarding the 13 reported deaths after receipt of influenza A (H1N1) 2009 monovalent vaccines — Vaccine Adverse Event Reporting System, United States, 2009*

Age (yrs)	Sex	H1N1 vaccine type	Vaccination to onset (days)	Medical history	Preliminary diagnosis/ Autopsy results
1	Male	MIV†	1	Febrile seizures (one after measles, mumps, rubella vaccination)	Sudden death, no evidence of trauma
2	Female	MIV	0	Encephalopathy, central apnea, traumatic brain damage, seizures	Sudden cardiopulmonary arrest
9	Female	LAMV§	6	Trisomy 21, leukemia (in remission), cardiac disease (neutropenia on vaccination day)	Pneumococcal pneumonia/H1N1 influenza
18	Male	LAMV	0	No significant history, dental care for gingivitis 2 weeks before H1N1 vaccination; enlarged heart on chest radiograph	Massive aspiration/ Sudden cardiopulmonary arrest
19	Female	MIV	9	Rett syndrome, severe muscle wasting/physical disability	Bilateral pneumonia, respiratory failure
35	Female	LAMV	3	Hereditary spherocytosis, splenectomy	Pneumoccocal sepsis
38	Male	MIV	19	Immunocompromised	Respiratory failure/Under review
46	Female	MIV	2	Hypertension, hyperlipidemia, pulmonary embolism, deep vein thrombosis	Pulmonary embolus/Negative for H1N1 in lung tissue
49	Female	MIV	3	Type 2 diabetes, stroke, chronic obstructive pulmonary disease, emphysema, substance abuse	Suspected cardiovascular event
53	Female	MIV	5	End-stage renal disease and atrial fibrillation	Under review
56	Female	MIV	0	Driver involved in motor vehicle crash leaving clinic after H1N1 vaccination	Trauma
61	Male	MIV	13	Hypertension, diabetes, peripheral vascular disease, end stage renal disease	Cardiac/Respiratory arrest, gram-negative sepsis
77	Male	MIV	2	Lung cancer atrial fibrillation, recurrent deep venous thrombosis hypertension, hyperlipidemia	Suspected myocardial infarction

* As of November 24, 2009.
† Monovalent inactivated, split-virus or subunit vaccines.
§ Live, attenuated monovalent vaccine.

Data from VAERS indicated that the overall reporting rate after H1N1 vaccination was higher than the rate after seasonal influenza vaccination. Although these data might represent an actual difference in the safety of the vaccines, the difference might have resulted from efforts to enhance reporting to VAERS and heightened public awareness of the H1N1 vaccines. VSD has the capability to test and strengthen hypotheses generated by VAERS reports. To date, preliminary VSD data indicate no increase above background rates for monitored health events among recipients of H1N1 vaccines. VSD, because of its ability to follow populations of vaccinated and unvaccinated persons over time, can detect associations between health events and vaccination. This and other systems will continue to monitor adverse events after H1N1 and seasonal influenza vaccination and can help determine whether adverse events after vaccination are causally related to the vaccines (Table 3).

The findings in this report are subject to at least three limitations. First, as a voluntary reporting system VAERS is subject to underreporting, and the use of the number of vaccine doses distributed as the denominator for calculating adverse event reporting rates also contributes to lower rates than would have been calculated using the number of doses administered. However, distribution data are the best available for rapid calculations and have been used previously for vaccine safety assessments (*3,5*). Second, VAERS reports provide only preliminary diagnoses; these diagnoses are validated later with medical record reviews. Even when diagnoses are validated, VAERS reports do not enable conclusions to be drawn regarding associations between vaccination and the adverse events reported. In addition, medical conditions that might develop months after vaccination could not be captured in this VAERS analysis, which included only 2 months of postvaccination experience. Finally, for the VSD analysis, the number of H1N1 vaccine doses administered within the managed-care organizations had not yet reached an adequate level to detect small increases in risk for rare diseases. For example, 400,000 doses administered would enable detection of an increased risk for Guillain-Barré syndrome as large as the seven-fold increase observed after the 1976 vaccinations; however, 800,000 doses would be needed to detect only a two-fold increase.

The 13 deaths reported to VAERS reflect a range of underlying conditions, some of which cannot be reasonably attributed

TABLE 3. Surveillance systems monitoring the safety of influenza A (H1N1) 2009 monovalent vaccines — United States, 2009

System	Federal agency	Description	Approximate U.S. population monitored
Vaccine Adverse Event Reporting System (VAERS)	CDC, Food and Drug Administration (FDA)	Health-care providers and manufacturers are required to report to VAERS certain adverse events in vaccinees; health-care providers and members of the public also may report other adverse events voluntarily. VAERS enables early detection of new, rare, or unusual patterns of adverse events, which can then be investigated using other methods and systems. Enhancements to VAERS include providing information on influenza vaccination record cards, advertising in medical journals, using state vaccine safety coordinators, and increasing report processing capacity.	Entire population
Vaccine Safety Datalink (VSD)	CDC	Uses administrative data and electronic medical records to collect information on vaccinations and health-care encounters to monitor vaccine safety. VSD is monitoring H1N1 vaccine safety using historical and other appropriate comparison groups, with weekly data analyses.	9.5 million
Population-based active surveillance for Guillain-Barré syndrome	CDC	CDC and Emerging Infections Program sites actively identify Guillain-Barré syndrome cases, using a network of neurologists and collaboration with the American Academy of Neurology.	45 million
Real-Time Immunization Monitoring System	CDC	Allows vaccinees to register online at the time of vaccination; solicits reports of postvaccination adverse events with e-mails on the day of vaccination and 7 days and 42 days after vaccination.	Entire population
Post-Licensure Rapid Immunization Safety Monitoring	National Vaccine Program Office, CDC, FDA	Active surveillance using electronic billing, diagnostic, and vaccination data from state vaccine registries and large health plans in several states..	30 million (17 million with registry-enhanced data)
Defense Medical Surveillance System	U.S. Department of Defense	An executive information, electronic medical records system containing longitudinal data on U.S. active duty military personnel	1.4 million
Veterans Affairs Adverse Drug Event Reporting System (VA ADERS)	U.S. Department of Veterans Affairs	VA health system, including veterans and employees.	1.2 million
Medicare data systems	Centers for Medicare and Medicaid Services	National Claims History File and Enrollment Database for persons enrolled in fee-for-service Medicare; can be used for retrospective and prospective vaccine safety studies, primarily among persons aged ≥65 years	38 million
Indian Health Service electronic health records	Indian Health Service	Can conduct enhanced VAERS surveillance and provide signal detection.	1.4 million
Vaccines and Medications in Pregnancy Surveillance System	Biomedical Advanced Research and Development Authority	A collaboration of academic and professional investigators that can monitor the relationship between receipt of influenza A (H1N1) 2009 monovalent vaccines, seasonal influenza vaccines, and antiviral medications in pregnancy and subsequent maternal and fetal outcomes.	Prospective cohort study (1,100). Case-control surveillance (2,000)
Clinical Immunization Safety Assessment Network	CDC	Collaboration between CDC and six academic sites with vaccine safety expertise provides broad consultation on clinical issues that arise during safety monitoring, including review of possible Guillain-Barré syndrome and anaphylaxis reports.	Entire population

to vaccination. No patterns in age, sex, or type of underlying medical condition were observed that might lead investigators to suspect a causal link with vaccination. Regarding Guillain-Barré syndrome cases reported after H1N1 vaccination, the currently reported number of cases appears substantially smaller than the number expected from a population of 30–40 million persons, but underreporting to VAERS and differences in vaccinated and background populations make the comparison complex. Guillain-Barré syndrome monitoring and evaluation are continuing using VAERS, VSD, and enhanced Guillain-Barré syndrome surveillance systems (Table 3). In 15 years of VAERS experience with TIV, 28% of severe adverse event reports were classified as neurologic or muscular conditions, 11% as respiratory, and 6% as gastrointestinal (*5*), percentages comparable with those observed (28%, 10%, and 5%) in these initial reports after H1N1 vaccination.

A comprehensive vaccine safety monitoring and response program is necessary to detect possible increases in adverse health events and formulate hypotheses for further investigation and testing. VAERS data can detect safety signals (i.e., new,

What is already known on this topic?

Vaccine safety monitoring is an important component of all vaccination programs and can address concerns that the current H1N1 vaccines might increase the risk for neurologic complications such as occurred with Guillain-Barré syndrome and the 1976 swine influenza vaccine.

What is added by this report?

CDC review of reports from the U.S. Vaccine Adverse Event Reporting System showed no concerning safety signals (i.e., new, unexpected, or rare adverse events), and analysis of data from the Vaccine Safety DataLink found no increased occurrence of monitored conditions after H1N1 vaccination.

What are the implications for public health practice?

CDC and other agencies will use additional systems and continue to monitor H1N1 vaccine safety closely; health-care providers should continue to report adverse events after H1N1 and seasonal influenza vaccinations.

unexpected or rare adverse events) but generally cannot be used to infer causality (*3*). Once a large enough number of vaccine doses have been administered in its member managed care organizations, VSD can better identify associations between vaccination and health events (*4*). Recently, new vaccine safety monitoring systems have been developed to augment existing surveillance systems by focusing on specific health events (e.g., Guillain-Barré syndrome or pregnancy outcomes) and to estimate background rates for selected medical conditions, conduct case-control studies, and assess causality (Table 3). These additional systems will enhance the ability to determine whether the difference in the VAERS reporting rate between H1N1 and seasonal influenza vaccines can be attributed to reporting bias or safety differences. To synthesize and evaluate data on H1N1 vaccine safety, a nongovernment working group has been established by the National Vaccine Advisory Committee[§§] with members representing other federal advisory committees as well as experts in internal medicine, pediatrics, immunology, and vaccine safety. The group will meet every 2 weeks and will provide reports to the public through the National Vaccine Advisory Committee after considering data from the many available systems.

[§§] Additional information available at http://www.hhs.gov/nvpo/nvac. Accessed November 27, 2009.

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Announcement

Clinical Vaccinology Course — March 12–14, 2010

A clinical vaccinology course for health-care professionals will be held March 12–14, 2010, at the San Diego Marriott Mission Valley in San Diego, California. Through lectures and interactive case presentations, the course will focus on new developments and concerns related to the use of vaccines in pediatric, adolescent, and adult populations. Leading infectious disease experts, including pediatricians, internists, and family physicians, will present the latest information on newly available vaccines, vaccines in development, and vaccines whose continued administration is essential to improving disease prevention efforts.

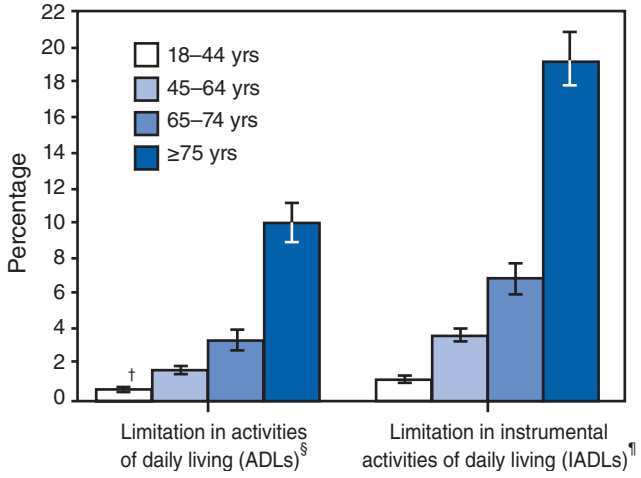
This course is designed specifically for physicians, nurses, physician assistants, pharmacists, vaccine program administrators, and other health professionals involved with or interested in the clinical use of vaccines. It also will interest federal, state, and local health-care professionals involved in the prevention and control of infectious diseases. Course participants should have a knowledge of or interest in vaccines and vaccine-preventable diseases.

CDC and four national organizations are collaborating with the National Foundation for Infectious Diseases (NFID), the Emory University School of Medicine, and the Emory Vaccine Center to sponsor this course. Continuing medical education, continuing nursing education, and continuing pharmacy education credits will be offered. Information regarding the preliminary program, registration, and hotel accommodations is available at http://www.nfid.org, or by e-mail (idcourse@nfid.org), fax (301-907-0878), telephone (301-656-0003, ext. 19), or mail (NFID, 4733 Bethesda Avenue, Suite 750, Bethesda, MD 20814-5228).

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage of Adults with Activity Limitations, by Age Group and Type of Limitation — National Health Interview Survey, United States, 2008*



* Estimates are based on household interviews of a sample of the civilian, noninstitutionalized U.S. population. Persons with unknown limitation status were excluded from the denominators.
† 95% confidence interval.
§ ADLs are based on response to the question, "Because of a physical, mental, or emotional problem, does [person] need the help of other persons with personal care needs, such as eating, bathing, dressing, or getting around inside the home?"
¶ IADLs are based on response to the question, "Because of a physical, mental, or emotional problem, does [person] need the help of other persons in handling routine needs, such as everyday household chores, doing necessary business, shopping, or getting around for other purposes?"

In 2008, limitations in activities of daily living (ADLs) and limitations in instrumental activities of daily living (IADLs) increased with age. Persons aged ≥75 years were approximately three times more likely than persons aged 65–74 years to report ADLs (10.0% versus 3.4%) or IADLs (19.2% versus 6.9%). In addition, persons in each age group were approximately twice as likely to require help with IADLs than with ADLs.

SOURCE: Adams PF, Heyman KM, Vickerie JL. Summary health statistics for the U.S. population: National Health Interview Survey, 2008. Vital Hlth Stat 2009;10(243). Available at http://www.cdc.gov/nchs/data/series/sr_10/sr10_243.pdf.

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending December 5, 2009 (48th week)*

Disease	Current week	Cum 2009	5-year weekly average†	Total cases reported for previous years 2008	2007	2006	2005	2004	States reporting cases during current week (No.)
Anthrax	—	—	—	—	1	1	—	—	
Botulism:									
foodborne	—	12	1	17	32	20	19	16	
infant	1	50	2	109	85	97	85	87	WA (1)
other (wound and unspecified)	—	20	1	19	27	48	31	30	
Brucellosis	—	87	2	80	131	121	120	114	
Chancroid	—	22	1	25	23	33	17	30	
Cholera	—	8	0	5	7	9	8	6	
Cyclosporiasis§	1	120	1	139	93	137	543	160	NC (1)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup	—	38	0	62	55	67	80	112	
eastern equine	—	4	0	4	4	8	21	6	
Powassan	—	1	0	2	7	1	1	1	
St. Louis	—	10	0	13	9	10	13	12	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§,**:									
Ehrlichia chaffeensis	4	739	9	1,137	828	578	506	338	NY (2), MD (1), FL (1)
Ehrlichia ewingii	—	6	—	9	—	—	—	—	
Anaplasma phagocytophilum	14	643	14	1,026	834	646	786	537	NY (5), MN (9)
undetermined	4	109	2	180	337	231	112	59	MN (4)
Haemophilus influenzae,††									
invasive disease (age <5 yrs):									
serotype b	—	24	0	30	22	29	9	19	
nonserotype b	2	174	3	244	199	175	135	135	MN (2)
unknown serotype	3	210	3	163	180	179	217	177	NYC (1), NE (1), AZ (1)
Hansen disease§	—	57	2	80	101	66	87	105	
Hantavirus pulmonary syndrome§	—	10	1	18	32	40	26	24	
Hemolytic uremic syndrome, postdiarrheal§	2	192	4	330	292	288	221	200	FL (1), OK (1)
Hepatitis C viral, acute	5	768	17	878	845	766	652	720	NY (2), MI (1), FL (1), TN (1)
HIV infection, pediatric (age <13 years)§§	—	—	4	—	—	—	380	436	
Influenza-associated pediatric mortality§,¶¶	16	334	0	90	77	43	45	—	MN (4), MO (2), VA (1), NC (1), CO (1), NM (1), AZ (2), CA (3), AL (1)
Listeriosis	8	689	17	759	808	884	896	753	NY (2), PA (1), VA (1), SC (1), FL (1), AR (1), TX (1)
Measles***	—	61	0	140	43	55	66	37	
Meningococcal disease, invasive†††:									
A, C, Y, and W-135	3	238	5	330	325	318	297	—	CT (1), MN (1), OK (1)
serogroup B	2	125	3	188	167	193	156	—	CT (1), OK (1)
other serogroup	—	23	0	38	35	32	27	—	
unknown serogroup	6	416	10	616	550	651	765	—	NY (2), PA (1), MN (1), CO (2)
Mumps	70	706	18	454	800	6,584	314	258	NY (34), NYC (36)
Novel influenza A virus infections	—	§§§	0	2	4	N	N	N	
Plague	—	7	0	3	7	17	8	3	
Poliomyelitis, paralytic	—	—	—	—	—	—	1	—	
Polio virus infection, nonparalytic§	—	—	—	—	—	N	N	N	
Psittacosis§	—	8	0	8	12	21	16	12	
Q fever total§,¶¶¶:	—	75	1	124	171	169	136	70	
acute	—	64	0	110	—	—	—	—	
chronic	—	11	—	14	—	—	—	—	
Rabies, human	—	3	0	2	1	3	2	7	
Rubella****	—	4	0	16	12	11	11	10	
Rubella, congenital syndrome	—	1	—	—	—	1	1	—	
SARS-CoV§,††††	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	1	123	2	157	132	125	129	132	CT (1)
Syphilis, congenital (age <1 yr)	—	231	7	434	430	349	329	353	
Tetanus	1	10	1	19	28	41	27	34	NE (1)
Toxic-shock syndrome (staphylococcal)§	—	75	2	71	92	101	90	95	
Trichinellosis	—	12	0	39	5	15	16	5	
Tularemia	—	74	2	123	137	95	154	134	
Typhoid fever	—	313	4	449	434	353	324	322	
Vancomycin-intermediate *Staphylococcus aureus*§	—	66	0	63	37	6	2	—	
Vancomycin-resistant *Staphylococcus aureus*§	—	—	—	—	2	1	3	1	
Vibriosis (noncholera *Vibrio* species infections)§	2	558	4	492	549	N	N	N	AZ (1), WA (1)
Yellow fever	—	—	—	—	—	—	—	—	

See Table I footnotes on next page.

TABLE I. (*Continued*) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending December 5, 2009 (48th week)*

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

* Incidence data for reporting year 2009 is provisional, whereas data for 2004 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. The total sum of incident cases is then divided by 25 weeks. Additional information is available at http://www.cdc.gov/epo/dphsi/phs/files/5yearweeklyaverage.pdf.

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

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

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

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

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

¶¶ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Since April 26, 2009, a total of 224 influenza-associated pediatric deaths associated with 2009 pandemic influenza A (H1N1) virus infection have been reported. Since August 30, 2009, a total of 204 influenza-associated pediatric deaths occurring during the 2009–10 influenza season have been reported. A total of 129 influenza-associated pediatric death occurring during the 2008-09 influenza season have been reported.

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

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

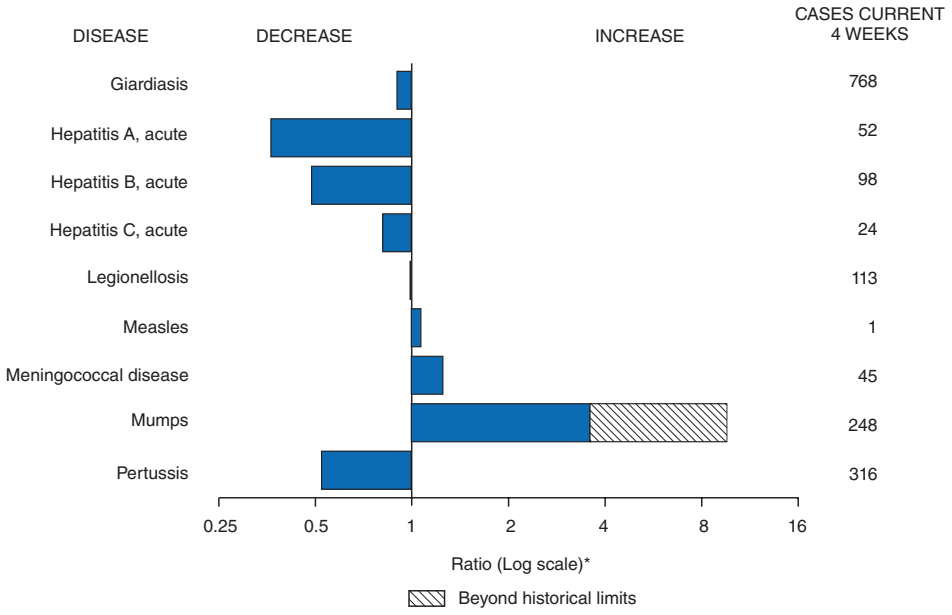
§§§ CDC discontinued reporting of individual confirmed and probable cases of novel influenza A (H1N1) viruses infections on July 24, 2009. CDC will report the total number of novel influenza A (H1N1) hospitalizations and deaths weekly on the CDC H1N1 influenza website (http://www.cdc.gov/h1n1flu).

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

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

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

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals December 5, 2009, with historical data



* Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

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TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending December 5, 2009, and November 29, 2008 (48th week)*

Reporting area	Chlamydia†					Coccidiodomycosis					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 week		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	13,457	22,420	26,096	1,039,817	1,096,322	35	230	471	10,804	6,264	41	119	369	6,293	8,285
New England	555	757	1,655	36,624	34,456	—	0	1	1	1	1	6	45	405	376
Connecticut	116	225	1,306	10,577	10,337	N	0	0	N	N	—	0	38	38	41
Maine§	—	47	75	2,206	2,382	N	0	0	N	N	—	0	4	41	43
Massachusetts	386	360	944	17,926	15,853	N	0	0	N	N	—	2	16	164	165
New Hampshire	2	34	61	1,444	1,919	—	0	1	1	1	—	1	5	68	56
Rhode Island§	51	67	244	3,393	2,893	—	0	0	—	—	—	0	8	20	10
Vermont§	—	23	63	1,078	1,072	N	0	0	N	N	1	1	9	74	61
Mid. Atlantic	3,312	3,015	6,734	144,698	136,030	—	0	0	—	—	8	13	37	746	699
New Jersey	356	429	838	20,556	20,611	N	0	0	N	N	—	1	5	42	39
New York (Upstate)	674	584	4,563	29,429	25,649	N	0	0	N	N	4	3	12	206	248
New York City	1,731	1,148	1,982	55,554	51,443	N	0	0	N	N	—	1	8	69	104
Pennsylvania	551	826	1,001	39,159	38,327	N	0	0	N	N	4	8	19	429	308
E.N. Central	1,605	3,383	4,292	156,168	177,919	—	1	4	35	38	1	27	54	1,376	2,054
Illinois	357	1,049	1,426	46,375	54,446	N	0	0	N	N	—	2	8	133	201
Indiana	194	413	695	19,805	19,910	N	0	0	N	N	—	4	17	185	178
Michigan	834	872	1,332	42,093	41,155	—	0	3	20	29	—	5	11	253	255
Ohio	—	718	1,177	31,584	42,821	—	0	2	15	9	—	7	16	355	661
Wisconsin	220	348	461	16,311	19,587	N	0	0	N	N	1	7	24	450	759
W.N. Central	398	1,347	1,697	61,405	62,006	—	0	1	9	3	3	17	61	971	943
Iowa	—	175	256	8,470	8,483	N	0	0	N	N	—	3	14	191	277
Kansas	4	171	561	9,161	8,447	N	0	0	N	N	—	1	6	61	83
Minnesota	—	260	338	11,499	13,266	—	0	0	—	—	3	4	34	331	215
Missouri	394	509	638	23,957	22,578	—	0	1	9	3	—	3	12	171	170
Nebraska§	—	104	219	4,787	4,902	N	0	0	N	N	—	2	9	110	110
North Dakota	—	30	77	1,386	1,654	N	0	0	N	N	—	0	10	12	6
South Dakota	—	55	80	2,145	2,676	N	0	0	N	N	—	1	10	95	82
S. Atlantic	2,546	3,854	5,448	180,665	224,406	—	0	1	5	4	12	19	45	986	974
Delaware	89	87	180	4,364	3,433	—	0	1	1	1	1	0	2	10	12
District of Columbia	—	129	226	5,916	6,322	—	0	0	—	—	—	0	1	2	15
Florida	710	1,424	1,672	67,108	65,027	N	0	0	N	N	9	8	24	430	438
Georgia	—	711	1,909	27,752	38,031	N	0	0	N	N	—	5	23	308	241
Maryland§	334	424	772	19,578	21,871	—	0	1	4	3	2	1	5	39	48
North Carolina	—	0	1,024	—	33,843	N	0	0	N	N	—	0	9	58	68
South Carolina§	641	537	1,421	23,334	24,221	N	0	0	N	N	—	1	7	53	52
Virginia§	692	602	926	29,220	28,643	N	0	0	N	N	—	1	7	70	76
West Virginia	80	69	136	3,393	3,015	N	0	0	N	N	—	0	2	16	24
E.S. Central	1,153	1,756	2,208	83,069	78,717	—	0	0	—	—	3	3	10	205	165
Alabama§	—	459	627	21,440	22,776	N	0	0	N	N	—	1	5	55	70
Kentucky	—	245	642	12,174	11,234	N	0	0	N	N	1	1	4	62	33
Mississippi	543	457	840	21,490	19,066	N	0	0	N	N	—	0	3	14	17
Tennessee§	610	578	809	27,965	25,641	N	0	0	N	N	2	1	5	74	45
W.S. Central	2,346	2,993	5,809	144,392	138,202	—	0	1	1	3	10	9	271	478	2,125
Arkansas§	357	269	417	12,742	13,118	N	0	0	N	N	2	1	5	51	89
Louisiana	303	515	1,130	23,965	20,596	—	0	1	1	3	—	0	6	29	63
Oklahoma	310	171	2,717	12,434	12,192	N	0	0	N	N	5	2	11	121	128
Texas§	1,376	2,023	2,521	95,251	92,296	N	0	0	N	N	3	5	258	277	1,845
Mountain	1,249	1,442	2,076	69,607	69,894	35	171	368	8,623	4,113	3	8	26	482	559
Arizona	548	495	758	23,738	22,985	33	170	364	8,528	4,020	—	1	3	33	87
Colorado	287	314	727	15,468	16,965	N	0	0	N	N	—	2	10	132	109
Idaho§	—	69	184	3,382	3,706	N	0	0	N	N	1	1	7	85	66
Montana§	38	56	87	2,755	2,827	N	0	0	N	N	—	1	4	52	44
Nevada§	198	170	477	8,964	8,824	2	1	4	54	49	—	0	2	5	17
New Mexico§	105	182	540	8,402	7,631	—	0	2	10	31	—	2	8	122	168
Utah	23	112	176	5,001	5,510	—	1	2	30	11	—	0	3	31	45
Wyoming§	50	35	97	1,897	1,446	—	0	1	1	2	2	0	2	22	23
Pacific	293	3,450	4,682	163,189	174,692	—	39	172	2,130	2,102	—	13	25	644	390
Alaska	—	92	199	3,499	4,325	N	0	0	N	N	—	0	1	6	3
California	—	2,691	3,592	126,971	135,161	—	39	172	2,130	2,102	—	7	20	390	236
Hawaii	1	120	147	5,300	5,466	N	0	0	N	N	—	0	1	1	2
Oregon§	292	193	387	9,174	9,943	N	0	0	N	N	—	3	9	165	60
Washington	—	393	571	18,245	19,797	N	0	0	N	N	—	1	8	82	89
American Samoa	—	0	0	—	73	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	1	1	—	123	—	0	0	—	—	—	0	0	—	—
Puerto Rico	70	134	331	6,566	6,480	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	8	17	369	575	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending December 5, 2009, and November 29, 2008 (48th week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive All ages, all serotypes†				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	249	318	498	16,303	17,184	3,208	5,407	6,918	247,701	306,451	33	59	124	2,645	2,517
New England	4	29	64	1,564	1,553	100	95	301	4,622	4,825	—	3	16	178	162
Connecticut	—	6	15	269	313	34	47	275	2,214	2,356	—	0	12	49	39
Maine§	2	3	13	190	173	—	2	9	126	89	—	0	2	17	17
Massachusetts	—	12	36	672	634	51	36	112	1,827	1,959	—	2	5	89	74
New Hampshire	—	3	11	169	152	5	2	6	104	96	—	0	2	11	9
Rhode Island§	—	1	6	59	87	10	6	19	306	294	—	0	2	8	15
Vermont§	2	3	14	205	194	—	1	5	45	31	—	0	1	4	8
Mid. Atlantic	41	62	104	2,953	3,198	594	587	1,138	29,150	30,126	12	12	25	567	481
New Jersey	—	6	17	215	480	66	92	124	4,290	4,868	—	2	7	105	89
New York (Upstate)	33	24	81	1,241	1,125	87	109	664	5,449	5,613	7	3	20	147	141
New York City	1	16	25	739	779	326	211	366	10,344	9,581	1	2	11	111	82
Pennsylvania	7	15	34	758	814	115	191	263	9,067	10,064	4	4	10	204	169
E.N. Central	1	44	71	2,171	2,546	541	1,092	1,436	49,006	63,328	—	12	28	531	410
Illinois	—	9	18	422	659	124	344	524	14,819	18,958	—	3	9	132	138
Indiana	N	0	11	N	N	55	140	223	6,291	7,953	—	1	22	68	66
Michigan	1	12	24	591	573	288	281	498	13,678	15,452	—	0	3	24	25
Ohio	—	16	28	748	829	—	246	431	10,090	15,249	—	2	6	88	121
Wisconsin	—	9	19	410	485	74	84	143	4,128	5,716	—	3	20	219	60
W.N. Central	129	24	141	1,627	1,902	109	276	373	13,079	15,484	5	3	15	149	186
Iowa	3	6	15	282	304	—	32	53	1,418	1,512	—	0	0	—	2
Kansas	—	2	11	96	152	4	44	83	2,164	2,087	—	0	2	13	20
Minnesota	124	0	104	539	665	—	41	65	1,905	2,810	4	0	10	54	56
Missouri	1	8	30	456	438	105	126	173	6,002	7,326	—	1	4	52	68
Nebraska§	1	3	9	162	193	—	24	55	1,245	1,300	1	0	4	24	28
North Dakota	—	0	16	27	19	—	2	14	87	126	—	0	4	6	12
South Dakota	—	1	5	65	131	—	6	20	258	323	—	0	0	—	—
S. Atlantic	50	69	109	3,396	2,799	684	1,145	1,956	52,156	78,281	7	13	31	647	637
Delaware	—	0	3	24	41	20	18	37	891	947	—	0	1	4	7
District of Columbia	—	0	5	22	63	—	50	88	2,334	2,371	—	0	1	2	8
Florida	32	38	59	1,800	1,226	236	410	486	19,253	21,411	4	4	10	208	171
Georgia	—	11	67	750	636	—	229	876	9,414	14,305	—	3	9	140	128
Maryland§	2	5	11	255	264	73	114	197	5,350	5,895	—	1	6	82	88
North Carolina	N	0	0	N	N	—	0	428	—	14,501	3	0	17	65	72
South Carolina§	1	2	8	96	122	180	162	412	7,360	8,746	—	1	5	62	55
Virginia§	13	8	31	398	377	171	147	308	7,109	9,412	—	1	6	56	83
West Virginia	2	1	5	51	70	4	9	20	445	693	—	0	3	28	25
E.S. Central	3	7	22	359	466	300	510	687	23,845	28,159	2	3	9	143	133
Alabama§	—	3	11	166	266	—	137	178	6,205	8,990	1	0	4	34	24
Kentucky	N	0	0	N	N	—	72	156	3,517	4,252	—	0	5	19	8
Mississippi	N	0	0	N	N	144	142	252	6,669	6,767	—	0	1	5	13
Tennessee§	3	4	18	193	200	156	156	230	7,454	8,150	1	2	6	85	88
W.S. Central	3	7	22	391	423	658	886	1,556	42,213	46,855	4	2	22	105	105
Arkansas§	1	2	9	139	134	116	82	134	3,935	4,238	1	0	3	17	14
Louisiana	—	2	8	96	139	88	167	418	7,786	8,700	—	0	1	12	10
Oklahoma	2	3	18	156	150	92	62	612	4,168	4,425	3	1	20	72	71
Texas§	N	0	0	N	N	362	559	696	26,324	29,492	—	0	1	4	10
Mountain	10	28	59	1,431	1,518	206	175	234	8,113	10,737	3	4	11	212	271
Arizona	1	3	7	183	130	110	58	92	2,889	3,176	2	1	7	71	100
Colorado	6	8	26	450	533	29	45	106	2,134	3,465	1	1	6	63	52
Idaho§	—	4	10	195	186	—	2	8	91	166	—	0	1	4	12
Montana§	—	2	11	123	83	2	1	5	73	113	—	0	1	2	4
Nevada§	—	1	10	68	113	35	28	93	1,559	2,008	—	0	2	15	16
New Mexico§	1	2	8	104	100	28	23	52	1,051	1,246	—	0	3	25	46
Utah	—	5	12	251	328	—	5	12	243	446	—	1	2	29	37
Wyoming§	2	1	4	57	45	2	1	5	73	117	—	0	1	3	4
Pacific	8	50	130	2,411	2,779	16	541	764	25,517	28,656	—	2	8	113	132
Alaska	—	2	7	102	98	—	15	24	610	501	—	0	3	20	19
California	—	32	55	1,563	1,835	—	450	657	21,484	23,529	—	0	4	25	42
Hawaii	—	0	2	17	41	3	12	24	570	568	—	0	3	24	18
Oregon§	2	7	18	368	433	13	20	44	919	1,144	—	1	3	41	51
Washington	6	7	74	361	372	—	40	71	1,934	2,914	—	0	2	3	2
American Samoa	—	0	0	—	—	—	0	0	—	3	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	73	—	0	0	—	—
Puerto Rico	—	2	10	102	206	1	4	24	210	258	—	0	1	3	1
U.S. Virgin Islands	—	0	0	—	—	—	2	7	93	115	N	0	0	N	N

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending December 5, 2009, and November 29, 2008 (48th week)*

Reporting area	Hepatitis (viral, acute), by type† A: Current week	A: Previous 52 weeks Med	A: Previous 52 weeks Max	A: Cum 2009	A: Cum 2008	B: Current week	B: Previous 52 weeks Med	B: Previous 52 weeks Max	B: Cum 2009	B: Cum 2008	Legionellosis: Current week	Legionellosis: Previous 52 weeks Med	Legionellosis: Previous 52 weeks Max	Legionellosis: Cum 2009	Legionellosis: Cum 2008
United States	20	37	89	1,717	2,361	33	63	197	2,802	3,487	28	55	157	2,905	2,865
New England	—	2	5	92	124	—	1	4	43	72	—	3	17	168	204
Connecticut	—	0	2	18	26	—	0	3	14	25	—	1	5	51	38
Maine§	—	0	1	1	18	—	0	2	14	11	—	0	3	8	10
Massachusetts	—	1	4	56	55	—	0	2	12	21	—	1	9	73	79
New Hampshire	—	0	1	7	11	—	0	1	3	8	—	0	2	10	29
Rhode Island§	—	0	1	8	12	—	0	0	—	4	—	0	4	19	43
Vermont§	—	0	1	2	2	—	0	0	—	3	—	0	1	7	5
Mid. Atlantic	2	5	10	238	304	2	5	17	276	411	10	15	69	1,054	954
New Jersey	—	1	5	55	75	—	1	6	66	114	—	2	13	155	135
New York (Upstate)	1	1	3	45	60	—	1	11	47	59	6	5	29	333	322
New York City	—	2	5	77	103	—	1	4	62	96	—	3	20	204	126
Pennsylvania	1	1	6	61	66	2	2	7	101	142	4	6	25	362	371
E.N. Central	1	4	18	229	318	1	7	21	342	482	1	9	34	550	625
Illinois	—	1	12	97	106	—	1	6	74	175	—	1	10	90	114
Indiana	—	0	4	15	19	—	1	18	56	46	—	1	4	43	53
Michigan	1	1	4	66	116	1	2	8	108	133	1	2	11	139	167
Ohio	—	0	3	35	45	—	1	13	77	111	—	4	17	268	254
Wisconsin	—	0	4	16	32	—	0	4	27	17	—	0	2	10	37
W.N. Central	—	2	16	111	234	2	3	16	154	79	1	2	7	94	133
Iowa	—	0	3	32	106	—	0	3	28	21	—	0	2	21	20
Kansas	—	0	1	7	15	—	0	2	5	8	—	0	1	3	2
Minnesota	—	0	12	19	36	—	0	11	25	10	—	0	4	12	21
Missouri	—	0	3	29	32	—	1	5	73	31	1	1	5	44	67
Nebraska§	—	0	3	20	41	2	0	2	21	8	—	0	2	12	20
North Dakota	—	0	2	1	—	—	0	1	—	1	—	0	3	1	—
South Dakota	—	0	1	3	4	—	0	1	2	—	—	0	1	1	3
S. Atlantic	7	7	14	387	367	11	17	32	817	868	11	10	20	503	457
Delaware	—	0	1	4	7	U	0	1	U	U	—	0	5	18	12
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	9	16
Florida	4	4	9	167	134	9	6	11	275	304	8	3	10	182	135
Georgia	—	1	3	51	53	—	3	9	129	169	—	1	5	49	38
Maryland§	—	1	4	40	43	—	1	5	67	78	2	2	12	128	125
North Carolina	2	0	3	27	60	—	1	19	148	72	—	0	6	39	36
South Carolina§	—	1	4	54	17	—	1	4	49	62	—	0	2	12	11
Virginia§	1	1	3	39	48	2	1	10	88	104	1	1	5	57	56
West Virginia	—	0	2	5	5	—	0	19	61	79	—	0	2	9	28
E.S. Central	1	1	4	40	77	2	7	11	301	367	3	2	12	127	110
Alabama§	—	0	2	10	12	—	1	7	76	100	—	0	2	15	16
Kentucky	1	0	1	10	30	1	2	7	82	87	1	1	3	49	53
Mississippi	—	0	2	11	5	—	1	2	30	46	—	0	2	4	1
Tennessee§	—	0	2	9	30	1	2	6	113	134	2	1	9	59	40
W.S. Central	6	3	43	164	226	13	9	99	453	674	—	2	21	100	91
Arkansas§	—	0	1	8	9	—	1	5	47	59	—	0	1	8	14
Louisiana	—	0	1	3	11	—	0	4	33	86	—	0	2	4	9
Oklahoma	3	0	6	6	7	8	2	17	98	103	—	0	2	6	10
Texas§	3	3	37	147	199	5	6	76	275	426	—	1	19	82	58
Mountain	2	3	8	149	202	2	2	6	112	190	1	2	7	126	91
Arizona	2	2	6	69	103	—	1	3	40	73	—	1	4	49	22
Colorado	—	1	5	46	36	—	0	2	20	33	—	0	2	18	14
Idaho§	—	0	1	4	17	—	0	2	11	9	1	0	2	7	3
Montana§	—	0	1	6	1	—	0	0	—	2	—	0	2	7	4
Nevada§	—	0	2	8	12	2	0	3	26	42	—	0	1	10	11
New Mexico§	—	0	1	7	17	—	0	2	6	11	—	0	2	8	10
Utah	—	0	2	7	13	—	0	1	5	14	—	0	4	23	27
Wyoming§	—	0	1	2	3	—	0	2	4	6	—	0	2	4	—
Pacific	1	6	17	307	509	—	6	36	304	344	1	4	12	183	200
Alaska	—	0	1	3	5	—	0	1	3	10	—	0	1	1	2
California	—	5	16	242	416	—	4	28	218	244	—	3	10	144	157
Hawaii	—	0	2	6	17	—	0	1	5	7	—	0	1	1	8
Oregon§	—	0	2	17	25	—	1	4	40	40	—	0	2	14	17
Washington	1	1	4	39	46	—	1	8	38	43	1	0	4	23	16
American Samoa	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	2	18	23	—	0	5	22	46	—	0	1	1	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending December 5, 2009, and November 29, 2008 (48th week)*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All groups				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	265	434	1,905	27,911	31,456	17	22	45	1,075	1,124	11	16	48	802	1,063
New England	4	58	455	5,623	11,165	1	1	5	48	53	2	1	4	33	32
Connecticut	—	0	40	—	3,786	—	0	4	5	10	2	0	1	5	1
Maine§	2	9	76	839	827	—	0	1	2	1	—	0	1	4	6
Massachusetts	—	20	306	3,229	4,496	—	0	3	30	32	—	0	3	16	20
New Hampshire	—	10	87	972	1,548	—	0	1	3	4	—	0	1	3	4
Rhode Island§	—	1	78	211	124	—	0	1	5	2	—	0	1	4	1
Vermont§	2	4	39	372	384	1	0	1	3	4	—	0	1	1	—
Mid. Atlantic	201	173	1,401	15,937	12,674	2	6	13	277	302	3	2	6	93	119
New Jersey	—	37	376	4,050	3,358	—	0	1	1	64	—	0	2	8	16
New York (Upstate)	114	53	1,368	3,974	4,871	1	1	10	46	28	2	0	2	25	30
New York City	—	2	23	206	771	—	4	11	180	171	—	0	2	16	25
Pennsylvania	87	66	631	7,707	3,674	1	1	4	50	39	1	1	4	44	48
E.N. Central	12	15	213	2,204	2,270	—	3	10	135	145	—	3	9	134	193
Illinois	—	1	11	119	107	—	1	4	53	74	—	1	3	34	79
Indiana	—	1	6	59	40	—	0	3	15	5	—	0	3	32	24
Michigan	—	1	10	114	84	—	0	3	26	17	—	0	5	19	32
Ohio	—	0	5	50	45	—	1	6	34	29	—	1	3	39	38
Wisconsin	12	13	195	1,862	1,994	—	0	1	7	20	—	0	2	10	20
W.N. Central	12	4	336	269	964	—	1	8	61	68	2	1	9	69	91
Iowa	—	1	14	92	106	—	0	1	10	12	—	0	2	10	18
Kansas	—	0	2	14	16	—	0	1	4	9	—	0	2	8	6
Minnesota	12	0	326	133	821	—	0	8	24	25	2	0	4	13	24
Missouri	—	0	2	10	6	—	0	2	13	14	—	0	3	26	25
Nebraska§	—	0	3	19	12	—	0	1	8	8	—	0	1	9	12
North Dakota	—	0	10	—	—	—	0	1	1	—	—	0	3	1	3
South Dakota	—	0	1	1	3	—	0	1	1	—	—	0	1	2	3
S. Atlantic	36	60	234	3,570	4,055	14	6	17	316	274	—	2	9	141	149
Delaware	3	12	64	919	738	—	0	1	5	3	—	0	1	4	2
District of Columbia	—	0	5	19	71	—	0	2	6	4	—	0	0	—	—
Florida	3	2	12	119	79	—	1	7	84	56	—	1	4	50	49
Georgia	—	0	6	49	35	—	1	5	65	54	—	0	2	29	18
Maryland§	21	25	124	1,695	2,116	13	1	5	74	77	—	0	1	10	18
North Carolina	1	0	14	59	40	—	0	5	21	27	—	0	5	19	12
South Carolina§	—	0	3	31	27	—	0	1	4	9	—	0	1	11	22
Virginia§	8	10	61	514	817	1	1	5	55	42	—	0	2	12	23
West Virginia	—	0	33	165	132	—	0	1	2	2	—	0	2	6	5
E.S. Central	—	0	2	32	45	—	0	3	27	22	—	0	4	32	51
Alabama§	—	0	1	3	9	—	0	3	8	5	—	0	1	9	10
Kentucky	—	0	1	1	5	—	0	2	9	5	—	0	1	6	8
Mississippi	—	0	0	—	1	—	0	1	1	1	—	0	1	3	11
Tennessee§	—	0	2	28	30	—	0	3	9	11	—	0	2	14	22
W.S. Central	—	1	21	40	114	—	1	10	41	77	2	1	12	78	110
Arkansas§	—	0	0	—	—	—	0	1	4	1	—	0	2	9	13
Louisiana	—	0	0	—	3	—	0	1	3	3	—	0	3	11	23
Oklahoma	—	0	2	—	—	—	0	2	1	2	2	0	2	14	17
Texas§	—	1	21	40	111	—	0	9	33	71	—	1	9	44	57
Mountain	—	1	13	44	49	—	0	6	28	33	2	1	4	56	57
Arizona	—	0	2	7	8	—	0	2	9	14	—	0	2	13	9
Colorado	—	0	1	4	3	—	0	3	8	5	2	0	2	20	14
Idaho§	—	0	2	12	9	—	0	1	2	3	—	0	1	7	5
Montana§	—	0	13	3	4	—	0	3	5	—	—	0	2	4	4
Nevada§	—	0	1	4	11	—	0	1	—	4	—	0	1	2	7
New Mexico§	—	0	1	5	8	—	0	0	—	3	—	0	1	3	8
Utah	—	0	1	7	4	—	0	2	4	4	—	0	1	2	8
Wyoming§	—	0	1	2	2	—	0	0	—	—	—	0	2	5	2
Pacific	—	4	13	192	120	—	3	9	142	150	—	3	14	166	261
Alaska	—	0	1	3	6	—	0	1	2	6	—	0	2	6	8
California	—	2	10	140	67	—	2	6	107	110	—	2	8	104	187
Hawaii	N	0	0	N	N	—	0	1	1	3	—	0	1	4	5
Oregon§	—	1	4	34	36	—	0	2	11	4	—	0	6	39	37
Washington	—	0	12	15	11	—	0	3	21	27	—	0	6	13	24
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	3	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	3	2	—	0	0	—	3
U.S. Virgin Islands	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending December 5, 2009, and November 29, 2008 (48th week)*

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	81	272	1,697	12,618	9,873	35	64	140	3,436	3,953	8	24	179	1,317	2,244
New England	—	12	27	551	947	5	6	24	325	399	—	0	2	11	7
Connecticut	—	0	4	37	52	—	2	22	132	190	—	0	0	—	—
Maine†	—	1	10	74	40	—	1	4	49	55	—	0	2	5	1
Massachusetts	—	7	19	327	725	—	0	0	—	—	—	0	1	5	2
New Hampshire	—	1	7	71	39	2	0	3	31	53	—	0	0	—	1
Rhode Island†	—	0	7	31	79	1	1	7	51	32	—	0	0	—	3
Vermont†	—	0	1	11	12	2	1	5	62	69	—	0	1	1	—
Mid. Atlantic	16	22	64	1,034	1,087	6	11	23	555	879	—	1	29	64	121
New Jersey	—	3	12	151	204	—	0	0	—	—	—	0	2	—	81
New York (Upstate)	11	4	41	228	395	5	7	22	415	468	—	0	29	12	14
New York City	2	1	21	88	74	1	0	3	22	19	—	0	4	30	11
Pennsylvania	3	12	33	567	414	—	0	16	118	392	—	0	2	22	15
E.N. Central	7	59	238	2,749	1,711	—	2	19	216	253	—	1	7	88	147
Illinois	—	13	40	562	484	—	1	9	87	103	—	0	6	49	109
Indiana	—	6	158	301	100	—	0	6	21	10	—	0	3	13	6
Michigan	7	12	40	759	267	—	1	6	63	77	—	0	2	6	3
Ohio	—	19	57	995	690	—	0	5	45	63	—	0	4	18	29
Wisconsin	—	3	12	132	170	N	0	0	N	N	—	0	1	2	—
W.N. Central	12	31	872	1,559	1,212	8	6	18	326	298	2	4	27	318	433
Iowa	—	4	12	184	211	—	0	3	24	28	—	0	2	5	8
Kansas	—	3	9	142	77	—	1	6	60	64	—	0	1	2	—
Minnesota	—	0	808	165	226	—	0	11	61	64	2	0	1	4	—
Missouri	10	18	51	870	413	1	1	5	66	62	—	3	26	295	402
Nebraska†	2	3	18	139	217	—	1	6	77	32	—	0	2	12	20
North Dakota	—	0	24	29	1	7	0	9	11	25	—	0	1	—	—
South Dakota	—	0	6	30	67	—	0	4	27	23	—	0	0	—	3
S. Atlantic	8	32	71	1,487	890	16	26	111	1,560	1,559	4	9	40	439	867
Delaware	—	0	2	13	17	—	0	0	—	—	—	0	3	17	32
District of Columbia	—	0	1	3	7	—	0	0	—	—	—	0	0	—	6
Florida	3	9	29	493	272	—	0	95	146	138	—	0	2	9	15
Georgia	—	3	11	186	99	—	0	72	409	361	—	0	7	44	77
Maryland†	2	2	8	120	147	—	7	15	363	405	1	1	3	36	89
North Carolina	—	0	65	223	79	N	4	4	N	N	2	4	36	259	441
South Carolina†	—	4	18	234	116	—	0	0	—	—	—	0	5	18	54
Virginia†	3	4	24	184	142	14	10	26	529	583	1	1	8	52	144
West Virginia	—	0	5	31	11	2	3	6	113	72	—	0	1	4	9
E.S. Central	5	14	33	699	377	—	1	6	83	177	—	4	16	247	328
Alabama†	—	4	19	265	55	—	0	0	—	—	—	1	7	59	90
Kentucky	—	4	15	206	134	—	1	4	45	45	—	0	1	1	1
Mississippi	—	1	4	53	98	—	0	1	4	7	—	0	1	7	10
Tennessee†	5	3	14	175	90	—	0	4	34	125	—	3	14	180	227
W.S. Central	13	64	389	2,755	1,578	—	0	13	66	82	2	1	161	129	293
Arkansas†	2	5	38	265	133	—	0	10	33	44	2	0	61	61	65
Louisiana	—	1	8	90	84	—	0	0	—	—	—	0	1	2	6
Oklahoma	1	0	45	76	53	—	0	13	32	36	—	0	98	53	170
Texas†	10	56	304	2,324	1,308	—	0	1	1	2	—	0	6	13	52
Mountain	19	18	32	828	779	—	1	6	82	105	—	0	3	20	45
Arizona	—	4	12	201	209	N	0	0	N	N	—	0	1	5	16
Colorado	4	5	12	224	140	—	0	0	—	—	—	0	1	1	1
Idaho†	15	1	5	85	30	—	0	0	—	11	—	0	1	1	1
Montana†	—	0	6	53	84	—	0	4	25	13	—	0	2	8	3
Nevada†	—	0	3	9	27	—	0	1	1	12	—	0	0	—	3
New Mexico†	—	1	10	59	70	—	0	2	24	29	—	0	1	1	4
Utah	—	3	19	177	202	—	0	2	11	14	—	0	1	1	7
Wyoming†	—	0	5	20	17	—	0	4	21	26	—	0	1	3	10
Pacific	1	23	67	956	1,292	—	4	12	223	201	—	0	1	1	3
Alaska	—	1	9	46	246	—	0	2	12	14	N	0	0	N	N
California	—	8	22	389	481	—	4	12	196	174	—	0	1	1	—
Hawaii	—	0	3	26	17	—	0	0	—	—	N	0	0	N	N
Oregon†	—	4	16	244	164	—	0	3	15	13	—	0	0	—	3
Washington	1	5	58	251	384	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	1	—	—	1	3	38	58	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending December 5, 2009, and November 29, 2008 (48th week)*

Reporting area	Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†					Shigellosis				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	409	898	2,323	41,479	44,809	21	84	255	4,095	4,754	110	286	1,268	13,376	19,387
New England	—	32	420	1,962	2,105	—	4	67	271	243	—	4	43	316	232
Connecticut	—	0	395	395	491	—	0	67	67	47	—	0	38	38	40
Maine§	—	2	7	112	145	—	0	3	18	22	—	0	2	5	20
Massachusetts	—	22	50	1,045	1,133	—	2	6	89	107	—	3	27	226	150
New Hampshire	—	3	42	230	144	—	1	3	35	27	—	0	4	19	5
Rhode Island§	—	2	11	122	103	—	0	26	38	10	—	0	7	23	12
Vermont§	—	1	5	58	89	—	0	3	24	30	—	0	1	5	5
Mid. Atlantic	37	89	196	4,737	5,419	4	6	21	328	440	16	57	87	2,503	2,324
New Jersey	—	14	46	799	1,238	—	1	4	33	128	—	10	27	516	842
New York (Upstate)	25	23	66	1,224	1,328	3	3	9	141	168	7	4	23	208	553
New York City	2	22	42	1,113	1,206	—	1	5	55	52	1	8	15	410	705
Pennsylvania	10	30	64	1,601	1,647	1	2	8	99	92	8	27	63	1,369	224
E.N. Central	5	93	152	4,326	4,815	2	15	31	749	827	—	49	132	2,152	3,821
Illinois	—	24	51	1,193	1,411	—	2	10	134	132	—	10	25	460	911
Indiana	—	6	50	344	572	—	1	7	71	86	—	1	21	56	561
Michigan	3	18	34	861	895	1	3	8	149	211	—	4	21	201	181
Ohio	—	28	52	1,320	1,220	—	3	11	124	185	—	22	68	1,026	1,631
Wisconsin	2	12	29	608	717	1	5	17	271	213	—	7	26	409	537
W.N. Central	13	47	109	2,359	2,615	1	11	37	673	769	15	20	64	1,042	844
Iowa	—	7	16	363	398	—	2	14	148	201	—	1	11	50	175
Kansas	—	6	18	269	437	—	0	4	33	50	—	3	11	159	59
Minnesota	4	13	51	552	660	—	2	19	216	176	1	2	10	78	280
Missouri	3	13	35	617	706	—	2	10	126	147	12	9	58	716	208
Nebraska§	5	5	41	331	223	1	1	6	83	143	2	0	3	30	13
North Dakota	1	0	30	71	43	—	0	28	7	2	—	0	9	5	33
South Dakota	—	2	22	156	148	—	0	12	60	50	—	0	1	4	76
S. Atlantic	220	266	447	12,463	11,605	9	12	30	596	762	31	44	79	2,133	2,958
Delaware	—	2	9	129	145	—	0	2	13	13	3	2	10	140	9
District of Columbia	—	0	5	23	58	—	0	1	1	6	—	0	2	6	21
Florida	175	118	278	6,142	4,823	5	4	7	163	136	12	9	24	437	764
Georgia	—	41	98	2,198	2,164	—	1	4	65	85	—	13	29	603	1,063
Maryland§	6	15	29	726	805	1	2	5	87	122	3	6	19	346	110
North Carolina	22	17	92	1,019	1,325	2	2	21	86	105	9	5	27	300	217
South Carolina§	3	16	65	1,056	1,093	—	0	3	29	42	2	3	9	110	530
Virginia§	9	21	88	963	990	1	2	16	123	221	1	4	59	182	211
West Virginia	5	4	23	207	202	—	0	5	29	32	1	0	3	9	33
E.S. Central	15	50	113	2,721	3,314	—	4	12	201	269	6	14	47	725	1,811
Alabama§	1	14	32	717	945	—	1	4	43	60	—	3	11	121	392
Kentucky	5	8	18	425	451	—	1	4	66	98	2	2	25	204	259
Mississippi	2	14	45	829	1,031	—	0	1	6	5	3	1	4	46	293
Tennessee§	7	14	33	750	887	—	2	10	86	106	1	7	36	354	867
W.S. Central	74	101	1,333	4,489	6,581	4	5	139	251	356	29	49	967	2,321	4,583
Arkansas§	11	11	25	583	740	2	1	4	42	54	4	6	16	291	537
Louisiana	—	8	43	599	1,072	—	0	1	—	8	—	2	9	108	618
Oklahoma	4	13	102	585	758	—	0	82	30	50	8	5	61	268	163
Texas§	59	56	1,204	2,722	4,011	2	4	55	179	244	17	33	889	1,654	3,265
Mountain	20	53	128	2,641	3,148	—	10	26	502	600	5	21	49	1,060	1,131
Arizona	2	20	50	973	1,051	—	1	4	68	62	3	16	42	778	576
Colorado	9	11	33	575	667	—	3	13	153	196	2	2	11	94	123
Idaho§	6	3	10	166	182	—	1	7	88	143	—	0	2	9	14
Montana§	—	2	7	96	119	—	0	7	34	32	—	0	5	13	8
Nevada§	2	3	11	164	218	—	0	3	14	19	—	1	7	58	225
New Mexico§	1	5	29	311	501	—	1	3	33	49	—	1	11	90	142
Utah	—	6	15	273	333	—	1	10	98	86	—	0	3	16	36
Wyoming§	—	1	9	83	77	—	0	2	14	13	—	0	1	2	7
Pacific	25	127	537	5,781	5,207	1	9	31	524	488	8	24	66	1,124	1,683
Alaska	—	1	7	67	54	—	0	0	—	6	—	0	1	2	1
California	—	95	516	4,319	3,805	—	5	15	245	233	—	19	65	909	1,454
Hawaii	3	5	59	293	244	—	0	2	8	13	—	0	4	35	41
Oregon§	—	8	18	388	407	—	1	11	77	63	1	1	3	38	91
Washington	22	11	85	714	697	1	2	17	194	173	7	2	11	140	96
American Samoa	—	0	1	—	2	—	0	0	—	—	—	1	2	3	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	13	—	0	0	—	—	—	0	0	—	15
Puerto Rico	—	8	40	376	716	—	0	0	—	—	—	0	2	10	31
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending December 5, 2009, and November 29, 2008 (48th week)*

Reporting area	Streptococcal diseases, invasive, group A					*Streptococcus pneumoniae*, invasive disease, nondrug resistant† Age <5 years				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max		
United States	39	102	239	4,564	4,977	18	32	122	1,562	1,686
New England	—	5	28	272	344	—	1	6	56	91
Connecticut	—	0	21	72	92	—	0	4	—	11
Maine§	—	0	2	17	26	—	0	1	5	2
Massachusetts	—	2	10	120	164	—	0	4	35	57
New Hampshire	—	0	4	34	24	—	0	2	11	11
Rhode Island§	—	0	2	11	25	—	0	1	1	10
Vermont§	—	0	3	18	13	—	0	1	4	—
Mid. Atlantic	5	20	43	907	984	3	4	33	220	214
New Jersey	—	2	7	124	177	—	0	4	38	70
New York (Upstate)	3	7	25	297	303	2	2	17	111	95
New York City	—	4	12	172	187	1	0	31	71	49
Pennsylvania	2	6	18	314	317	N	0	2	N	N
E.N. Central	3	17	42	815	909	2	5	18	238	307
Illinois	—	5	12	230	245	—	0	3	23	91
Indiana	—	2	23	128	120	—	0	13	36	31
Michigan	1	3	11	136	166	2	1	4	64	78
Ohio	—	4	13	194	243	—	1	6	70	56
Wisconsin	2	2	11	127	135	—	1	3	45	51
W.N. Central	12	6	37	368	356	3	2	11	140	100
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	5	37	36	N	0	1	N	N
Minnesota	10	0	34	171	166	3	0	10	82	37
Missouri	—	2	8	80	85	—	0	4	32	35
Nebraska§	1	1	3	42	37	—	0	2	14	8
North Dakota	1	0	4	17	10	—	0	3	5	9
South Dakota	—	0	3	21	22	—	0	2	7	11
S. Atlantic	8	21	49	1,049	1,055	3	6	18	296	330
Delaware	—	0	1	11	9	—	0	0	—	—
District of Columbia	—	0	3	12	14	N	0	0	N	N
Florida	1	5	12	257	253	2	1	6	67	62
Georgia	—	5	13	245	240	—	2	6	78	95
Maryland§	3	3	12	181	176	1	1	7	72	55
North Carolina	—	2	12	88	130	N	0	0	N	N
South Carolina§	—	1	5	67	68	—	1	6	44	62
Virginia§	4	3	9	151	128	—	0	4	23	43
West Virginia	—	1	4	37	37	—	0	3	12	13
E.S. Central	—	3	10	178	176	2	2	7	94	87
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	5	35	38	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	2	19	9
Tennessee§	—	3	9	143	138	2	1	6	75	78
W.S. Central	6	8	79	405	460	3	5	46	270	264
Arkansas§	—	0	3	18	11	—	0	4	26	14
Louisiana	—	0	3	11	17	—	0	3	13	13
Oklahoma	—	3	20	123	107	3	1	7	55	62
Texas§	6	5	59	253	325	—	3	34	176	175
Mountain	3	10	22	413	532	2	4	16	217	247
Arizona	1	3	7	139	182	—	2	10	105	108
Colorado	2	2	7	119	134	1	0	4	45	58
Idaho§	—	0	2	10	16	1	0	2	9	5
Montana§	N	0	0	N	N	N	0	0	N	N
Nevada§	—	0	1	5	13	—	0	1	—	3
New Mexico§	—	1	7	78	128	—	0	4	24	35
Utah	—	1	6	61	52	—	0	5	34	36
Wyoming§	—	0	1	1	7	—	0	0	—	2
Pacific	2	3	9	157	161	—	0	4	31	46
Alaska	—	1	4	36	34	—	0	3	23	28
California	N	0	0	N	N	N	0	0	N	N
Hawaii	2	2	8	121	127	—	0	2	8	18
Oregon§	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	—	0	0	—	30	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending December 5, 2009, and November 29, 2008 (48th week)*

Reporting area	*Streptococcus pneumoniae*, invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages					Aged <5 years									
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	26	49	276	2,467	2,852	3	8	20	396	467	112	287	452	12,940	12,027
New England	—	1	16	52	109	—	0	2	3	16	3	5	15	294	289
Connecticut	—	0	15	—	55	—	0	2	—	5	1	1	5	53	30
Maine§	—	0	2	16	17	—	0	1	1	2	—	0	1	3	10
Massachusetts	—	0	1	3	—	—	0	1	2	—	2	4	10	211	202
New Hampshire	—	0	3	5	—	—	0	0	—	—	—	0	2	14	19
Rhode Island§	—	0	6	15	23	—	0	1	—	7	—	0	5	13	18
Vermont§	—	0	2	13	14	—	0	0	—	2	—	0	1	—	10
Mid. Atlantic	5	3	14	164	285	—	0	3	24	28	21	35	50	1,665	1,551
New Jersey	—	0	0	—	—	—	0	0	—	—	3	4	13	203	198
New York (Upstate)	3	1	10	74	64	—	0	2	13	8	1	2	8	111	126
New York City	1	0	4	7	119	—	0	2	—	4	13	22	39	1,028	977
Pennsylvania	1	1	8	83	102	—	0	2	11	16	4	7	13	323	250
E.N. Central	—	11	41	555	571	—	1	7	81	76	20	39	61	1,844	1,181
Illinois	N	0	0	N	N	N	0	0	N	N	12	10	27	466	490
Indiana	—	3	32	184	189	—	0	6	27	23	1	2	10	135	124
Michigan	—	0	2	24	21	—	0	1	3	2	1	4	18	218	187
Ohio	—	7	18	347	361	—	1	4	51	51	—	6	14	270	318
Wisconsin	—	0	0	—	—	—	0	0	—	—	6	15	28	755	62
W.N. Central	—	2	161	106	194	—	0	3	21	38	2	6	12	286	379
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	19	15
Kansas	—	0	5	38	75	—	0	2	13	6	—	0	3	26	26
Minnesota	—	0	156	—	26	—	0	3	—	26	—	1	4	67	108
Missouri	—	1	5	54	82	—	0	1	6	3	2	3	8	153	214
Nebraska§	—	0	1	2	—	—	0	0	—	—	—	0	3	16	15
North Dakota	—	0	3	10	2	—	0	0	—	—	—	0	1	4	—
South Dakota	—	0	2	2	9	—	0	2	2	3	—	0	1	1	1
S. Atlantic	12	25	53	1,181	1,192	3	4	14	199	221	18	63	262	2,945	2,668
Delaware	—	0	2	18	3	—	0	2	3	—	—	0	3	27	15
District of Columbia	N	0	0	N	N	N	0	0	N	N	—	3	8	159	136
Florida	10	15	36	694	672	3	2	13	120	134	3	19	32	910	963
Georgia	—	8	25	368	407	—	1	5	68	74	—	14	227	685	635
Maryland§	—	0	1	4	5	—	0	0	—	1	4	6	16	263	316
North Carolina	N	0	0	N	N	N	0	0	N	N	7	9	31	508	266
South Carolina§	—	0	0	—	—	—	0	0	—	—	2	2	6	107	87
Virginia§	N	0	0	N	N	N	0	0	N	N	2	7	15	282	238
West Virginia	2	1	13	97	105	—	0	2	8	12	—	0	2	4	12
E.S. Central	7	4	25	235	294	—	0	3	32	57	9	22	36	1,019	1,031
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	18	379	412
Kentucky	—	1	5	68	71	—	0	2	8	11	—	1	10	62	79
Mississippi	—	0	3	4	40	—	0	1	3	14	7	4	16	197	155
Tennessee§	7	2	23	163	183	—	0	3	21	32	2	8	15	381	385
W.S. Central	1	1	6	82	88	—	0	3	16	13	35	54	79	2,469	2,147
Arkansas§	1	1	5	50	16	—	0	3	11	3	6	5	35	243	157
Louisiana	—	1	5	32	72	—	0	1	5	10	7	13	41	602	636
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	5	65	79
Texas§	—	0	0	—	—	—	0	0	—	—	22	31	49	1,559	1,275
Mountain	1	1	7	89	117	—	0	2	18	16	3	9	18	409	552
Arizona	—	0	0	—	—	—	0	0	—	—	—	3	9	170	288
Colorado	—	0	0	—	—	—	0	0	—	—	1	1	4	74	124
Idaho§	N	0	1	N	N	N	0	1	N	N	—	0	1	3	7
Montana§	—	0	0	—	1	—	0	0	—	—	—	0	7	1	—
Nevada§	1	0	4	30	52	—	0	2	6	6	1	1	10	89	70
New Mexico§	—	0	1	1	—	—	0	0	—	—	1	1	5	53	38
Utah	—	1	5	47	62	—	0	2	10	10	—	0	2	16	22
Wyoming§	—	0	2	11	2	—	0	1	2	—	—	0	1	3	3
Pacific	—	0	1	3	2	—	0	1	2	2	1	44	68	2,009	2,229
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	1
California	N	0	0	N	N	N	0	0	N	N	—	40	61	1,824	2,009
Hawaii	—	0	1	3	2	—	0	1	2	2	—	0	3	27	27
Oregon§	N	0	0	N	N	N	0	0	N	N	1	0	4	39	23
Washington	N	0	0	N	N	N	0	0	N	N	—	2	7	119	169
American Samoa	N	0	0	N	N	N	0	0	N	N	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	1	3	17	199	150
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending December 5, 2009, and November 29, 2008 (48th week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive§				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	58	365	1,035	15,578	26,918	—	0	43	346	687	—	0	45	316	667
New England	3	7	45	327	1,576	—	0	0	—	7	—	0	0	—	3
Connecticut	—	0	18	—	803	—	0	0	—	5	—	0	0	—	3
Maine¶	—	0	12	94	252	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	2	2	—	—	0	0	—	1	—	0	0	—	—
New Hampshire	3	4	11	184	237	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	1	4	—	—	0	0	—	1	—	0	0	—	—
Vermont¶	—	0	16	43	284	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	11	34	57	1,435	2,197	—	0	2	7	49	—	0	1	1	20
New Jersey	N	0	0	N	N	—	0	1	2	5	—	0	0	—	4
New York (Upstate)	N	0	0	N	N	—	0	1	3	24	—	0	1	1	7
New York City	—	0	0	—	—	—	0	1	2	8	—	0	0	—	7
Pennsylvania	11	34	57	1,435	2,197	—	0	0	—	12	—	0	0	—	2
E.N. Central	18	135	254	5,779	7,032	—	0	3	7	44	—	0	3	4	20
Illinois	—	32	73	1,435	1,308	—	0	2	4	12	—	0	0	—	8
Indiana	1	7	30	379	—	—	0	1	2	3	—	0	1	2	1
Michigan	16	41	87	1,729	2,795	—	0	0	—	11	—	0	0	—	6
Ohio	—	37	88	1,787	2,134	—	0	0	—	14	—	0	2	2	1
Wisconsin	1	9	55	449	795	—	0	1	1	4	—	0	0	—	4
W.N. Central	—	15	114	805	1,185	—	0	5	25	51	—	0	11	70	134
Iowa	N	0	0	N	N	—	0	0	—	3	—	0	1	5	3
Kansas	—	3	19	183	438	—	0	1	4	14	—	0	2	6	17
Minnesota	—	0	0	—	—	—	0	1	1	2	—	0	1	3	8
Missouri	—	8	51	522	694	—	0	2	3	12	—	0	0	—	3
Nebraska¶	N	0	0	N	N	—	0	2	11	7	—	0	6	40	40
North Dakota	—	0	108	83	—	—	0	0	—	2	—	0	1	1	35
South Dakota	—	0	2	17	53	—	0	3	6	11	—	0	2	15	28
S. Atlantic	16	34	146	1,771	4,322	—	0	3	9	20	—	0	1	3	20
Delaware	—	0	2	12	45	—	0	0	—	—	—	0	0	—	1
District of Columbia	—	0	3	12	21	—	0	0	—	4	—	0	0	—	4
Florida	7	21	67	1,087	1,515	—	0	1	2	3	—	0	1	1	—
Georgia	N	0	0	N	N	—	0	1	4	4	—	0	0	—	4
Maryland¶	N	0	0	N	N	—	0	0	—	6	—	0	1	2	8
North Carolina	N	0	0	N	N	—	0	0	—	2	—	0	0	—	1
South Carolina¶	—	0	54	154	798	—	0	2	3	—	—	0	0	—	1
Virginia¶	—	0	119	28	1,312	—	0	0	—	—	—	0	0	—	1
West Virginia	9	9	32	478	631	—	0	0	—	1	—	0	0	—	—
E.S. Central	—	6	26	377	1,079	—	0	6	35	48	—	0	4	26	57
Alabama¶	—	6	26	372	1,065	—	0	0	—	11	—	0	0	—	7
Kentucky	N	0	0	N	N	—	0	1	3	3	—	0	0	—	—
Mississippi	—	0	2	5	14	—	0	5	29	22	—	0	4	22	43
Tennessee¶	N	0	0	N	N	—	0	1	3	12	—	0	1	4	7
W.S. Central	—	82	747	3,822	7,402	—	0	16	103	69	—	0	6	33	62
Arkansas¶	—	0	30	115	691	—	0	1	4	7	—	0	0	—	2
Louisiana	—	1	7	76	69	—	0	2	10	18	—	0	4	10	31
Oklahoma	N	0	0	N	N	—	0	2	6	4	—	0	2	2	5
Texas¶	—	76	721	3,631	6,642	—	0	13	83	40	—	0	4	21	24
Mountain	10	21	71	1,174	1,992	—	0	12	75	103	—	0	16	118	184
Arizona	—	0	0	—	—	—	0	4	12	62	—	0	2	6	52
Colorado	8	9	33	485	806	—	0	7	35	17	—	0	14	66	54
Idaho¶	N	0	0	N	N	—	0	3	9	4	—	0	5	28	35
Montana¶	—	0	20	105	292	—	0	1	2	—	—	0	1	3	5
Nevada¶	N	0	0	N	N	—	0	2	7	9	—	0	1	5	7
New Mexico¶	—	0	20	134	208	—	0	2	6	5	—	0	1	2	3
Utah	2	9	32	450	676	—	0	0	—	6	—	0	0	—	20
Wyoming¶	—	0	1	—	10	—	0	1	4	—	—	0	2	8	8
Pacific	—	2	6	88	133	—	0	12	85	296	—	0	11	61	167
Alaska	—	1	5	53	71	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	7	59	291	—	0	6	44	153
Hawaii	—	0	4	35	62	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	1	1	3	—	0	3	6	13
Washington	N	0	0	N	N	—	0	6	25	2	—	0	3	11	1
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	1	1	—	62	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	6	26	405	549	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE III. Deaths in 122 U.S. cities,* week ending December 5, 2009 (48th week)

Reporting area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45–64	25–44	1–24	<1	
New England	611	419	144	26	8	14	60
Boston, MA	164	107	37	11	4	5	16
Bridgeport, CT	38	34	4	—	—	—	5
Cambridge, MA	11	7	4	—	—	—	2
Fall River, MA	24	18	5	—	1	—	1
Hartford, CT	65	43	16	4	1	1	2
Lowell, MA	22	19	1	2	—	—	5
Lynn, MA	10	7	2	1	—	—	1
New Bedford, MA	21	17	4	—	—	—	3
New Haven, CT	29	19	9	1	—	—	6
Providence, RI	61	41	11	2	2	5	2
Somerville, MA	3	3	—	—	—	—	—
Springfield, MA	62	43	19	—	—	—	8
Waterbury, CT	28	17	10	1	—	—	2
Worcester, MA	73	44	22	4	—	3	7
Mid. Atlantic	1,785	1,237	408	85	27	26	112
Albany, NY	58	34	19	1	2	2	6
Allentown, PA	21	17	2	1	1	—	1
Buffalo, NY	70	46	21	3	—	—	7
Camden, NJ	29	20	5	3	—	1	—
Elizabeth, NJ	26	13	10	2	1	—	2
Erie, PA	54	42	10	2	—	—	1
Jersey City, NJ	10	5	2	3	—	—	—
New York City, NY	911	638	207	36	13	15	53
Newark, NJ	15	7	7	1	—	—	1
Paterson, NJ	8	7	1	—	—	—	3
Philadelphia, PA	163	88	50	14	8	3	7
Pittsburgh, PA§	53	38	9	4	—	2	5
Reading, PA	41	30	8	3	—	—	1
Rochester, NY	97	66	22	7	—	2	7
Schenectady, NY	23	21	2	—	—	—	2
Scranton, PA	24	17	7	—	—	—	2
Syracuse, NY	112	90	17	3	1	1	11
Trenton, NJ	31	26	4	1	—	—	1
Utica, NY	17	12	3	1	1	—	—
Yonkers, NY	22	20	2	—	—	—	2
E.N. Central	1,847	1,250	422	103	36	36	150
Akron, OH	59	44	9	4	1	1	3
Canton, OH	45	35	10	—	—	—	2
Chicago, IL	U	U	U	U	U	U	U
Cincinnati, OH	91	55	21	5	7	3	11
Cleveland, OH	271	184	65	15	4	3	17
Columbus, OH	274	167	76	19	8	4	22
Dayton, OH	153	110	36	6	1	—	13
Detroit, MI	141	83	38	13	4	3	7
Evansville, IN	29	22	7	—	—	—	—
Fort Wayne, IN	76	56	12	6	—	2	3
Gary, IN	17	9	6	1	—	1	—
Grand Rapids, MI	71	48	14	4	1	4	9
Indianapolis, IN	163	102	38	11	5	7	19
Lansing, MI	42	31	9	2	—	—	3
Milwaukee, WI	85	57	23	3	1	1	8
Peoria, IL	65	45	11	3	2	4	11
Rockford, IL	62	44	13	4	1	—	5
South Bend, IN	47	36	8	1	1	1	6
Toledo, OH	92	68	19	5	—	—	5
Youngstown, OH	64	54	7	1	—	2	6
W.N. Central	736	479	178	45	15	19	59
Des Moines, IA	113	72	29	8	3	1	10
Duluth, MN	36	21	12	3	—	—	5
Kansas City, KS	32	17	10	3	2	—	1
Kansas City, MO	129	91	26	7	2	3	8
Lincoln, NE	49	38	7	3	1	—	2
Minneapolis, MN	72	40	23	6	1	2	8
Omaha, NE	111	78	25	2	1	5	11
St. Louis, MO	52	26	13	6	2	5	4
St. Paul, MN	60	47	8	4	—	1	5
Wichita, KS	82	49	25	3	3	2	5
S. Atlantic	1,384	906	312	81	44	41	83
Atlanta, GA	161	103	32	9	6	11	9
Baltimore, MD	103	54	37	9	2	1	8
Charlotte, NC	138	87	32	12	6	1	14
Jacksonville, FL	235	169	53	6	7	—	20
Miami, FL	106	70	19	10	6	1	10
Norfolk, VA	81	54	13	4	2	8	4
Richmond, VA	78	48	17	9	2	2	1
Savannah, GA	59	41	12	4	1	1	2
St. Petersburg, FL	51	34	10	2	1	4	2
Tampa, FL	248	161	60	12	8	7	11
Washington, D.C.	107	73	23	4	2	5	2
Wilmington, DE	17	12	4	—	1	—	—
E.S. Central	997	642	250	69	25	11	83
Birmingham, AL	196	118	56	13	7	2	16
Chattanooga, TN	97	62	30	4	1	—	6
Knoxville, TN	125	93	15	14	3	—	15
Lexington, KY	89	55	18	11	3	2	5
Memphis, TN	184	117	51	8	5	3	17
Mobile, AL	90	59	25	5	—	1	8
Montgomery, AL	51	33	15	3	—	—	2
Nashville, TN	165	105	40	11	6	3	14
W.S. Central	1,469	956	351	104	31	27	90
Austin, TX	83	59	17	7	—	—	6
Baton Rouge, LA	63	44	10	7	1	1	—
Corpus Christi, TX	63	42	14	3	2	2	4
Dallas, TX	265	164	63	25	6	7	16
El Paso, TX	106	72	25	4	5	—	3
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	321	200	78	26	7	10	20
Little Rock, AR	101	59	31	8	1	2	9
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	298	215	58	15	7	3	24
Shreveport, LA	34	17	15	1	—	1	2
Tulsa, OK	135	84	40	8	2	1	6
Mountain	1,087	732	250	69	19	16	83
Albuquerque, NM	114	75	25	10	4	—	12
Boise, ID	48	38	6	1	2	1	2
Colorado Springs, CO	76	55	17	2	2	—	2
Denver, CO	74	42	24	6	—	2	3
Las Vegas, NV	187	130	40	13	2	2	16
Ogden, UT	42	30	10	—	2	—	7
Phoenix, AZ	179	102	52	16	3	5	17
Pueblo, CO	35	26	6	3	—	—	2
Salt Lake City, UT	163	109	37	10	2	5	15
Tucson, AZ	169	125	33	8	2	1	7
Pacific	1,950	1,371	406	102	44	25	203
Berkeley, CA	16	15	1	—	—	—	3
Fresno, CA	158	112	30	12	4	—	23
Glendale, CA	28	25	3	—	—	—	7
Honolulu, HI	72	59	8	4	1	—	5
Long Beach, CA	68	58	5	3	2	—	16
Los Angeles, CA	292	180	74	20	9	9	37
Pasadena, CA	24	21	3	—	—	—	5
Portland, OR	132	86	36	7	1	1	8
Sacramento, CA	243	174	50	10	8	1	23
San Diego, CA	187	134	43	5	3	2	15
San Francisco, CA	127	78	32	14	—	2	18
San Jose, CA	187	141	34	5	3	4	14
Santa Cruz, CA	51	39	8	2	2	—	5
Seattle, WA	172	107	43	11	5	6	14
Spokane, WA	69	51	13	3	2	—	5
Tacoma, WA	124	91	23	6	4	—	5
Total¶	**11,866**	**7,992**	**2,721**	**684**	**249**	**215**	**923**

U: Unavailable. —:No reported cases.

* Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of >100,000. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

† Pneumonia and influenza.

§ Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶ Total includes unknown ages.

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