



# MMWR™

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### Alcohol and Suicide Among Racial/Ethnic Populations — 17 States, 2005–2006

During 2001–2005, an estimated annual 79,646 alcohol-attributable deaths (AAD) and 2.3 million years of potential life lost (YPLL) were attributed to the harmful effects of excessive alcohol use (1). An estimated 5,800 AAD and 189,667 YPLL were associated annually with suicide (1). The burden of suicide varies widely among racial and ethnic populations in the United States, and limited data are available to describe the role of alcohol in suicides in these populations. To examine the relationship between alcohol and suicide among racial/ethnic populations, CDC analyzed data from the National Violent Death Reporting System (NVDRS) for the 2-year period 2005–2006 (the most recent data available). This report summarizes the results of that analysis, which indicated that the overall prevalence of alcohol intoxication (i.e., blood alcohol concentration [BAC] at or above the legal limit of 0.08 g/dL) was nearly 24% among suicide decedents tested for alcohol, with the highest percentage occurring among American Indian/Alaska Natives (AI/ANs) (37%), followed by Hispanics (29%) and persons aged 20–49 years (28%). These results indicate that many populations can benefit from comprehensive and culturally appropriate suicide-prevention strategies that include efforts to reduce alcohol consumption, especially programs that focus on persons aged <50 years.

NVDRS is an active, state-based surveillance system that collects information on homicides, suicides, deaths of undetermined intent, deaths from legal intervention (e.g., involving a person killed by an on-duty police officer), and unintentional firearm deaths. Suicide decedents are identified as those with death certificates that list *International Classification of Diseases, 10th Revision* codes X60–84 or Y87.0 as the primary cause of death. Information on race and ethnicity are recorded as separate items in NVDRS consistent with other vital statistics reporting; for this analysis, CDC used five racial/ethnic categories: Hispanic, non-Hispanic white, non-Hispanic black,

non-Hispanic AI/AN, and non-Hispanic Asian/Pacific Islander (A/PI). Analysis was limited to persons aged  $\geq 10$  years. Data from 2 years, 2005 and 2006, were aggregated to produce more stable estimates than could be obtained from an analysis of data from a single year.

A total of 19,255 suicides occurred in the 17 states contributing data to NVDRS during 2005–2006 (Alaska, California,\* Colorado, Georgia, Kentucky, Massachusetts, Maryland, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin) (2). This analysis excluded 21 decedents because they were aged <10 years or of unknown age and 240 decedents who were classified as “other” race or unknown race and/or ethnicity, resulting in a final sample of 18,994.

Alcohol-related information was assessed by NVDRS through questions asked of next of kin, judgment by medical or law enforcement officials, or laboratory data.† Information collected related to 1) the decedent’s alcohol dependence or problem (whether the victim was perceived by self or others to have a problem with, or to be addicted to, alcohol); 2) suspected alcohol use (whether alcohol use by the decedent in the hours preceding the incident was suspected, based on witness or investigator reports or circumstantial evidence, such as empty alcohol containers around the decedent); 3) testing for alcohol

\*The California system covers four major metropolitan counties.

† Additional information about NVDRS methods is available at [http://www.cdc.gov/ncipc/pub-res/nvdrs-coding/vs3/nvdrs\\_coding\\_manual\\_version\\_3-a.pdf](http://www.cdc.gov/ncipc/pub-res/nvdrs-coding/vs3/nvdrs_coding_manual_version_3-a.pdf) and <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5801a1.htm>.

#### INSIDE

- 641 Novel Influenza A (H1N1) Virus Infections Among Health-Care Personnel — United States, April–May 2009
- 646 QuickStats

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(i.e., whether the decedents blood was tested for the presence of alcohol); 4) alcohol test results (recorded as positive, negative, not applicable [i.e., not tested], or unknown); and 5) the decedent's BAC measured in g/dL. A BAC  $\geq 0.08$  g/dL was used to define intoxication consistent with the standard set by the U.S. Department of Transportation (3). Coroner and medical examiner records indicated that nearly 70% of the decedents were tested for BAC. The analysis of BAC excluded persons not tested for alcohol and persons who were tested for alcohol but for whom no quantitative values were recorded.

BAC was examined both as a continuous variable and as a multiple of the legal limit ( $\geq 0.24$ ,  $\geq 0.16$ ,  $\geq 0.08$ , and  $< 0.08$  g/dL, and three times, two times, or any level greater than or equal to the legal limit for intoxication versus below the limit). Prevalence estimates and confidence intervals were calculated, and statistical significance was assessed by a chi-square test.

The highest percentage of suicide decedents characterized as dependent on alcohol was observed among non-Hispanic AI/ANs (21%); the lowest percentage was observed among non-Hispanic blacks (7%) (Table). Recent alcohol use was suspected in approximately 46% of non-Hispanic AI/ANs, nearly 30% of Hispanics, and 26% of non-Hispanic whites.

The highest percentage of suicide decedents tested for alcohol was among non-Hispanic blacks (76%). Alcohol was detected in the blood of 33.2% of decedents tested, with the highest percentages occurring among non-Hispanic AI/AN (45.5%) and Hispanic (39.0%) subjects tested (Table).

For all age groups, the highest percentage of decedents with BACs  $\geq 0.08$  g/dL was among AI/ANs aged 30–39 years (54.3%), followed by AI/AN and Hispanic decedents aged 20–29 years (50.0% and 37.3%, respectively). Among decedents tested who were aged 10–19 years (all of whom were under the legal drinking age in the United States), 12% had BACs  $\geq 0.08$  g/dL; the levels ranged from 1.3% in non-Hispanic blacks to 28.6% in non-Hispanic A/PIs (Figure 1). Among male decedents tested, 25% tested above legal intoxication; among females tested, 18% tested above legal intoxication (Figure 2). Males had a significantly higher percentage with BACs  $\geq 0.08$  g/dL than females ( $p < 0.02$ , by chi-square test) in all racial/ethnic populations except non-Hispanic AI/ANs, for whom the percentages for each sex were equal (37%) ( $p = 0.99$ , by chi-square test).

**Reported by:** AE Crosby, MD, V Espitia-Hardeman, MSc, HA Hill, MD, PhD, L Ortega, MD, C Clavel-Arcas, MD, National Center for Injury Prevention and Control, CDC.

**Editorial Note:** Researchers have proposed various mechanisms regarding the role of acute or chronic alcohol use in suicidal behavior (4). These include alcohol's effect on promoting depression and hopelessness, promoting disinhibition of

**TABLE. Alcohol-related characteristics among suicide decedents, by race/ethnicity — National Violent Death Reporting System, 17 states, 2005–2006**

Characteristic	Race/Ethnicity																	
	Total (N = 18,994)			Hispanic (n = 1,111)			White, non-Hispanic (n = 15,774)			Black, non-Hispanic (n = 1,329)			AI/AN <sup>†</sup> , non-Hispanic (n = 329)			A/PI, <sup>§</sup> non-Hispanic (n = 451)		
	No.	(%)	(95% CI)*	No.	(%)	(95% CI)	No.	(%)	(95% CI)	No.	(%)	(95% CI)	No.	(%)	(95% CI)	No.	(%)	(95% CI)
<b>Alcohol dependence<sup>¶</sup></b>	<b>2,961</b>	<b>(15.6)</b>	<b>(15.1–16.1)</b>	193	(17.4)	(15.1–19.6)	2,576	(16.3)	(15.8–16.9)	90	(6.8)	(5.4–8.1)	69	(21.0)	(16.6–25.4)	33	(7.3)	(4.9–9.7)
<b>Recent alcohol use suspected<sup>**</sup></b>	<b>4,783</b>	<b>(25.2)</b>	<b>(24.6–25.8)</b>	328	(29.5)	(26.8–32.2)	4,020	(25.5)	(24.8–26.2)	217	(16.3)	(14.3–18.3)	152	(46.2)	(40.8–51.6)	66	(14.6)	(11.4–17.9)
<b>Tested for alcohol</b>	<b>13,208</b>	<b>(69.5)</b>	<b>(68.9–70.2)</b>	763	(68.7)	(66.0–71.4)	10,944	(69.4)	(68.7–70.1)	1,044	(75.6)	(73.2–77.9)	225	(68.4)	(63.4–73.4)	272	(60.3)	(55.8–64.8)
<b>Alcohol test positive<sup>††§§¶¶</sup></b>	<b>4,322</b>	<b>(33.2)</b>	<b>(32.4–34.0)</b>	296	(39.2)	(35.7–42.6)	3,616	(33.6)	(32.7–34.5)	247	(24.9)	(22.2–27.6)	101	(45.5)	(39.0–52.0)	62	(22.9)	(17.9–27.9)
<b>Blood alcohol concentration (g/dL)<sup>§§***</sup></b>																		
≥0.24	608	(5.4)	(5.0–5.8)	43	(6.7)	(4.8–8.6)	520	(5.6)	(5.1–6.0)	15	(1.8)	(0.9–2.6)	27	(13.2)	(8.5–17.8)	3	(1.6)	(0.0–3.4)
≥0.16	1,531	(13.6)	(13.0–14.3)	122	(18.9)	(15.9–22.0)	1,300	(14.0)	(13.2–14.6)	53	(6.2)	(4.6–7.8)	49	(23.9)	(18.1–29.7)	7	(3.7)	(1.0–6.4)
≥0.08	2,649	(23.6)	(22.8–24.4)	185	(28.7)	(25.2–32.2)	2,243	(24.1)	(23.2–24.9)	123	(14.3)	(12.0–16.7)	76	(37.1)	(30.5–43.7)	22	(11.6)	(7.1–16.2)
<0.08	8,569	(76.4)	(75.6–77.2)	459	(71.3)	(67.8–74.8)	7,078	(75.9)	(75.1–76.8)	736	(85.7)	(83.3–88.0)	129	(62.9)	(56.3–69.5)	167	(88.4)	(83.8–92.9)

\* Confidence interval.

<sup>†</sup> American Indian/Alaska Native.<sup>§</sup> Asian/Pacific Islander.<sup>¶</sup> Based on whether the decedent was perceived by self (before death) or others (before or after death) to have a problem with alcohol or to be addicted to alcohol.<sup>\*\*</sup> Based on whether alcohol use by the decedent that preceded and influenced the incident was suspected, based on witness or investigator reports or circumstantial evidence, such as empty alcohol containers around the decedent.<sup>††</sup> Defined as alcohol present in the blood at levels above the limits of detection of the test.<sup>§§</sup> Among those with known test results.<sup>¶¶</sup> Number of decedents for whom alcohol test result was unknown was 195 total, seven for Hispanics, 172 for non-Hispanic whites, 12 for non-Hispanic blacks, three for AI/ANs, and one for A/PIs.<sup>\*\*\*</sup> Number of decedents for whom alcohol test result was unknown was 1,990 total, 119 for Hispanics, 1,623 for non-Hispanic whites, 145 for non-Hispanic blacks, 20 for AI/ANs, and 83 for A/PIs.

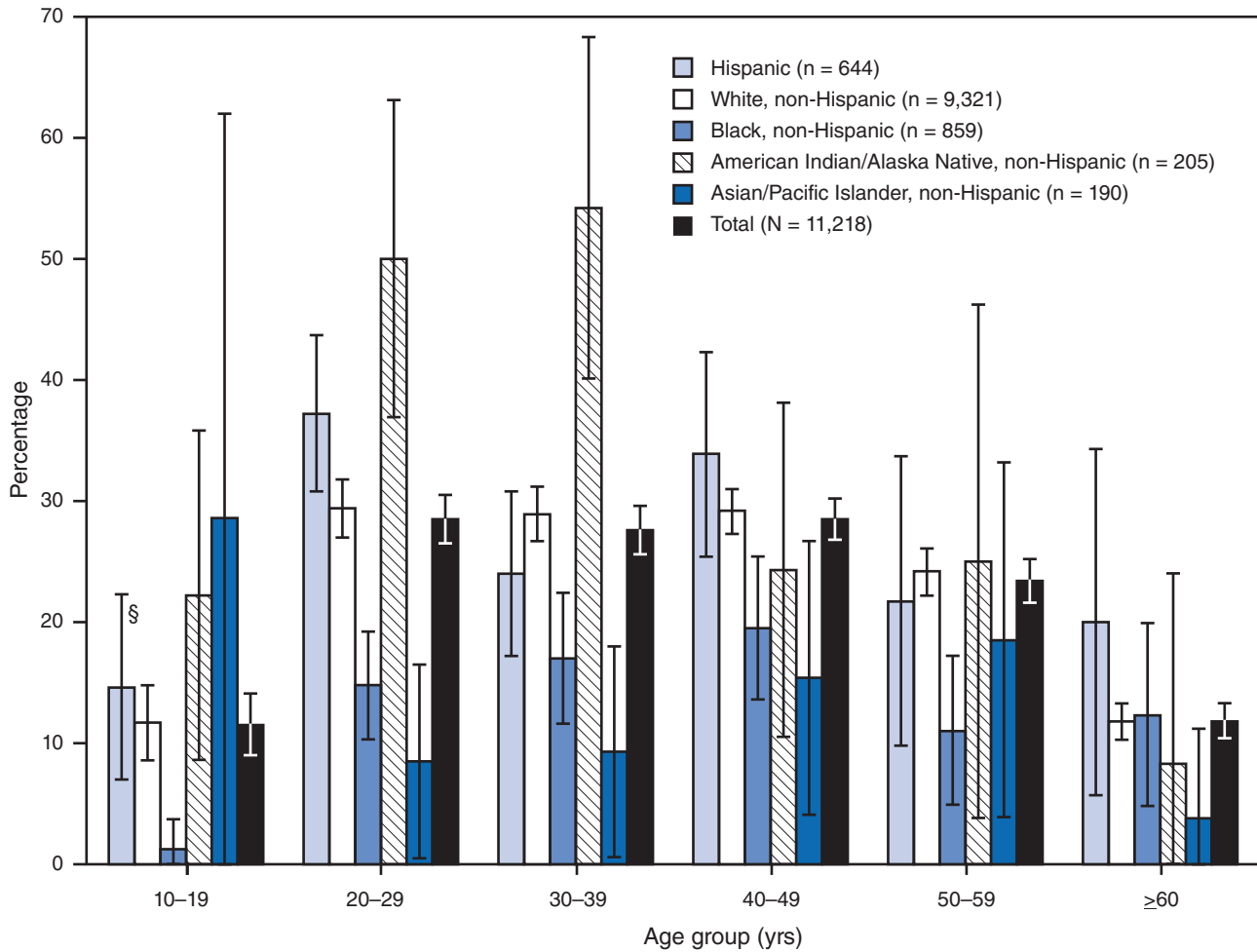
negative behavior and impulsivity, impairing problem solving, and contributing to disruption in interpersonal relationships (4). Although numerous studies show that alcohol use often plays a role in suicide, the association can vary from population to population. The results of this analysis indicate that alcohol intoxication likely was present in nearly one quarter of the tested suicide deaths recorded by NVDRS in 17 states during 2005–2006; especially among non-Hispanic AI/ANs and Hispanics. Racial/ethnic differences in the prevalence of problem drinking cannot explain the pattern in alcohol-associated suicides. Data from the Behavioral Risk Factor Surveillance System that examined binge drinking among different racial/ethnic populations showed that the highest percentage occurred among Hispanics (5).

The analysis by sex reveals that the percentage(s) of tested subjects with BACs at or over the legal limit for intoxication was higher for males than females in all racial/ethnic populations except non-Hispanic AI/ANs, for whom the percentage(s) for each sex were equal. Among suicide decedents, other studies also show higher levels of intoxication among males compared with females (4).

The findings of this report are subject to at least five limitations. First, police and coroner records might estimate alcohol

use inaccurately because persons considered unlikely to have been drinking often are not tested. For example, one study showed that women were rarely tested for alcohol, and males aged ≥60 years were tested less commonly than young adult males (6). Second, injury mortality deaths probably underestimate from 25% to 35% the actual numbers for AI/ANs and certain other racial/ethnic populations, such as Hispanics, because of the misclassification of race/ethnicity of decedents on death certificates (7). Third, incorrect or incomplete information might have resulted in misclassification of the intent of the deceased, especially when distinguishing among suicide, undetermined deaths, and unintentional injury deaths (4). Studies estimate that 2%–45% of suicides are misclassified as other causes, whereas few (zero to 1%) deaths classified as suicides have been found to be actually attributable to other causes (4). Fourth, autopsy practices and laboratory protocols differ from jurisdiction to jurisdiction, potentially leading to uneven assessment of alcohol-related factors. NVDRS provides some recommendations for participating states that can reduce these differences (2,6), but the extent to which these recommendations have led to improvements is not known. Finally, these results reflect the data from the 17 states studied and are not nationally representative.

**FIGURE 1. Percentage of suicide decedents with blood alcohol concentrations (BACs)  $\geq 0.08$  g/dL,\* by race/ethnicity and age group† — National Violent Death Reporting System, 17 states, 2005–2006**



\* Sample sizes are based on the number of decedents tested for alcohol minus the number for whom the BAC value was unknown.

† Among those with known test results.

§ 95% confidence interval.

Effective, comprehensive suicide-prevention programs have been developed. These programs focus on an array of risk or protective factors, including alcohol consumption, substance misuse, and social support; however, few have been developed specifically for minority populations (4). Some international studies suggest that measures to restrict alcohol use can reduce suicides (8). The measures include raising the minimum legal drinking age; increasing taxes on alcohol sales; limiting the sale of alcohol products by age of purchaser, time of day available, or business type; and mandating that workplaces be alcohol-free. An example of a successful comprehensive prevention program that included a component addressing alcohol misuse and was implemented in an AI/AN community is the Natural Helpers program (9). This multicomponent program involved

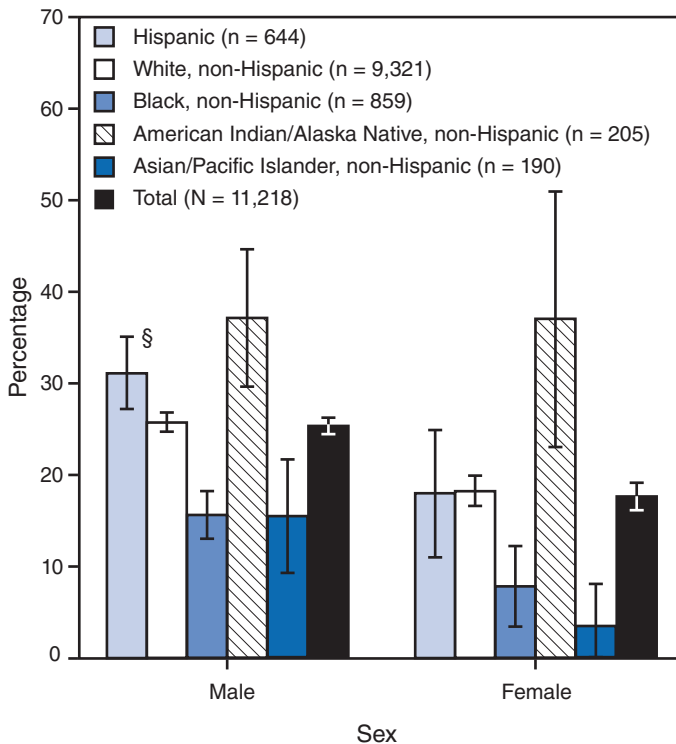
personnel who were trained to respond to young persons in crisis, notify mental health professionals in the event of a crisis, and provide health education in the schools and community. Other program components included outreach to families after a suicide or traumatic death, immediate response and follow-up for reported at-risk youth, alcohol and substance-abuse programs, community education about suicide prevention, and suicide-risk screening in mental health and social service programs.

**Acknowledgments**

This report is based, in part, on contributions by NVDRS staff at state health departments; and L Frazier and J Barnes, National Center for Injury Prevention and Control, CDC.



**FIGURE 2. Percentage of suicide decedents with blood alcohol concentrations (BACs)  $\geq 0.08$  g/dL,\* by race/ethnicity and sex† — National Violent Death Reporting System, 17 states, 2005–2006**



\* Sample sizes are based on the number of decedents tested for alcohol minus the number for whom the BAC value was unknown.

† Among those with known test results.

§ 95% confidence interval.

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## Novel Influenza A (H1N1) Virus Infections Among Health-Care Personnel — United States, April–May 2009

Soon after identification of novel influenza A (H1N1) virus infections in the United States in mid-April 2009, CDC provided interim recommendations to reduce the risk for transmission in health-care settings. These included recommendations on use of personal protective equipment (PPE), management of health-care personnel (HCP) after unprotected exposures, and instruction of ill HCP not to report to work (1). To better understand the risk for acquiring infection with the virus among HCP and the impact of infection-control recommendations, CDC solicited reports of infected HCP from state health departments. As of May 13, CDC had received 48 reports of confirmed or probable infections with novel influenza A (H1N1) virus\* (2); of these, 26 reports included detailed case reports with information regarding risk factors that might have led to infection. Of the 26 cases, 13 (50%) HCP were deemed to have acquired infection in a health-care setting, including one instance of probable HCP to HCP transmission and 12 instances of probable or possible patient to HCP transmission. Eleven HCP had probable or possible acquisition in the community, and two had no reported exposures in either health-care or community settings. Among 11 HCP with probable or possible patient to HCP acquisition and available information on PPE use, only three reported always using either a surgical mask or an N95 respirator. These findings suggest that transmission of novel influenza A (H1N1) virus to HCP is occurring in both health-care and community settings and that additional messages aimed at reinforcing current infection-control recommendations are needed.

After identifying the first two cases of novel influenza A (H1N1) infection in the United States on April 15, 2009, CDC requested that all state and local health departments implement enhanced surveillance for unsubtypable influenza A viruses (3). On May 4, CDC began distributing a data collection instrument to health departments to gather additional information on infected HCP. The instrument included questions on job type, facility type, contact with patients with novel influenza A (H1N1) infections or respiratory illness (i.e., pneumonia, upper respiratory tract infections, or influenza-like illness), and

\* A confirmed case of novel influenza A (H1N1) virus infection was defined in a person with an influenza-like illness and laboratory-confirmed novel influenza A (H1N1) virus infection by real-time reverse transcription–polymerase chain reaction (rRT-PCR) or viral culture. A probable case was defined in a person with an influenza-like illness who was positive for influenza A, but negative for human H1 and H3 by influenza rRT-PCR.

use of PPE (i.e., gloves, gowns, surgical masks, N95 respirators, or eye protection [goggles or face shield]). For this analysis, HCP were defined as employees, students, contractors, clinicians, or volunteers whose activities involved contact with patients in a health-care or laboratory setting. Only HCP with confirmed or probable novel influenza A (H1N1) infections were included in the analysis.

Reports on HCP cases were reviewed by infection-control staff members at CDC. Cases were categorized, using criteria developed for this investigation, as having potential acquisition in the community or in a health-care setting.<sup>†</sup> The criteria used to determine the most likely source of acquisition were based on exposures indicated on the data collection instrument during the 7 days preceding symptom onset. PPE use was used to assign a level of certainty (probable or possible) to patient to HCP transmission, but PPE use was not used to distinguish between acquisition in community or health-care settings.

CDC received 48 reports of confirmed or probable novel influenza A (H1N1) infection among HCP from 18 states. Detailed information on health-care exposures was obtained for 26 cases (18 confirmed and eight probable) reported from 11 states (Table 1). Dates of illness onset ranged from April 23 to May 4. Job type was available for 25 HCP: five registered nurses (20%), four nursing assistants (16%), four physicians (16%), and 12 persons in 10 other occupations.<sup>§</sup> Two (8%) of these infected HCP were hospitalized, one of whom reported having underlying medical conditions. Neither hospitalized HCP was admitted to an intensive-care unit; no HCP died. Among the 16 HCP for whom such information was available, eight had been vaccinated for seasonal influenza since September 2008.

Among the 26 infected HCP, 12 (46%) reported caring for a patient with either novel influenza A (H1N1) infection (six) or respiratory illness (six) (Table 2). Six HCP (23%) reported

**TABLE 1. Number and percentage of health-care personnel (N = 26) with confirmed or probable novel influenza A (H1N1) infection,\* by selected characteristics — United States, April–May 2009**

Characteristic	No.	(%) <sup>†</sup>
<b>Case status</b>		
Confirmed	18	(69)
Probable	8	(31)
<b>Sex (n = 23)</b>		
Male	4	(17)
Female	19	(83)
<b>Age group (yrs) (n = 20)</b>		
20–29	8	(40)
30–39	7	(35)
40–49	3	(15)
≥50	2	(10)
<b>Race/Ethnicity (n = 22)</b>		
White, non-Hispanic	12	(55)
Hispanic	5	(23)
Black, non-Hispanic	2	(9)
Asian/Pacific Islander	2	(9)
Other	1	(5)
<b>Job type (n = 25)</b>		
Registered nurse	5	(20)
Nursing assistant	4	(16)
Physician	4	(16)
Licensed practical nurse	2	(8)
Medical assistant	2	(8)
Physician's assistant	1	(4)
Nurse anesthetist	1	(4)
Orthodontic clinical assistant	1	(4)
Pharmacy technician	1	(4)
Physical therapist	1	(4)
Ward clerk	1	(4)
Student	1	(4)
Receptionist	1	(4)
<b>Facility type<sup>§</sup> (n = 25)</b>		
Outpatient	10	(40)
Inpatient, acute care	8	(32)
Long-term care facility/Long-term acute-care facility	2	(8)
Emergency department	2	(8)
None	3	(12)

\* A confirmed case of novel influenza A (H1N1) virus infection was defined in a person with an influenza-like illness and laboratory-confirmed novel influenza A (H1N1) virus infection by real-time reverse transcription–polymerase chain reaction (rRT-PCR) or viral culture. A probable case was defined in a person with an influenza-like illness who was positive for influenza A, but negative for human H1 and H3 by influenza rRT-PCR.

<sup>†</sup> Percentages in groupings might not add to 100% because of rounding.

<sup>§</sup> Facility in which health-care personnel worked during the week preceding symptom onset.

<sup>†</sup> All exposures occurred ≤7 days before symptom onset. *Health-care settings:* Probable patient to HCP transmission was defined as exposure to a patient with known novel influenza A (H1N1) virus infection without using a surgical mask or N95 respirator. Possible patient to HCP transmission was defined as exposure to a patient with known novel H1N1 virus infection while using a surgical mask or N95 respirator or exposure to a patient with respiratory illness (i.e., pneumonia, upper respiratory tract infections, or influenza-like illness) regardless of the use of respiratory PPE. Probable HCP to HCP transmission was defined as contact with a coworker with confirmed or probable novel H1N1 virus infection or contact with a coworker with respiratory illness who traveled to Mexico. *Community settings:* Probable community transmission was defined as exposure to a person with confirmed or probable novel H1N1 virus infection outside of a health-care setting, or travel to Mexico, or having no contact with a health-care setting. Possible community transmission was defined as contact with a person with respiratory illness outside of a health-care setting with no other reported exposures.

<sup>§</sup> Licensed practical nurse and medical assistant (two each); physician's assistant, nurse anesthetist, orthodontic clinical assistant, pharmacy technician, physical therapist, ward clerk, student, and receptionist (one each).

**TABLE 2. Reported exposures and personal protective equipment (PPE) use among health-care personnel (HCP) (N = 26) with confirmed or probable novel influenza A (H1N1) infection — United States, April–May 2009**

Characteristic	No.	(%)*
<b>Reported exposures<sup>†</sup></b>		
Cared for a patient with H1N1 infection	6	(23)
Cared for a patient with respiratory illness (H1N1 status unknown)	6	(23)
Travel to Mexico	4	(15)
Close/family contact with H1N1 infection	3	(12)
Close/family contact with respiratory illness	3	(12)
No contact with a health-care setting	3	(12)
Coworker with respiratory illness and recent travel to Mexico	1	(4)
<b>Postulated exposure source<sup>§</sup></b>		
Probable community transmission	10	(38)
Probable transmission from patient to HCP	5	(19)
Possible transmission from patient to HCP	7	(27)
Probable transmission from HCP to HCP	1	(4)
Possible community transmission	1	(4)
Unknown source	2	(8)
<b>PPE use among HCP (n = 12) with probable or possible patient to HCP transmission</b>		
<i>Surgical mask (n = 10)</i>		
Always	2	
Sometimes	3	
Never	5	
<i>N95 respirator (n = 11)</i>		
Always <sup>¶</sup>	1	
Sometimes**	2	
Never	8	
<i>N95 respirator or surgical mask (n = 11)</i>		
Always	3	
Sometimes	4	
Never	4	
<i>Gloves (n = 11)</i>		
Always	5	
Sometimes	1	
Never	5	
<i>Gown (n = 10)</i>		
Always	0	
Sometimes	3	
Never	7	
<i>Eye protection (n = 10)</i>		
Always	0	
Sometimes	1	
Never	9	

\* Percentages in groupings might not add to 100% because of rounding.

<sup>†</sup> During the week preceding symptom onset. Two HCP had more than one type of exposure, and two HCP had no reported exposures.

<sup>§</sup> All exposures occurred  $\leq 7$  days before symptom onset. *Health-care settings:* Probable patient to HCP transmission was defined as exposure to a patient with known novel influenza A (H1N1) virus infection without using a surgical mask or N95 respirator. Possible patient to HCP transmission was defined as exposure to a patient with known novel H1N1 virus infection while using a surgical mask or N95 respirator or exposure to a patient with respiratory illness (i.e., pneumonia, upper respiratory tract infections, or influenza-like illness) regardless of the use of respiratory PPE. Probable HCP to HCP transmission was defined as contact with a coworker with confirmed or probable novel H1N1 virus infection or contact with a coworker with respiratory illness who traveled to Mexico. *Community settings:* Probable community transmission was defined as exposure to a person with confirmed or probable novel H1N1 virus infection outside of a health-care setting, or travel to Mexico, or having no contact with a health-care setting. Possible community transmission was defined as contact with a person with respiratory illness outside of a health-care setting with no other reported exposures.

<sup>¶</sup> Not fit-tested

\*\* Fit-tested.

having a close contact or family member with either respiratory illness (three) or novel H1N1 infection (three); four (15%) reported recent travel to Mexico. By using the criteria for assessment of infection acquisition, 13 HCP (50%) were deemed to have been infected in a health-care setting, including five instances of probable patient to HCP transmission,<sup>¶</sup> seven of possible patient to HCP transmission, and one of probable HCP to HCP transmission. Community transmission was deemed most likely for 11 HCP (42%); two HCP (8%) had no reported exposures in either health-care or community settings.

Of the 12 HCP with probable or possible patient to HCP acquisition, 11 reported information on their use of PPE when caring for the presumed source patient. Only three reported always using either a surgical mask (two) or an N95 respirator (one) (Table 2). Five reported always using gloves. None reported always using eye protection. None reported always using gloves, gown, and either surgical mask or N95 respirator.

Among the three HCP who reported always using either a surgical mask or N95 respirator, a physician with possible patient to HCP acquisition reported always using an N95 respirator when with the presumed source patient. However, the physician also reported never having had a fit test for the respirator, and information was not available on whether the physician used a gown or eye protection (Table 3). A nurse anesthetist with possible patient to HCP transmission reported always using gloves and a surgical mask with the presumed source patient, but sometimes using a gown, N95 respirator, and eye protection. In addition, a registered nurse with possible patient to HCP transmission (who was caring for a novel H1N1 patient on droplet precautions) reported always using a surgical mask and gloves with the presumed source patient but never using a gown, N95 respirator, or eye protection.

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<sup>¶</sup> One HCP had both 1) exposure to a patient with known novel influenza A (H1N1) infection while using only gloves for PPE (probable patient to HCP transmission) and 2) exposure to a community contact with respiratory illness (possible community transmission). For this HCP, the route of transmission was categorized as probable patient to HCP transmission.

**TABLE 3. Use of personal protective equipment (PPE)\* among health-care personnel (HCP) (n = 12) with probable or possible patient to HCP transmission of novel influenza A (H1N1) infection, by job type and facility type — United States, April–May 2009**

Job type	Transmission type <sup>†</sup>	Facility type	Gloves	Gown	Surgical mask	N95 respirator	Eye protection
Nursing assistant	Probable patient to HCP	Inpatient, acute care	Never	Never	Never	Never	Never
Medical assistant	Probable patient to HCP	Outpatient	Never	Never	Sometimes	Never	Never
Licensed practical nurse	Probable patient to HCP	Outpatient	Never	Never	Never	Never	Never
Physician's assistant	Probable patient to HCP	Outpatient	Always	Never	Never	Never	Never
Registered nurse	Probable patient to HCP	Outpatient	Never	Never	Sometimes	Never	Never
Nursing assistant	Possible patient to HCP	Inpatient, acute care	Always	Sometimes	Never	Sometimes	Never
Physician	Possible patient to HCP	Outpatient	Always	— <sup>§</sup>	—	Always	—
Licensed practical nurse	Possible patient to HCP	Inpatient, long-term care	Sometimes	Sometimes	Sometimes	Never	Never
Nurse anesthetist	Possible patient to HCP	Inpatient, acute care	Always	Sometimes	Always	Sometimes	Sometimes
Registered nurse	Possible patient to HCP	Inpatient, acute care	Always	Never	Always	Never	Never
Medical assistant	Possible patient to HCP	Outpatient	Never	Never	Never	Never	Never
Physician	Possible patient to HCP	Inpatient, acute care	—	—	—	—	—

\* When with presumed source patient.

<sup>†</sup> All exposures occurred  $\leq 7$  days before symptom onset. Probable patient to HCP transmission was defined as exposure to a patient with known novel influenza A (H1N1) virus infection without using a surgical mask or N95 respirator. Possible patient to HCP transmission was defined as exposure to a patient with known novel H1N1 virus infection while using a surgical mask or N95 respirator or exposure to a patient with respiratory illness (i.e., pneumonia, upper respiratory tract infections, or influenza-like illness) regardless of the use of respiratory PPE.

<sup>§</sup> Information not available.

**Editorial Note:** Routine infection-control recommendations to decrease the risk for transmission of seasonal influenza to HCP include vaccination, isolation of infected patients in single rooms, and use of standard precautions and droplet precautions (4,5). For infections with the novel influenza A (H1N1) virus, because of the lack of a vaccine and little initial information regarding the severity and transmissibility of the virus, CDC's interim infection-control recommendations for the care of patients with such infections have included the use of fit-tested N95 respirators, eye protection, and contact precautions in addition to routine infection-control practices applied to seasonal influenza (1). In addition, CDC has recommended that aerosol-generating procedures (e.g., bronchoscopy) should be performed in an airborne infection-isolation room with negative pressure air handling. In this analysis, among the 11 HCP infected because of probable or possible patient to HCP transmission for whom information was available, none adhered to these recommended practices completely.

Although no data are available on why recommended practices often were not followed in these situations, similar nonadherence with recommended PPE by HCP caring for patients with febrile respiratory infections has been documented previously for influenza and other respiratory infections (6–8). Barriers to adherence can include 1) a belief that these practices are not necessary, inconvenient, or disruptive; 2) lack of availability of PPE; 3) inadequate training in infection control; 4) failure to establish effective, systematic approaches to HCP safety; and 5) failure to recognize patients and activities that warrant specific infection-control practices. In addition, some of the suboptimal practices described in this report might have occurred before CDC's interim recommendations were first issued on April 25.

Most of the probable or possible patient to HCP transmissions in this report occurred in situations where the use of PPE was not in accordance with CDC recommendations. Among the three HCP who reported always using either a surgical mask or an N95 respirator while caring for a patient with either confirmed novel H1N1 infection or respiratory illness, one had not been fit-tested for the respirator, and none used all of the PPE recommended by CDC for infection control. Even so, these findings cannot definitively establish that patient to HCP transmission was related to nonuse of certain PPE, nor can the findings be used to determine the effectiveness of PPE in protecting HCP from infection with the novel influenza A (H1N1) virus.

Initial evidence suggests that HCP are not overrepresented among reported cases of persons infected with novel influenza A (H1N1) virus in the United States. Among confirmed and probable cases in adults aged 18–64 years and reported to CDC as of May 13, approximately 4% have occurred in HCP; approximately 9% of working adults in the United States are employed in health-care settings (9,10). However, this comparison is subject to several limitations, including that case reports are not geographically homogeneous, and substantial underreporting is likely. As data on additional novel influenza A (H1N1) cases are collected, the risk for infection among HCP might be better elucidated.

Whatever the risk for infection to HCP, much of that risk likely exists in the outpatient setting. As of May 31, only 653 (6%) of 10,053 patients reported with novel influenza A (H1N1) infection had been hospitalized. The findings in this report indicate that six of the 12 HCP with probable or possible patient to HCP acquisition reported working in outpatient



settings during the week preceding symptom onset. Many interactions between HCP and infected patients likely occur in ambulatory-care settings and highlight the need for outpatient staff members to follow infection-control recommendations.

The findings in this report are subject to at least four limitations. First, the total number of infected HCP likely is underreported. Some HCP might not seek care for their symptoms; in addition, some states might not systematically collect data that allow them to identify HCP among persons with novel H1N1 infection. Second, detailed risk factor information was available for only 26 (54%) of the 48 reported cases, some information was missing, and data were not collected on a number of infection-control practices, including hand hygiene. Third, information collected on health-care and community exposures might have been subject to recall bias, and HCP might have had unrecognized exposures in either setting, which might have resulted in errors in identifying the source of acquisition. Finally, conclusions in this report were limited by the small number of HCP cases available for analysis.

These results highlight the need to maintain adherence to comprehensive infection-control strategies to prevent transmission of novel H1N1 in health-care settings. These strategies should include administrative controls (e.g., visitor policies and triage of potentially infectious patients), provision of infection-control resources, training in infection-control practices and correct use of PPE, identification of all ill HCP, and exclusion of ill HCP from work.

### Acknowledgments

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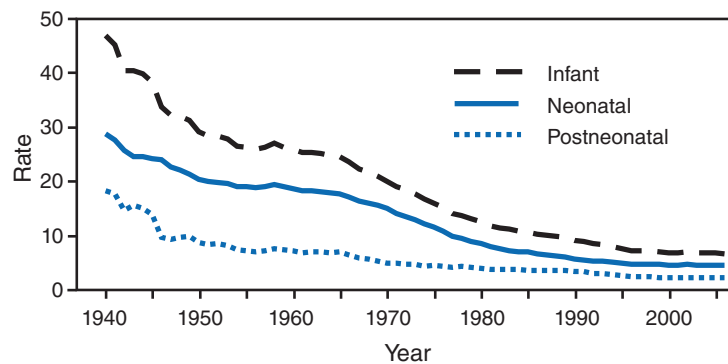
### Erratum: Vol. 58, No. 22

In the report, “Outbreak of Cryptosporidiosis Associated with a Splash Park — Idaho, 2007,” the reference list on page 618 is incomplete. The full list should include the following reference: **10. CDC. Surveillance for waterborne-disease outbreaks associated with recreational water—United States, 2001–2002. MMWR 2004;53(No. SS-8).**

## QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

### Infant, Neonatal, and Postneonatal Mortality Rates\* — United States, 1940–2006



\* Deaths per 1,000 live births for each group: infant (aged <1 year), neonatal (aged <28 days), and postneonatal (aged 28 days to <1 year).

In the United States, the infant mortality rate decreased 86%, from 47.0 infant deaths per 1,000 live births in 1940 to 6.7 in 2006. During the same period, the neonatal rate decreased 85%, from 28.8 to 4.5 deaths per 1,000 live births, and the postneonatal rate decreased 88%, from 18.3 to 2.2 deaths per 1,000 live births.

**SOURCE:** Heron MP, Hoyert DL, Murphy SL, Xu JQ, Kochanek KD, Tejada-Vera B. Deaths: final data for 2006. Natl Vital Stat Rep 2009;57(14). Available at [http://www.cdc.gov/nchs/data/nvsr/nvsr57/nvsr57\\_14.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr57/nvsr57_14.pdf).

**TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending June 13, 2009 (23rd week)\***

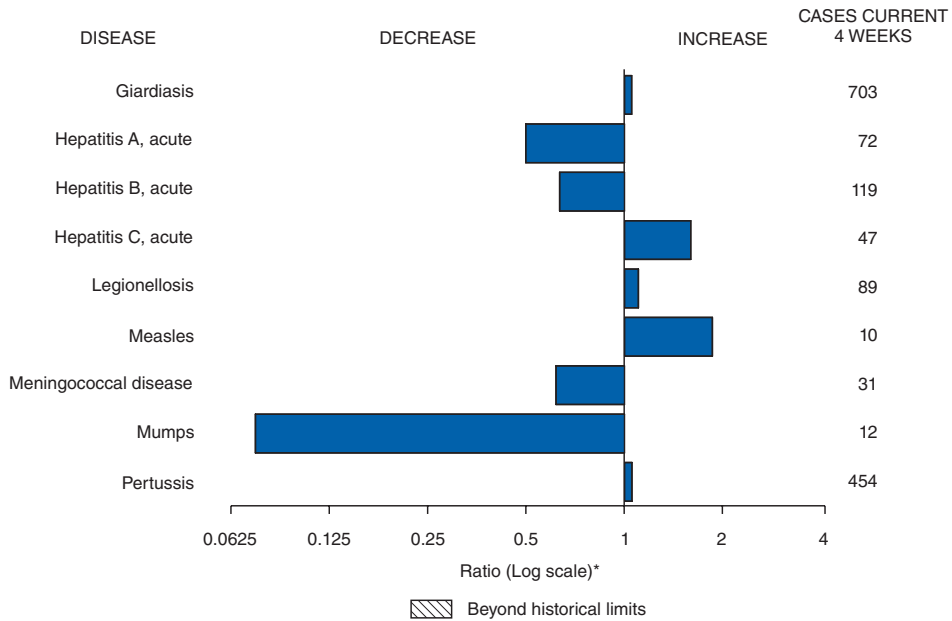
Disease	Current week	Cum 2009	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2008	2007	2006	2005	2004	
Anthrax	—	—	—	—	1	1	—	—	
Botulism:									
foodborne	—	8	0	17	32	20	19	16	
infant	—	24	2	109	85	97	85	87	
other (wound and unspecified)	—	12	1	19	27	48	31	30	
Brucellosis	—	34	2	80	131	121	120	114	
Chancroid	1	19	0	25	23	33	17	30	MA (1)
Cholera	—	2	0	3	7	9	8	6	
Cyclosporiasis§	1	36	12	139	93	137	543	160	FL (1)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup	—	—	1	62	55	67	80	112	
eastern equine	—	—	0	4	4	8	21	6	
Powassan	—	—	0	2	7	1	1	1	
St. Louis	—	—	0	13	9	10	13	12	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§, **:									
<i>Ehrlichia chaffeensis</i>	9	111	16	1,136	828	578	506	338	MO (2), SC (1), GA (1), TN (5)
<i>Ehrlichia ewingii</i>	—	—	0	9	—	—	—	—	
<i>Anaplasma phagocytophilum</i>	4	45	19	1,025	834	646	786	537	ME (2), NY (2)
undetermined	2	23	8	180	337	231	112	59	MO (2)
<i>Haemophilus influenzae</i> ††									
invasive disease (age <5 yrs):									
serotype b	1	13	0	30	22	29	9	19	AZ (1)
nonsertotype b	1	89	3	245	199	175	135	135	FL (1)
unknown serotype	1	95	4	163	180	179	217	177	OH (1)
Hansen disease§	4	28	2	80	101	66	87	105	FL (1), CA (3)
Hantavirus pulmonary syndrome§	—	3	1	18	32	40	26	24	
Hemolytic uremic syndrome, postdiarrheal§	3	60	5	330	292	288	221	200	FL (1), TN (1), CA (1)
Hepatitis C viral, acute	18	370	16	878	845	766	652	720	NY (2), PA (2), MI (2), IA (8), DE (1), KY (1), WA (1), CA (1)
HIV infection, pediatric (age <13 years)§§	—	—	3	—	—	—	380	436	
Influenza-associated pediatric mortality§,¶¶	1	72	1	85	77	43	45	—	AZ (1)
Listeriosis	5	208	13	759	808	884	896	753	NY (2), GA (1), FL (1), CA (1)
Measles***	—	25	3	140	43	55	66	37	
Meningococcal disease, invasive†††:									
A, C, Y, and W-135	1	130	6	329	325	318	297	—	TX (1)
serogroup B	—	66	4	188	167	193	156	—	
other serogroup	—	10	1	38	35	32	27	—	
unknown serogroup	3	232	14	616	550	651	765	—	OH (1), NE (1), FL (1)
Mumps	5	165	35	454	800	6,584	314	258	NYC (2), OH (1), FL (1), CA (1)
Novel influenza A virus infections§§§	—	17,855	—	2	4	N	N	N	
Plague	—	—	0	1	7	17	8	3	
Poliomyelitis, paralytic	—	—	—	—	—	—	1	—	
Polio virus infection, nonparalytic§	—	—	—	—	—	N	N	N	
Psittacosis§	—	6	0	8	12	21	16	12	
Q fever total§,¶¶¶:									
acute	1	28	4	124	171	169	136	70	
chronic	—	2	0	14	—	—	—	—	WA (1)
Rabies, human	—	—	0	1	1	3	2	7	
Rubella****	—	1	0	16	12	11	11	10	
Rubella, congenital syndrome	—	1	—	—	—	1	1	—	
SARS-CoV§,††††	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	1	74	2	157	132	125	129	132	NY (1)
Syphilis, congenital (age <1 yr)	—	69	8	393	430	349	329	353	
Tetanus	1	4	1	19	28	41	27	34	OH (1)
Toxic-shock syndrome (staphylococcal)§	2	37	2	71	92	101	90	95	MN (1), MO (1)
Trichinellosis	—	9	0	39	5	15	16	5	
Tularemia	—	14	5	122	137	95	154	134	
Typhoid fever	6	143	6	448	434	353	324	322	PA (1), VA (1), TN (1), TX (1), CO (1), AZ (1)
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	1	27	0	62	37	6	2	—	OH (1)
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	0	—	2	1	3	1	
Vibriosis (noncholera <i>Vibrio</i> species infections)§	5	93	4	493	549	N	N	N	FL (3), WA (1), CA (1)
Yellow fever	—	—	—	—	—	—	—	—	

See Table I footnotes on next page.

TABLE I. (Continued) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending June 13, 2009 (23rd week)\*

—: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts.
\* Incidence data for reporting year 2008 and 2009 are provisional, whereas data for 2004, 2005, 2006, and 2007 are finalized.
† Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years. Additional information is available at http://www.cdc.gov/epo/dphsi/phs/files/5yearweeklyaverage.pdf.
§ Not notifiable in all states. Data from states where the condition is not notifiable 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. Seventy-one influenza-associated pediatric deaths 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.
§§§ These cases were obtained from state and territorial health departments in response to novel Influenza A (H1N1) infections and include cases in addition to those reported to the National Notifiable Diseases Surveillance System (NNDSS). Because of the volume of cases and the method by which they are being collected, a 5-year weekly average for this disease is not calculated.
¶¶¶ In 2008, Q fever acute and chronic reporting categories were recognized as a result of revisions to the Q fever case definition. Prior to that time, case counts were not differentiated with respect to acute and chronic Q fever cases.
\*\*\*\* No rubella cases were reported for the current week.
†††† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals June 13, 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.

Notifiable Disease Data Team and 122 Cities Mortality Data Team
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TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending June 13, 2009, and June 7, 2008 (23rd week)\*

Reporting area	Hepatitis (viral, acute), by type†										Legionellosis				
	A				B										
	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			
<b>United States</b>	21	38	89	734	1,198	27	69	196	1,363	1,673	22	49	152	627	846
<b>New England</b>	1	2	8	32	58	—	1	4	16	37	3	2	18	18	40
Connecticut	1	0	4	10	10	—	0	3	6	12	3	0	5	10	8
Maine§	—	0	5	1	3	—	0	2	7	6	—	0	2	—	1
Massachusetts	—	1	3	14	30	—	0	2	1	12	—	1	7	6	14
New Hampshire	—	0	2	3	5	—	0	2	2	3	—	0	5	—	4
Rhode Island§	—	0	2	3	9	—	0	1	—	3	—	0	14	1	9
Vermont§	—	0	1	1	1	—	0	1	—	1	—	0	1	1	4
<b>Mid. Atlantic</b>	3	5	13	77	132	4	6	17	124	212	5	13	60	161	207
New Jersey	—	1	5	5	30	—	1	5	19	61	—	1	14	9	25
New York (Upstate)	2	1	4	22	30	2	1	11	31	32	4	5	24	62	55
New York City	—	2	6	21	38	—	1	4	26	44	—	2	12	19	26
Pennsylvania	1	1	4	29	34	2	2	8	48	75	1	5	35	71	101
<b>E.N. Central</b>	1	5	12	80	173	—	10	21	174	218	2	9	41	109	171
Illinois	—	1	5	17	62	—	2	7	24	81	—	2	13	8	24
Indiana	—	0	3	5	10	—	1	18	29	12	—	1	6	7	14
Michigan	—	1	5	29	65	—	2	8	54	67	1	2	16	20	46
Ohio	1	1	4	24	19	—	2	13	51	47	1	4	18	69	78
Wisconsin	—	0	3	5	17	—	0	3	16	11	—	0	6	5	9
<b>W.N. Central</b>	—	2	16	52	157	—	2	16	67	34	1	2	8	24	38
Iowa	—	1	5	11	76	—	0	3	10	10	—	0	2	8	8
Kansas	—	0	1	5	9	—	0	2	4	6	—	0	1	2	1
Minnesota	—	0	12	12	16	—	0	11	11	3	1	0	4	1	4
Missouri	—	0	3	14	18	—	1	5	33	13	—	1	7	9	15
Nebraska§	—	0	2	9	36	—	0	2	8	2	—	0	3	3	9
North Dakota	—	0	2	—	—	—	0	1	—	—	—	0	3	1	—
South Dakota	—	0	1	1	2	—	0	1	1	—	—	0	1	—	1
<b>S. Atlantic</b>	6	7	15	179	146	7	20	32	445	430	4	9	22	152	169
Delaware	—	0	1	1	3	—	0	2	13	11	—	0	1	1	4
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	—	7
Florida	4	4	8	93	66	6	7	11	144	145	2	3	7	66	57
Georgia	1	1	4	26	25	—	3	9	61	75	2	1	5	20	15
Maryland§	—	0	4	16	17	—	2	6	39	38	—	2	9	24	42
North Carolina	—	1	9	20	9	—	0	19	115	47	—	0	7	28	8
South Carolina§	—	0	3	11	6	—	1	5	17	33	—	0	1	2	4
Virginia§	1	1	6	12	17	1	2	10	33	45	—	1	5	11	20
West Virginia	—	0	1	—	3	—	1	6	23	36	—	0	3	—	12
<b>E.S. Central</b>	—	1	5	17	35	4	8	13	138	162	2	2	5	36	52
Alabama§	—	0	2	5	5	—	2	7	43	45	—	0	2	5	6
Kentucky	—	0	2	3	14	3	2	7	39	46	—	1	3	17	25
Mississippi	—	0	2	5	2	—	1	3	6	15	1	0	0	1	1
Tennessee§	—	0	4	4	14	1	2	8	50	56	1	0	4	13	20
<b>W.S. Central</b>	4	4	43	73	116	4	11	98	196	348	1	1	21	23	28
Arkansas§	—	0	1	4	3	—	1	5	14	23	—	0	2	2	4
Louisiana	—	0	2	2	6	—	1	4	16	48	—	0	2	1	3
Oklahoma	—	0	6	1	3	—	2	17	48	35	1	0	6	3	2
Texas§	4	3	37	66	104	4	6	75	118	242	—	1	19	17	19
<b>Mountain</b>	5	3	31	62	94	2	3	10	54	82	1	2	8	35	36
Arizona	3	1	28	35	38	—	1	5	25	32	1	0	3	19	9
Colorado	2	0	2	10	19	—	0	3	8	12	—	0	2	1	3
Idaho§	—	0	1	—	13	—	0	2	2	3	—	0	1	—	1
Montana§	—	0	1	3	—	—	0	1	—	—	—	0	2	4	3
Nevada§	—	0	3	6	3	2	0	3	12	20	—	0	2	6	6
New Mexico§	—	0	1	5	14	—	0	2	4	7	—	0	2	—	3
Utah	—	0	2	3	4	—	0	3	3	4	—	0	2	5	11
Wyoming§	—	0	0	—	3	—	0	1	—	4	—	0	0	—	—
<b>Pacific</b>	1	8	25	162	287	6	7	36	149	150	3	3	9	69	105
Alaska	—	0	1	3	2	—	0	1	3	5	—	0	1	2	1
California	1	6	25	124	233	5	5	28	111	105	1	3	9	56	81
Hawaii	—	0	2	3	5	1	0	1	3	3	—	0	1	1	4
Oregon§	—	0	4	9	20	—	0	9	16	19	—	0	2	4	9
Washington	—	1	4	23	27	—	1	8	16	18	2	0	3	6	10
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	7	14	—	0	5	2	25	—	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 notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting year 2008 and 2009 are provisional.

† Data for acute hepatitis C, viral are available in Table I.

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending June 13, 2009, and June 7, 2008 (23rd 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		
<b>United States</b>	145	511	1,907	3,573	5,851	9	23	46	374	383	4	18	48	438	643
<b>New England</b>	2	101	834	416	2,164	—	1	5	9	19	—	0	4	15	17
Connecticut	—	24	264	—	938	—	0	4	1	3	—	0	1	1	1
Maine§	2	5	73	77	52	—	0	1	1	1	—	0	1	2	3
Massachusetts	—	23	400	117	795	—	0	4	6	10	—	0	3	9	12
New Hampshire	—	12	145	161	254	—	0	1	—	2	—	0	1	1	1
Rhode Island§	—	0	78	12	101	—	0	1	—	1	—	0	1	1	—
Vermont§	—	5	41	49	24	—	0	1	1	2	—	0	1	1	—
<b>Mid. Atlantic</b>	134	220	1,401	2,067	2,168	3	5	17	86	100	—	2	5	47	69
New Jersey	3	27	231	397	1,059	—	0	4	—	15	—	0	1	2	9
New York (Upstate)	84	99	1,368	743	401	2	0	10	19	13	—	0	2	11	19
New York City	—	8	54	—	140	—	3	11	51	58	—	0	2	8	11
Pennsylvania	47	51	338	927	568	1	1	3	16	14	—	1	4	26	30
<b>E.N. Central</b>	—	13	205	91	363	1	3	7	44	62	1	3	8	72	107
Illinois	—	0	13	3	17	—	1	5	15	32	—	1	6	17	37
Indiana	—	0	8	9	2	—	0	1	7	3	—	0	4	15	15
Michigan	—	1	10	6	—	1	0	2	7	9	—	0	3	12	14
Ohio	—	0	6	7	7	—	1	2	14	14	1	0	3	22	26
Wisconsin	—	11	187	66	337	—	0	3	1	4	—	0	1	6	15
<b>W.N. Central</b>	—	6	336	48	112	3	1	10	23	20	1	1	9	37	56
Iowa	—	1	9	8	39	—	0	3	4	2	—	0	1	3	11
Kansas	—	0	4	7	4	1	0	2	2	3	—	0	2	7	2
Minnesota	—	2	326	28	66	—	0	8	10	6	—	0	4	8	15
Missouri	—	0	1	2	1	1	0	2	5	5	—	0	2	13	17
Nebraska§	—	0	2	2	1	1	0	1	1	4	1	0	1	4	9
North Dakota	—	0	10	—	—	—	0	0	—	—	—	0	3	—	1
South Dakota	—	0	1	1	1	—	0	1	1	—	—	0	1	2	1
<b>S. Atlantic</b>	7	65	224	845	947	1	7	16	134	91	1	3	9	88	86
Delaware	—	11	36	213	288	—	0	1	1	1	—	0	1	2	—
District of Columbia	—	0	7	—	16	—	0	2	—	—	—	0	0	—	—
Florida	2	1	6	16	12	—	1	7	36	20	1	1	4	32	32
Georgia	1	0	6	16	11	1	1	4	29	26	—	0	2	16	11
Maryland§	—	29	164	393	456	—	2	8	34	27	—	0	1	4	10
North Carolina	—	1	6	17	2	—	1	7	17	2	—	0	5	15	3
South Carolina§	—	0	3	11	9	—	0	1	1	3	—	0	1	6	14
Virginia§	4	14	61	145	119	—	1	3	15	11	—	0	2	9	13
West Virginia	—	1	17	34	34	—	0	1	1	1	—	0	2	4	3
<b>E.S. Central</b>	—	0	5	8	15	—	0	2	12	8	—	0	3	15	35
Alabama§	—	0	1	1	6	—	0	1	3	3	—	0	1	3	3
Kentucky	—	0	2	1	1	—	0	2	5	3	—	0	1	3	7
Mississippi	—	0	1	—	—	—	0	1	—	—	—	0	1	1	9
Tennessee§	—	0	3	6	8	—	0	2	4	2	—	0	1	8	16
<b>W.S. Central</b>	1	2	21	11	33	—	1	10	11	21	1	1	12	37	68
Arkansas§	—	0	0	—	—	—	0	1	—	—	—	0	2	5	10
Louisiana	—	0	1	—	—	—	0	1	1	2	—	0	3	9	17
Oklahoma	—	0	2	—	—	—	0	2	1	2	—	0	3	2	9
Texas§	1	2	21	11	33	—	1	10	9	17	1	1	9	21	32
<b>Mountain</b>	1	1	13	13	13	—	0	3	4	12	—	1	4	35	37
Arizona	—	0	2	1	2	—	0	2	1	4	—	0	2	7	5
Colorado	—	0	1	2	2	—	0	1	1	3	—	0	2	10	7
Idaho§	1	0	2	5	2	—	0	1	1	—	—	0	1	4	4
Montana§	—	0	13	1	1	—	0	0	—	—	—	0	2	4	4
Nevada§	—	0	2	4	2	—	0	1	—	4	—	0	2	3	7
New Mexico§	—	0	2	—	3	—	0	1	—	1	—	0	1	3	4
Utah	—	0	1	—	—	—	0	1	1	—	—	0	1	1	4
Wyoming§	—	0	1	—	1	—	0	0	—	—	—	0	2	3	2
<b>Pacific</b>	—	3	13	74	36	1	3	10	51	50	—	4	14	92	168
Alaska§	—	0	2	1	1	—	0	1	1	2	—	0	2	2	3
California	—	2	6	66	26	1	2	8	38	38	—	2	8	57	130
Hawaii	N	0	0	N	N	—	0	1	1	2	—	0	1	3	1
Oregon§	—	0	4	5	9	—	0	4	6	4	—	0	10	21	20
Washington	—	0	12	2	—	—	0	3	5	4	—	0	6	9	14
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	2	—	1	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	1	1	—	0	1	—	2
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 notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting year 2008 and 2009 are provisional.

† Data for meningococcal disease, invasive caused by serogroups A, C, Y, and W-135; serogroup B; other serogroup; and unknown serogroup are available in Table I.

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



TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending June 13, 2009, and June 7, 2008 (23rd 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		
<b>United States</b>	145	241	1,697	4,866	3,295	21	71	120	1,412	1,703	13	36	179	395	300
<b>New England</b>	—	18	35	187	386	2	8	15	135	167	—	0	2	4	2
Connecticut	—	0	4	12	29	—	3	10	59	80	—	0	0	—	—
Maine†	—	1	7	34	14	—	1	5	20	27	—	0	2	4	—
Massachusetts	—	12	30	105	304	—	0	0	—	—	—	0	1	—	1
New Hampshire	—	1	5	25	9	2	1	7	16	15	—	0	1	—	—
Rhode Island†	—	1	6	5	25	—	0	3	14	14	—	0	2	—	1
Vermont†	—	0	2	6	5	—	1	6	26	31	—	0	0	—	—
<b>Mid. Atlantic</b>	9	24	64	436	388	7	17	30	275	337	—	1	29	14	39
New Jersey	—	4	12	56	71	—	0	0	—	—	—	0	6	—	28
New York (Upstate)	3	6	41	80	116	7	9	20	157	166	—	0	29	1	3
New York City	4	0	21	44	41	—	0	2	—	10	—	0	3	10	5
Pennsylvania	2	10	33	256	160	—	7	17	118	161	—	0	2	3	3
<b>E.N. Central</b>	53	43	238	1,024	653	2	2	28	39	43	—	1	15	15	19
Illinois	—	14	45	234	70	—	1	20	6	16	—	1	10	7	14
Indiana	—	2	158	80	21	—	0	6	6	1	—	0	3	1	1
Michigan	4	8	21	215	85	—	1	9	16	17	—	0	1	1	2
Ohio	49	14	57	461	441	2	0	7	11	9	—	0	4	6	2
Wisconsin	—	4	10	34	36	N	0	0	N	N	—	0	0	—	—
<b>W.N. Central</b>	8	31	872	880	273	2	5	17	113	113	2	4	33	55	67
Iowa	—	4	21	57	36	—	0	5	9	9	—	0	2	1	3
Kansas	1	2	12	82	26	1	1	6	44	39	—	0	0	—	—
Minnesota	4	1	808	165	63	—	0	11	20	18	—	0	0	—	—
Missouri	1	14	51	479	111	1	1	8	17	10	2	4	32	52	61
Nebraska†	2	4	32	85	25	—	0	2	—	17	—	0	4	2	—
North Dakota	—	0	24	1	1	—	0	9	4	10	—	0	1	—	—
South Dakota	—	0	10	11	11	—	0	4	19	10	—	0	0	—	3
<b>S. Atlantic</b>	36	26	71	648	308	1	27	90	634	821	2	16	72	207	82
Delaware	—	0	3	6	5	—	0	0	—	—	—	0	5	3	4
District of Columbia	—	0	2	—	1	—	0	0	—	—	—	0	1	—	2
Florida	34	7	20	240	75	—	0	74	74	138	—	0	3	4	3
Georgia	—	3	9	79	25	—	5	52	154	178	—	1	9	10	20
Maryland†	—	3	10	37	44	—	6	16	130	198	—	1	7	18	15
North Carolina	—	0	65	163	59	N	4	4	N	N	—	9	55	137	11
South Carolina†	2	2	10	59	46	—	0	0	—	—	—	1	9	12	8
Virginia†	—	3	24	59	48	—	11	24	228	253	2	2	15	22	15
West Virginia	—	0	2	5	5	1	1	6	48	54	—	0	1	1	4
<b>E.S. Central</b>	14	11	33	295	104	—	3	7	59	76	1	4	23	64	48
Alabama†	3	2	19	109	19	—	0	0	—	—	—	1	8	12	12
Kentucky	5	4	15	101	16	—	1	4	25	13	—	0	0	—	1
Mississippi	—	1	5	17	47	—	0	2	—	2	—	0	3	4	3
Tennessee†	6	2	14	68	22	—	2	6	34	61	1	3	19	48	32
<b>W.S. Central</b>	5	40	389	743	320	5	0	9	26	48	7	2	161	28	32
Arkansas†	—	2	38	33	34	5	0	5	21	30	7	0	61	13	1
Louisiana	—	2	7	34	14	—	0	0	—	—	—	0	2	—	3
Oklahoma	1	0	45	13	10	—	0	9	4	16	—	0	98	5	20
Texas†	4	35	304	663	262	—	0	1	1	2	—	1	6	10	8
<b>Mountain</b>	9	15	31	345	425	—	2	9	41	25	1	1	3	7	10
Arizona	3	2	10	66	121	N	0	0	N	N	1	0	2	2	4
Colorado	5	4	12	126	65	—	0	0	—	—	—	0	1	—	—
Idaho†	1	1	5	37	20	—	0	2	—	1	—	0	1	—	—
Montana†	—	0	4	9	58	—	0	4	13	—	—	0	1	3	1
Nevada†	—	0	3	6	16	—	0	5	—	1	—	0	2	—	—
New Mexico†	—	1	10	30	23	—	0	2	14	16	—	0	1	1	1
Utah	—	4	19	70	115	—	0	6	1	1	—	0	1	1	2
Wyoming†	—	0	2	1	7	—	0	4	13	6	—	0	2	—	2
<b>Pacific</b>	11	23	98	308	438	2	4	13	90	73	—	0	1	1	1
Alaska	—	3	21	28	36	—	0	2	9	12	N	0	0	N	N
California	—	6	24	41	219	2	4	12	81	59	—	0	1	1	—
Hawaii	—	0	3	13	5	—	0	0	—	—	N	0	0	N	N
Oregon†	—	3	46	97	70	—	0	2	—	2	—	0	1	—	1
Washington	11	6	76	129	108	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	1	—	—	1	5	15	27	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N

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

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

\* Incidence data for reporting year 2008 and 2009 are provisional.

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

**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending June 13, 2009, and June 7, 2008 (23rd week)\***

Reporting area	Salmonellosis					Shiga toxin-producing <i>E. coli</i> (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		
<b>United States</b>	420	940	2,322	13,189	14,039	36	78	255	1,109	1,275	175	432	1,269	6,145	7,252
<b>New England</b>	3	32	189	664	1,002	—	3	27	71	102	—	3	13	60	101
Connecticut	—	0	163	163	491	—	0	27	27	47	—	0	8	8	40
Maine§	—	2	8	41	57	—	0	3	9	3	—	0	6	2	2
Massachusetts	—	21	51	263	352	—	1	11	15	31	—	2	9	40	49
New Hampshire	3	3	33	125	51	—	1	3	16	10	—	0	1	1	2
Rhode Island§	—	2	9	50	27	—	0	1	—	7	—	0	1	6	7
Vermont§	—	1	7	22	24	—	0	6	4	4	—	0	2	3	1
<b>Mid. Atlantic</b>	44	84	201	1,501	1,758	3	7	27	85	136	32	54	93	1,137	877
New Jersey	1	15	55	118	420	—	1	12	14	52	—	19	38	247	205
New York (Upstate)	32	29	65	418	400	3	3	12	37	34	10	7	28	88	255
New York City	2	22	49	390	428	—	1	5	28	19	2	10	23	190	371
Pennsylvania	9	29	78	575	510	—	0	8	6	31	20	16	38	612	46
<b>E.N. Central</b>	37	93	194	1,637	1,753	2	12	74	166	160	15	86	132	1,175	1,291
Illinois	—	26	71	425	520	—	1	10	29	33	—	15	34	228	425
Indiana	—	7	53	87	146	—	1	14	16	12	—	3	39	24	346
Michigan	1	18	38	356	325	2	3	43	43	26	2	5	24	108	39
Ohio	36	27	49	561	498	—	3	17	42	37	13	42	80	642	340
Wisconsin	—	14	30	208	264	—	3	16	36	52	—	9	42	173	141
<b>W.N. Central</b>	32	50	148	1,037	925	7	12	58	167	182	7	14	48	333	402
Iowa	5	8	16	160	163	2	3	21	42	44	—	3	12	41	71
Kansas	4	7	29	120	105	—	1	7	13	11	—	3	10	99	6
Minnesota	11	12	69	248	246	3	2	21	44	32	2	3	25	31	98
Missouri	9	13	48	209	247	1	2	11	41	58	4	3	33	151	126
Nebraska§	3	5	41	180	97	1	2	30	24	23	1	0	3	8	—
North Dakota	—	0	30	14	17	—	0	28	—	1	—	0	9	1	27
South Dakota	—	4	22	106	50	—	0	4	3	13	—	0	1	2	74
<b>S. Atlantic</b>	153	262	457	3,513	3,384	2	14	48	240	235	26	48	85	932	1,506
Delaware	2	2	9	28	52	—	0	2	5	6	2	0	8	34	5
District of Columbia	—	0	2	—	33	—	0	1	—	3	—	0	2	—	8
Florida	115	100	174	1,597	1,501	1	3	10	75	65	14	11	26	201	411
Georgia	26	37	96	588	563	—	1	8	21	22	9	13	30	255	627
Maryland§	—	16	36	226	250	—	2	11	28	38	—	4	12	119	28
North Carolina	—	23	106	517	327	—	2	21	56	20	—	5	27	178	46
South Carolina§	4	17	57	221	299	—	1	3	9	15	—	5	28	60	295
Virginia§	5	21	88	272	271	1	3	27	38	46	1	4	59	80	67
West Virginia	1	3	10	64	88	—	0	3	8	20	—	0	3	5	19
<b>E.S. Central</b>	11	59	140	792	870	5	5	12	76	97	9	27	58	426	945
Alabama§	5	16	49	230	244	2	1	3	17	33	—	5	12	70	225
Kentucky	2	10	18	161	141	—	1	7	21	19	1	2	25	113	160
Mississippi	1	13	57	180	235	—	0	1	6	3	—	1	6	13	221
Tennessee§	3	14	62	221	250	3	2	6	32	42	8	14	48	230	339
<b>W.S. Central</b>	23	138	1,328	869	1,403	1	6	139	48	122	50	94	967	1,161	1,372
Arkansas§	10	14	39	173	137	—	0	5	7	22	11	10	27	149	150
Louisiana	—	12	54	103	273	—	0	1	—	4	—	7	26	57	266
Oklahoma	13	14	102	199	172	—	1	82	6	7	2	4	61	87	43
Texas§	—	94	1,199	394	821	1	5	55	35	89	37	64	889	868	913
<b>Mountain</b>	25	57	110	966	1,189	12	10	40	130	158	19	27	54	445	269
Arizona	9	22	43	368	318	3	1	4	17	23	16	16	35	321	119
Colorado	6	12	20	207	334	2	3	18	59	44	2	3	11	40	30
Idaho§	5	3	12	65	60	5	2	15	18	32	—	0	2	3	5
Montana§	—	2	7	49	41	—	0	3	6	17	—	0	5	11	1
Nevada§	5	4	14	103	83	2	0	3	7	7	1	3	13	30	83
New Mexico§	—	6	25	83	207	—	1	4	15	18	—	3	12	37	19
Utah	—	6	19	73	115	—	1	9	7	12	—	0	3	3	9
Wyoming§	—	1	5	18	31	—	0	2	1	5	—	0	1	—	3
<b>Pacific</b>	92	120	537	2,210	1,755	4	11	31	126	83	17	31	82	476	489
Alaska	1	1	4	24	18	—	0	1	—	3	—	0	1	2	—
California	64	87	516	1,692	1,313	—	6	15	78	48	15	26	75	379	418
Hawaii	—	5	15	103	88	—	0	2	2	3	—	1	3	8	17
Oregon§	—	7	72	151	144	—	1	7	10	10	—	1	10	14	25
Washington	27	11	85	240	192	4	3	16	36	19	2	2	13	73	29
American Samoa	—	0	1	—	1	—	0	0	—	—	—	0	2	3	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	—	5	—	0	0	—	—	—	0	2	—	9
Puerto Rico	—	12	40	76	238	—	0	0	—	—	—	0	4	1	7
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 notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting year 2008 and 2009 are provisional.

† Includes *E. coli* O157:H7; Shiga toxin-positive, serogroup non-O157; and Shiga toxin-positive, not serogrouped.

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending June 13, 2009, and June 7, 2008 (23rd week)\*

Reporting area	Streptococcal diseases, invasive, group A				<i>Streptococcus pneumoniae</i> , invasive disease, nondrug resistant†					
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max		
<b>United States</b>	50	100	240	2,781	3,057	30	33	121	860	966
<b>New England</b>	—	5	29	153	224	1	1	12	23	49
Connecticut	—	0	21	43	54	—	0	11	—	—
Maine§	—	0	3	10	16	1	0	1	1	1
Massachusetts	—	2	10	60	118	—	1	2	15	38
New Hampshire	—	0	4	26	16	—	0	1	5	7
Rhode Island§	—	0	8	4	10	—	0	2	—	3
Vermont§	—	0	3	10	10	—	0	1	2	—
<b>Mid. Atlantic</b>	14	18	38	537	645	10	4	33	129	118
New Jersey	—	1	6	5	115	—	1	4	14	33
New York (Upstate)	12	6	25	202	203	4	2	17	68	51
New York City	—	4	12	115	124	6	0	31	47	34
Pennsylvania	2	6	18	215	203	N	0	2	N	N
<b>E.N. Central</b>	2	18	42	565	611	1	6	18	126	181
Illinois	—	5	12	157	170	—	1	5	14	53
Indiana	—	3	23	93	77	—	0	13	15	20
Michigan	—	3	10	90	111	—	1	5	41	49
Ohio	2	4	13	152	164	1	1	6	42	32
Wisconsin	—	2	10	73	89	—	1	4	14	27
<b>W.N. Central</b>	2	6	37	227	225	3	2	11	68	42
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	1	5	32	25	N	0	1	N	N
Minnesota	—	0	34	84	101	3	0	7	31	9
Missouri	1	2	8	61	57	—	1	4	26	20
Nebraska§	1	1	3	28	22	—	0	1	3	4
North Dakota	—	0	4	7	8	—	0	3	4	4
South Dakota	—	0	3	15	12	—	0	2	4	5
<b>S. Atlantic</b>	6	22	46	613	597	1	7	16	176	187
Delaware	—	0	1	8	6	—	0	0	—	—
District of Columbia	—	0	2	—	6	N	0	0	N	N
Florida	3	6	12	154	135	1	1	6	43	35
Georgia	3	5	13	143	130	—	2	6	47	52
Maryland§	—	3	10	86	109	—	1	3	36	37
North Carolina	—	2	12	62	74	N	0	0	N	N
South Carolina§	—	1	5	37	37	—	1	6	27	29
Virginia§	—	3	9	98	77	—	0	4	15	29
West Virginia	—	1	4	25	23	—	0	2	8	5
<b>E.S. Central</b>	—	4	10	111	104	1	1	6	34	52
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	5	20	22	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	2	—	7
Tennessee§	—	3	8	91	82	1	1	6	34	45
<b>W.S. Central</b>	11	10	79	253	247	10	6	46	159	144
Arkansas§	—	0	2	9	6	—	0	4	16	9
Louisiana	—	0	2	6	11	—	0	3	12	7
Oklahoma	6	2	20	89	61	2	1	7	30	44
Texas§	5	6	59	149	169	8	4	34	101	84
<b>Mountain</b>	12	9	22	252	341	1	4	16	128	165
Arizona	2	3	7	77	115	—	2	10	75	73
Colorado	10	3	8	104	85	—	1	4	24	39
Idaho§	—	0	2	3	10	1	0	2	6	2
Montana§	N	0	0	N	N	N	0	0	N	N
Nevada§	—	0	1	4	6	—	0	1	—	2
New Mexico§	—	2	7	42	87	—	0	4	12	25
Utah	—	1	6	21	33	—	0	4	11	23
Wyoming§	—	0	1	1	5	—	0	1	—	1
<b>Pacific</b>	3	3	9	70	63	2	0	3	17	28
Alaska	1	0	4	9	15	2	0	3	12	17
California	N	0	0	N	N	N	0	0	N	N
Hawaii	2	3	8	61	48	—	0	2	5	11
Oregon§	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	—	0	8	—	22	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 notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting year 2008 and 2009 are provisional.

† Includes cases of invasive pneumococcal disease, in children aged <5 years, caused by *S. pneumoniae*, which is susceptible or for which susceptibility testing is not available (NNDS 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 June 13, 2009, and June 7, 2008 (23rd week)\*

Reporting area	<i>Streptococcus pneumoniae</i> , 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		
<b>United States</b>	34	56	276	1,593	1,838	6	9	21	243	264	76	260	452	5,324	5,341
<b>New England</b>	—	1	48	26	35	—	0	5	1	4	1	5	15	140	134
Connecticut	—	0	48	—	—	—	0	5	—	—	—	1	5	29	8
Maine§	—	0	2	7	12	—	0	1	—	—	—	0	2	1	5
Massachusetts	—	0	1	1	—	—	0	1	1	—	1	4	11	96	105
New Hampshire	—	0	3	5	—	—	0	0	—	—	—	0	2	10	6
Rhode Island§	—	0	6	5	11	—	0	1	—	2	—	0	5	4	5
Vermont§	—	0	1	8	12	—	0	0	—	2	—	0	2	—	5
<b>Mid. Atlantic</b>	2	4	14	94	190	—	0	3	18	16	27	33	51	813	743
New Jersey	—	0	0	—	—	—	0	0	—	—	2	4	13	101	89
New York (Upstate)	2	1	10	40	35	—	0	2	10	5	—	2	8	47	58
New York City	—	1	4	2	80	—	0	2	—	—	21	22	36	513	462
Pennsylvania	—	1	8	52	75	—	0	2	8	11	4	5	12	152	134
<b>E.N. Central</b>	5	9	41	349	400	2	1	7	49	54	8	24	44	444	483
Illinois	N	0	0	N	N	N	0	0	N	N	4	9	19	117	179
Indiana	—	2	32	108	143	—	0	6	16	17	1	2	10	70	63
Michigan	—	0	2	16	14	—	0	1	2	2	2	4	18	109	89
Ohio	5	7	18	225	243	2	1	4	31	35	1	6	28	127	131
Wisconsin	—	0	0	—	—	—	0	0	—	—	—	1	4	21	21
<b>W.N. Central</b>	2	3	161	68	130	—	1	4	17	23	2	6	14	132	182
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	10	8
Kansas	—	1	5	19	54	—	0	2	10	3	1	0	3	11	14
Minnesota	—	0	156	—	15	—	0	4	—	15	—	2	6	29	43
Missouri	2	1	5	37	56	—	0	1	5	2	1	3	10	69	112
Nebraska§	—	0	1	1	—	—	0	0	—	—	—	0	2	10	5
North Dakota	—	0	3	9	2	—	0	0	—	—	—	0	1	2	—
South Dakota	—	0	2	2	3	—	0	2	2	3	—	0	1	1	—
<b>S. Atlantic</b>	22	25	53	777	731	4	4	14	113	108	14	62	262	1,261	1,105
Delaware	—	0	2	9	2	—	0	0	—	—	—	0	3	14	5
District of Columbia	N	0	0	N	N	N	0	0	N	N	2	3	9	81	61
Florida	16	15	36	481	389	3	3	13	79	65	—	20	31	428	430
Georgia	5	8	25	212	261	1	1	5	27	36	3	13	227	217	195
Maryland§	—	0	1	4	4	—	0	0	—	1	3	6	16	125	140
North Carolina	N	0	0	N	N	N	0	0	N	N	—	8	19	221	118
South Carolina§	—	0	0	—	—	—	0	0	—	—	—	2	6	39	37
Virginia§	N	0	0	N	N	N	0	0	N	N	6	5	16	134	115
West Virginia	1	2	13	71	75	—	0	3	7	6	—	0	1	2	4
<b>E.S. Central</b>	2	5	25	171	208	—	1	3	24	38	4	22	36	485	452
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	17	179	197
Kentucky	1	1	5	48	49	—	0	2	7	9	—	1	10	24	42
Mississippi	—	0	3	—	24	—	0	1	—	8	1	3	18	87	58
Tennessee§	1	3	22	123	135	—	0	3	17	21	3	8	19	195	155
<b>W.S. Central</b>	1	1	6	52	68	—	0	3	10	12	4	48	80	928	883
Arkansas§	1	0	5	33	12	—	0	3	7	3	4	3	35	85	54
Louisiana	—	1	5	19	56	—	0	1	3	9	—	14	40	223	208
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	7	26	40
Texas§	—	0	0	—	—	—	0	0	—	—	—	29	40	594	581
<b>Mountain</b>	—	2	7	54	75	—	0	3	10	8	7	9	18	134	293
Arizona	—	0	0	—	—	—	0	0	—	—	—	3	11	21	149
Colorado	—	0	0	—	—	—	0	0	—	—	—	2	5	40	83
Idaho§	N	0	1	N	N	N	0	1	N	N	—	0	2	3	1
Montana§	—	0	1	—	—	—	0	0	—	—	—	0	7	—	—
Nevada§	—	1	4	26	36	—	0	2	6	3	6	1	7	49	34
New Mexico§	—	0	0	—	—	—	0	0	—	—	1	1	5	20	12
Utah	—	1	6	22	39	—	0	3	4	5	—	0	2	—	12
Wyoming§	—	0	2	6	—	—	0	0	—	—	—	0	1	1	2
<b>Pacific</b>	—	0	1	2	1	—	0	1	1	1	9	47	66	987	1,066
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
California	N	0	0	N	N	N	0	0	N	N	4	42	60	904	968
Hawaii	—	0	1	2	1	—	0	1	1	1	—	0	3	14	11
Oregon§	N	0	0	N	N	N	0	0	N	N	1	0	3	15	4
Washington	N	0	0	N	N	N	0	0	N	N	4	2	9	54	83
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	—	—	8	3	11	96	72
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 notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting year 2008 and 2009 are provisional.

† Includes cases of invasive pneumococcal disease caused by drug-resistant *S. pneumoniae* (DRSP) (NNDSS event code 11720).

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



TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending June 13, 2009, and June 7, 2008 (23rd week)\*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Neuroinvasive				Nonneuroinvasive§					
		Med	Max			Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
<b>United States</b>	93	359	711	7,539	17,489	—	1	75	—	9	—	0	77	1	24
<b>New England</b>	1	17	46	144	884	—	0	2	—	—	—	0	1	—	1
Connecticut	—	11	23	—	435	—	0	2	—	—	—	0	1	—	1
Maine¶	—	0	11	—	150	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
New Hampshire	1	4	11	101	148	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Vermont¶	—	3	17	43	151	—	0	0	—	—	—	0	0	—	—
<b>Mid. Atlantic</b>	15	39	61	864	1,353	—	0	8	—	—	—	0	4	—	—
New Jersey	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
New York (Upstate)	N	0	0	N	N	—	0	5	—	—	—	0	2	—	—
New York City	—	0	0	—	—	—	0	2	—	—	—	0	2	—	—
Pennsylvania	15	39	61	864	1,353	—	0	2	—	—	—	0	1	—	—
<b>E.N. Central</b>	48	147	254	3,601	4,298	—	0	8	—	—	—	0	3	—	—
Illinois	—	33	73	821	601	—	0	4	—	—	—	0	2	—	—
Indiana	—	0	14	83	—	—	0	1	—	—	—	0	1	—	—
Michigan	28	48	90	1,156	1,781	—	0	4	—	—	—	0	2	—	—
Ohio	20	42	91	1,317	1,444	—	0	3	—	—	—	0	1	—	—
Wisconsin	—	11	25	224	472	—	0	2	—	—	—	0	1	—	—
<b>W.N. Central</b>	8	22	114	608	712	—	0	6	—	1	—	0	21	1	2
Iowa	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
Kansas	—	6	22	170	285	—	0	2	—	1	—	0	3	—	1
Minnesota	—	0	0	—	—	—	0	2	—	—	—	0	4	—	—
Missouri	8	11	51	400	402	—	0	3	—	—	—	0	1	—	—
Nebraska¶	N	0	0	N	N	—	0	1	—	—	—	0	6	—	—
North Dakota	—	0	108	38	—	—	0	2	—	—	—	0	11	—	1
South Dakota	—	0	4	—	25	—	0	5	—	—	—	0	6	1	—
<b>S. Atlantic</b>	15	58	136	1,165	2,714	—	0	4	—	2	—	0	4	—	—
Delaware	—	0	5	2	14	—	0	0	—	—	—	0	1	—	—
District of Columbia	—	0	3	—	17	—	0	2	—	—	—	0	1	—	—
Florida	10	28	67	818	1,007	—	0	2	—	—	—	0	0	—	—
Georgia	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
Maryland¶	N	0	0	N	N	—	0	2	—	—	—	0	3	—	—
North Carolina	N	0	0	N	N	—	0	1	—	1	—	0	1	—	—
South Carolina¶	—	6	39	82	525	—	0	0	—	—	—	0	1	—	—
Virginia¶	—	9	60	28	757	—	0	0	—	—	—	0	1	—	—
West Virginia	5	10	32	235	394	—	0	0	—	1	—	0	0	—	—
<b>E.S. Central</b>	—	4	28	17	780	—	0	7	—	—	—	0	9	—	5
Alabama¶	—	4	28	16	772	—	0	3	—	—	—	0	2	—	1
Kentucky	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	1	1	8	—	0	4	—	—	—	0	8	—	2
Tennessee¶	N	0	0	N	N	—	0	2	—	—	—	0	3	—	2
<b>W.S. Central</b>	—	58	308	481	5,369	—	0	8	—	4	—	0	7	—	7
Arkansas¶	—	3	47	19	406	—	0	1	—	1	—	0	1	—	—
Louisiana	—	1	4	27	47	—	0	3	—	—	—	0	5	—	—
Oklahoma	N	0	0	N	N	—	0	1	—	2	—	0	1	—	3
Texas¶	—	49	282	435	4,916	—	0	6	—	1	—	0	4	—	4
<b>Mountain</b>	3	24	83	600	1,319	—	0	12	—	2	—	0	22	—	6
Arizona	—	0	0	—	—	—	0	10	—	1	—	0	8	—	—
Colorado	3	11	44	292	539	—	0	4	—	—	—	0	10	—	4
Idaho¶	N	0	0	N	N	—	0	1	—	1	—	0	6	—	1
Montana¶	—	3	27	70	176	—	0	0	—	—	—	0	2	—	—
Nevada¶	N	0	0	N	N	—	0	2	—	—	—	0	3	—	—
New Mexico¶	—	2	10	67	133	—	0	1	—	—	—	0	1	—	—
Utah	—	10	31	171	462	—	0	2	—	—	—	0	5	—	—
Wyoming¶	—	0	1	—	9	—	0	0	—	—	—	0	2	—	1
<b>Pacific</b>	3	2	7	59	60	—	0	38	—	—	—	0	23	—	3
Alaska	3	1	6	39	23	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	37	—	—	—	0	20	—	3
Hawaii	—	1	4	20	37	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	2	—	—	—	0	4	—	—
Washington	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	3	—	54	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	8	17	114	309	—	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 notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting year 2008 and 2009 are provisional.

† 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 1.

§ Not notifiable in all states. Data from states where the condition is not notifiable 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 June 13, 2009 (23rd week)

Reporting area	All causes, by age (years)							Reporting area	All causes, by age (years)						
	All Ages	≥65	45-64	25-44	1-24	<1	P&† Total		All Ages	≥65	45-64	25-44	1-24	<1	P&† Total
<b>New England</b>	517	363	118	17	6	13	55	<b>S. Atlantic</b>	1,356	826	359	100	32	39	70
Boston, MA	136	86	34	5	2	9	17	Atlanta, GA	190	128	40	17	3	2	3
Bridgeport, CT	25	19	5	1	—	—	4	Baltimore, MD	159	83	46	22	7	1	11
Cambridge, MA	9	6	3	—	—	—	—	Charlotte, NC	144	86	33	12	6	7	14
Fall River, MA	19	12	6	1	—	—	1	Jacksonville, FL	193	111	64	9	5	4	11
Hartford, CT	55	41	10	3	—	1	7	Miami, FL	89	48	32	3	2	4	5
Lowell, MA	20	15	5	—	—	—	—	Norfolk, VA	78	45	21	4	—	8	1
Lynn, MA	11	6	4	—	1	—	—	Richmond, VA	63	30	21	8	1	3	2
New Bedford, MA	31	28	3	—	—	—	2	Savannah, GA	59	42	16	1	—	—	5
New Haven, CT	19	16	3	—	—	—	1	St. Petersburg, FL	75	49	15	5	3	3	3
Providence, RI	57	42	11	2	2	—	2	Tampa, FL	180	121	41	8	5	5	10
Somerville, MA	1	1	—	—	—	—	—	Washington, D.C.	113	74	27	10	—	2	3
Springfield, MA	47	27	13	4	1	2	7	Wilmington, DE	13	9	3	1	—	—	2
Waterbury, CT	30	23	7	—	—	—	5	<b>E.S. Central</b>	929	584	251	56	22	16	78
Worcester, MA	57	41	14	1	—	1	9	Birmingham, AL	187	118	47	13	3	6	14
<b>Mid. Atlantic</b>	1,835	1,267	398	116	25	29	94	Chattanooga, TN	71	50	14	4	3	—	5
Albany, NY	38	33	5	—	—	—	2	Knoxville, TN	95	67	19	6	2	1	12
Allentown, PA	22	17	4	1	—	—	2	Lexington, KY	87	55	25	3	2	2	7
Buffalo, NY	86	59	15	6	3	3	7	Memphis, TN	166	86	53	20	4	3	14
Camden, NJ	28	14	8	2	1	3	1	Mobile, AL	108	81	24	3	—	—	6
Elizabeth, NJ	14	8	5	1	—	—	4	Montgomery, AL	74	49	19	2	3	1	4
Erie, PA	48	37	9	—	1	1	5	Nashville, TN	141	78	50	5	5	3	16
Jersey City, NJ	17	13	3	1	—	—	2	<b>W.S. Central</b>	1,268	787	303	88	47	43	73
New York City, NY	818	576	170	53	14	5	29	Austin, TX	87	48	21	6	5	7	9
Newark, NJ	44	21	18	2	2	1	2	Baton Rouge, LA	57	44	9	2	2	—	—
Paterson, NJ	12	8	2	2	—	—	2	Corpus Christi, TX	52	34	15	1	—	2	1
Philadelphia, PA	320	188	94	28	2	8	9	Dallas, TX	164	96	37	21	5	5	10
Pittsburgh, PA§	50	37	6	4	—	3	3	El Paso, TX	89	67	14	4	2	2	3
Reading, PA	33	25	7	1	—	—	4	Fort Worth, TX	U	U	U	U	U	U	U
Rochester, NY	119	91	21	4	—	3	8	Houston, TX	375	213	92	29	25	16	25
Schenectady, NY	26	19	5	2	—	—	1	Little Rock, AR	68	47	14	4	1	2	3
Scranton, PA	29	23	6	—	—	—	2	New Orleans, LA	U	U	U	U	U	U	U
Syracuse, NY	83	66	10	5	1	1	8	San Antonio, TX	220	141	53	15	4	7	11
Trenton, NJ	19	12	5	1	—	1	—	Shreveport, LA	46	26	15	1	2	2	6
Utica, NY	11	7	1	2	1	—	—	Tulsa, OK	110	71	33	5	1	—	5
Yonkers, NY	18	13	4	1	—	—	3	<b>Mountain</b>	996	683	220	52	24	16	66
<b>E.N. Central</b>	2,115	1,362	520	149	34	49	151	Albuquerque, NM	106	74	20	6	4	2	3
Akron, OH	70	39	24	6	—	1	1	Boise, ID	49	36	10	2	—	1	5
Canton, OH	42	27	10	3	1	1	3	Colorado Springs, CO	71	52	12	6	—	1	2
Chicago, IL	342	201	102	30	6	2	42	Denver, CO	59	41	11	5	1	1	6
Cincinnati, OH	96	60	26	5	1	4	11	Las Vegas, NV	230	166	46	8	4	6	16
Cleveland, OH	222	153	48	14	1	6	5	Ogden, UT	26	17	6	1	2	—	1
Columbus, OH	209	144	47	8	3	7	17	Phoenix, AZ	181	110	49	11	6	4	16
Dayton, OH	135	102	21	9	2	1	8	Pueblo, CO	28	23	4	1	—	—	1
Detroit, MI	158	93	42	12	9	2	14	Salt Lake City, UT	134	87	34	8	4	1	15
Evansville, IN	43	26	11	5	1	—	2	Tucson, AZ	112	77	28	4	3	—	1
Fort Wayne, IN	91	69	15	4	1	2	6	<b>Pacific</b>	1,459	970	319	103	39	26	139
Gary, IN	16	5	8	3	—	—	—	Berkeley, CA	16	8	5	3	—	—	—
Grand Rapids, MI	51	36	8	4	—	3	7	Fresno, CA	106	73	24	8	—	1	9
Indianapolis, IN	205	121	52	20	3	9	12	Glendale, CA	37	19	12	2	—	4	7
Lansing, MI	37	30	7	—	—	—	4	Honolulu, HI	64	45	14	3	2	—	6
Milwaukee, WI	97	47	30	13	3	4	2	Long Beach, CA	U	U	U	U	U	U	U
Peoria, IL	52	33	14	2	1	2	7	Los Angeles, CA	226	131	61	23	9	2	27
Rockford, IL	65	44	16	4	—	1	2	Pasadena, CA	19	9	6	1	—	3	2
South Bend, IN	41	27	11	2	—	1	1	Portland, OR	89	58	19	5	4	2	6
Toledo, OH	98	68	21	4	2	3	4	Sacramento, CA	190	132	37	15	2	4	22
Youngstown, OH	45	37	7	1	—	—	3	San Diego, CA	133	87	31	6	5	3	12
<b>W.N. Central</b>	651	432	148	38	16	15	47	San Francisco, CA	106	66	27	10	3	—	8
Des Moines, IA	131	91	29	8	1	2	8	San Jose, CA	166	127	24	7	6	2	19
Duluth, MN	24	17	5	1	—	1	1	Santa Cruz, CA	31	23	5	2	1	—	3
Kansas City, KS	22	9	9	3	1	—	1	Seattle, WA	109	67	30	10	1	1	9
Kansas City, MO	105	63	24	9	5	4	7	Spokane, WA	65	51	8	2	2	2	5
Lincoln, NE	41	34	7	—	—	—	1	Tacoma, WA	102	74	16	6	4	2	4
Minneapolis, MN	53	31	15	4	2	1	3	<b>Total¶</b>	<b>11,126</b>	<b>7,274</b>	<b>2,636</b>	<b>719</b>	<b>245</b>	<b>246</b>	<b>773</b>
Omaha, NE	72	53	12	2	2	3	8								
St. Louis, MO	86	49	28	2	3	2	7								
St. Paul, MN	42	28	6	7	1	—	3								
Wichita, KS	75	57	13	2	1	2	8								

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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