

## Influenza Vaccination Coverage Among Health-Care Personnel — United States, 2010–11 Influenza Season

The Advisory Committee on Immunization Practices (ACIP) and the Healthcare Infection Control Practices Advisory Committee recommend that all U.S. health-care personnel (HCP) be vaccinated annually against influenza (1). Nonetheless, influenza vaccination coverage among HCP in the United States has increased slowly over the past decade (2,3); during the 2009–10 influenza season, 61.9% of HCP received seasonal influenza vaccination (4). To update data with estimates from the 2010–11 influenza season, CDC conducted an Internet-based survey of 1,931 HCP who participated in three online survey panels. This report summarizes the results of that survey, which indicated that overall influenza vaccination coverage among HCP was 63.5% during the 2010–11 influenza season, similar to coverage for the 2009–10 season. Among HCP who reported working at a facility where vaccination was required by their employer, 98.1% were vaccinated. Among HCP without such an employer requirement but who were offered vaccination onsite, greater coverage was associated with a personal reminder from the employer to get vaccinated (69.9%), vaccination availability at no cost (67.9%), and vaccination availability for >1 day (68.8%). Influenza vaccination of HCP is needed to protect patients from HCP-transmitted disease. Maximizing influenza vaccination for all HCP is an important part of any comprehensive infection-control program.

To monitor 2010–11 influenza vaccination coverage among HCP, during April 1–27, 2011, CDC conducted a web-based survey of eligible HCP participating in three online survey panels. A total of 1,150 self-identified HCP were recruited from an online research panel operated by Knowledge Networks, Inc.\*; an additional 534 persons were sampled from a specialized research panel composed primarily of physician specialists recruited through sources such as the American Medical Association master file, and 247 self-identified HCP

were sampled from a marketing research panel composed of persons recruited through web advertising who agreed to participate in exchange for small amounts of financial compensation (i.e., \$10 or less per survey). The total sample of 1,931 from all three sources was weighted to be nationally representative of demographic and geographic characteristics of the U.S. population of HCP as reflected in the most recent Current Population Survey.† Statistical significance of weighted differences was determined by Wald chi-square tests ( $p < 0.05$ ). Factors associated with increased vaccination coverage were assessed in a multivariable logistic regression model. The survey measured self-reported influenza vaccination from August 2010 through approximately mid-April 2011.

Among the HCP, 63.5% reported receiving a 2010–11 influenza vaccination (Table 1).§ Vaccination coverage was higher among HCP working in hospitals (71.1%), compared with those working in ambulatory or outpatient centers (61.5%), patient homes (53.6%), and “other” health-care settings (46.7%). Vaccination coverage among physicians and dentists (84.2%) was similar to coverage among nurse practitioners and physician assistants (82.6%) and was significantly higher than for those working in all other occupational groups (Table 1).

† Available at <http://www.census.gov/cps>.

§ Responded “yes” to the question “Have you received an influenza vaccination this past influenza season (August 2010 through April 2011)?”

\* Additional information available at [http://www.knowledgenetworks.com/ganp/docs/knowledgepanel\(r\)-design-summary-description.pdf](http://www.knowledgenetworks.com/ganp/docs/knowledgepanel(r)-design-summary-description.pdf).

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Coverage also was significantly higher among persons aged  $\geq 60$  years (74.2%), compared with those aged 18–29 years (56.4%) and 30–44 years (57.8%). No significant differences in coverage were observed by race/ethnicity.

The prevalence of beliefs regarding influenza and influenza vaccination differed between vaccinated and unvaccinated HCP (Table 2). The greatest differences in prevalence were among HCP who believed getting vaccinated was worth the time and expense (vaccinated: 94.7%, unvaccinated: 45.8%), those who believed getting a vaccination would better protect persons around them (vaccinated: 89.1%, unvaccinated: 44.6%), those who believed vaccination could protect them from getting influenza (vaccinated: 92.7%, unvaccinated: 54.2%), and those who believed influenza to be a serious threat to their own health (vaccinated: 70.1%, unvaccinated: 34.2%). Among those vaccinated, 94.8% believed influenza vaccination was safe, compared with 66.2% of those not vaccinated who believed influenza vaccination was safe (Table 2).

Approximately 13% of HCP reported being required by their employers to be vaccinated for influenza. Among these persons, vaccination coverage was 98.1%, compared with 58.3% among those without an employer requirement (Table 1). Among HCP without an employer requirement who were offered vaccination onsite, greater coverage was associated with a personal reminder from the employer to get vaccinated (69.9% versus 59.5%), vaccination availability at no charge (67.9% versus 41.2%), and vaccination availability for  $>1$  day

(68.8% versus 41.4%) (Table 3). In all, 85.5% of HCP without an employer requirement were offered onsite vaccination at no charge on multiple days. Among HCP without onsite vaccination, neither a personal reminder from their employer to be vaccinated nor employers publicizing the risks and benefits of vaccination were associated with vaccination.

In a multivariable logistic regression model limited to HCP who did not have a vaccination requirement but were offered onsite vaccination, two incentives were associated with being vaccinated, after controlling for other incentives and demographic characteristics of HCP: a personal reminder to be vaccinated (odds ratio [OR] = 1.6; 95% confidence interval [CI] = 1.1–2.3) and vaccine availability at no cost and for  $>1$  day (considered as a composite variable because of near complete overlap in the two occurrences) (OR = 2.8; CI = 1.7–4.5). Other incentives were not associated with being vaccinated in this model.

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**TABLE 1. Influenza vaccination coverage among health-care personnel, by selected characteristics — United States, 2010–11 influenza season**

Characteristic	Unweighted no. in sample	% vaccinated*	(95% CI)
<b>Overall</b>	<b>1,931</b>	<b>63.5</b>	<b>(60.2–66.8)</b>
<b>Work setting</b>			
Hospital	617	71.1	(66.0–76.3)
Ambulatory/Outpatient	658	61.5	(54.8–68.2) <sup>†</sup>
Dentist office	47	54.6	(35.6–73.6)
Retail pharmacy	102	64.1	(52.0–76.3)
Long-term care facility	220	64.4	(55.8–73.0)
Home health	156	53.6	(42.6–64.5) <sup>†</sup>
Other	131	46.7	(34.3–59.1) <sup>†</sup>
<b>Occupation</b>			
Physician or dentist	430	84.2	(80.4–88.0)
Nurse practitioner/ Physician assistant	72	82.6	(71.0–94.1)
Nurse	255	69.8	(62.6–77.0) <sup>§</sup>
Allied health professional	245	64.4	(56.5–72.3) <sup>§</sup>
Technician	236	64.0	(55.7–72.3) <sup>§</sup>
Nonclinical support	60	66.2	(48.7–83.8) <sup>§</sup>
Administrative	248	57.2	(49.0–65.3) <sup>§</sup>
Assistant/Aide	295	55.9	(47.8–64.0) <sup>§</sup>
Other	90	62.4	(49.2–75.5) <sup>§</sup>
<b>Age group (yrs)</b>			
18–29	276	56.4	(48.2–64.6) <sup>¶</sup>
30–44	564	57.8	(51.7–64.0) <sup>¶</sup>
45–59	844	69.0	(64.0–73.9)
≥60	246	74.2	(66.3–82.1)
<b>Race/Ethnicity</b>			
White, non-Hispanic	1,252	66.6	(63.0–70.1)
Black, non-Hispanic	257	61.1	(51.0–71.2)
Hispanic	289	57.6	(45.3–69.9)
Mixed race, non-Hispanic	37	38.9	(17.9–60.0)
Other, non-Hispanic	96	54.8	(38.8–70.8)
<b>Required by employer to be vaccinated</b>			
Yes	230	98.1	(96.5–99.7)
No	1,695	58.3	(54.8–61.9)**

**Abbreviation:** CI = confidence interval.

\* Weighted estimate.

<sup>†</sup> Significantly different from those in hospital settings ( $p < 0.05$ ).

<sup>§</sup> Significantly different from physicians or dentists ( $p < 0.05$ ).

<sup>¶</sup> Significantly different from those aged  $\geq 60$  years ( $p < 0.05$ ).

\*\* Significantly different from those subject to an employer requirement for vaccination ( $p < 0.05$ ).

### Editorial Note

Vaccination of HCP against influenza has been shown to reduce illness and absenteeism and to reduce transmission of influenza to HCP, their families, and their patients (1). During the 2009–10 influenza season, influenza vaccination coverage among HCP reached peaks of 61.9% for the trivalent seasonal influenza vaccine and 64.3% for coverage with either the seasonal or pandemic monovalent 2009 H1N1 vaccine (4). Although increased attention to influenza resulting from the 2009 H1N1 pandemic was thought to have contributed to the increase in influenza vaccination coverage in 2009–10, comparable coverage was achieved during the 2010–11 season,

### What is already known on this topic?

The Advisory Committee on Immunization Practices (ACIP) recommends annual influenza vaccination for all health-care personnel (HCP); however, overall coverage among HCP remains well below the *Healthy People 2020* target of 90% coverage.

### What is added by this report?

Coverage for influenza vaccination among HCP was estimated at 63.5%. Coverage was 98.1% among HCP who had an employer requirement for vaccination. In the absence of requirements, increased vaccination coverage was associated with employers offering vaccination onsite, free of charge, for multiple days.

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

Health-care facilities should develop a comprehensive influenza vaccination strategy that uses a combination of approaches demonstrated to be effective in increasing vaccination coverage, such as education and accessible vaccination at no cost to HCP.

with 63.5% of HCP in this analysis reporting receipt of influenza vaccination from August 2010 through mid-April 2011. However, to the extent that the coverage estimates derived from this survey are comparable to those from the National Health Interview Survey (NHIS), influenza vaccination coverage of HCP remains below the *Healthy People 2020* target of 90% (as tracked by NHIS) (5).

The results of this survey indicate that 66.2% of unvaccinated HCP believed that the influenza vaccine was safe. However, when compared with those vaccinated, significantly lower percentages of unvaccinated HCP expressed the beliefs that getting vaccinated was worth the time and expense and that influenza vaccination can protect them and the persons around them from disease. These results indicate that programs to educate HCP regarding the seriousness of influenza and the effectiveness of the vaccine in protecting HCP and their patients from illness should continue.

Consistent with reports from health-care institutions that have required annual influenza vaccination as a condition for employment (6,7), vaccination coverage of 98.1% was reported among respondents who had an employer requirement for vaccination. Approximately 13% of surveyed HCP worked at facilities with such requirements, compared with 11% during the 2009–10 season (4). In the absence of requirements for vaccination, significantly higher vaccination coverage was achieved among employees who were offered vaccination onsite and free of charge for  $> 1$  day.

The findings in the report are subject to at least four limitations. First, the sample is not necessarily representative of all HCP in the United States, and estimates might not be directly comparable to those made for the 2009–10

**TABLE 2. Beliefs regarding influenza and vaccination among health-care personnel, by influenza vaccination status — United States, 2010–11 influenza season**

Belief	Vaccinated (n = 1,334*)		Not vaccinated (n = 586*)	
	% agree/ strongly agree <sup>†</sup>	(95% CI)	% agree/ strongly agree <sup>†§</sup>	(95% CI)
I am at risk for getting influenza	85.6	(82.4–88.9)	60.6	(54.6–66.5)
People around me are at risk for getting influenza	91.8	(89.2–94.5)	71.1	(65.2–77.0)
Influenza is a serious threat to my health	70.1	(66.3–73.9)	34.2	(28.7–39.7)
Influenza is a serious threat to the health of people around me	88.9	(85.9–91.1)	59.9	(54.0–65.7)
Influenza vaccination can protect me from getting influenza	92.7	(90.4–95.1)	54.2	(48.4–60.1)
If I get an influenza vaccination, people around me will be better protected from influenza	89.1	(96.3–91.9)	44.6	(38.8–50.4)
Influenza vaccination is safe	94.8	(92.8–96.8)	66.2	(60.6–71.8)
Getting vaccinated for influenza is worth the time and expense	94.7	(92.8–96.6)	45.8	(40.0–51.7)
I know everything I need to know to make a good decision about getting vaccinated for influenza	91.1	(88.5–93.7)	82.5	(78.1–86.9)

**Abbreviation:** CI = confidence interval.

\* Unweighted number in sample.

<sup>†</sup> Weighted estimate.

<sup>§</sup> All estimates for those not vaccinated were significantly different from the estimates for those vaccinated ( $p < 0.05$ ).

**TABLE 3. Influenza vaccination coverage among health-care personnel (HCP) not required by their employer to be vaccinated, by those with applicable employer incentives versus those without applicable employer incentives — United States, 2010–11 influenza season**

Employer incentive	With applicable employer incentive			Without applicable employer incentive		
	Unweighted no. in sample	% vaccinated*	(95% CI)	Unweighted no. in sample	% vaccinated*	(95% CI)
<b>Personally reminded by employer to get vaccinated</b>						
Vaccination offered onsite	787	69.9	(65.0–74.7)	491	59.5	(52.1–66.8) <sup>†</sup>
Vaccination not offered onsite	42	38.6	(18.4–58.8)	363	38.5	(31.1–45.9)
<b>Employer publicized risks and benefits of vaccination</b>						
Vaccination offered onsite	919	67.5	(62.8–72.3)	357	62.8	(54.5–71.1)
Vaccination not offered onsite	79	49.5	(32.8–66.2)	323	35.6	(28.1–43.2)
<b>Employer offered onsite vaccination</b>						
Financial incentives or rewards to individuals <sup>§</sup>	45	42.8	(22.2–63.4)	1,238	67.2	(63.0–71.3)
Employer publicized coverage levels to employees <sup>§</sup>	208	70.3	(60.7–79.9)	1,072	65.3	(60.7–69.8)
Vaccination available at no cost	1,159	67.9	(63.7–72.1)	114	41.2	(26.2–55.7) <sup>†</sup>
Vaccination available during multiple shifts	1,059	67.8	(63.4–72.3)	208	55.7	(44.8–66.6)
Vaccination available for >1 day	1,168	68.8	(64.5–72.9)	102	41.4	(27.5–55.2) <sup>†</sup>
Vaccination available when requested by HCP	866	69.3	(64.4–74.2)	399	61.5	(54.2–68.8)
Vaccination available at direct work station	839	68.6	(63.6–73.6)	428	61.1	(53.9–68.5)
Vaccination available from mobile carts	330	64.5	(56.5–72.6)	930	66.5	(61.7–71.4)
Vaccination available from peer vaccinators	607	69.1	(63.2–75.0)	653	63.4	(57.5–69.2)
Vaccination available at special events	314	66.6	(58.0–75.3)	945	65.8	(61.0–70.6)

**Abbreviation:** CI = confidence interval.

\* Weighted estimate.

<sup>†</sup> Significantly different when compared with employees with applicable employer incentive ( $p < 0.05$ ).

<sup>§</sup> A small number (<10) of respondents whose employers did not offer onsite vaccination also reported these employer practices.

season, because the sample used for that survey was restricted to members of the Knowledge Networks panel and not supplemented with members from the opt-in panels. Second, all results are based on self-report and are not substantiated by employment records or employer interviews. Third, the survey is possibly subject to selection bias, if participation in the survey is correlated with receipt of vaccination or certain beliefs. Finally, the definition of HCP used in this survey might vary slightly from definitions used in previously published surveys of vaccination coverage. Despite these limitations, Internet panel surveys are a useful surveillance tool for timely midseason and postseason evaluation of influenza vaccination coverage and knowledge, attitude, practice, and barrier data not provided by other sources of HCP data.

Since July 2007, the Joint Commission has required accredited critical access hospitals, other hospitals, and long-term care centers to establish an annual influenza vaccination program that would, at minimum, offer onsite influenza vaccination, monitor vaccination coverage, and provide education to staff members and licensed independent practitioners. Since 2009, CDC's National Healthcare Safety Network has provided a web-based tool for surveillance of vaccination of HCP in voluntarily enrolled health-care facilities.<sup>¶</sup> Beginning in 2013, the Centers for Medicare & Medicaid Services might require hospitals to report HCP influenza vaccination coverage as part of its Hospital Inpatient Quality Reporting Program (8). Tracking vaccination coverage among HCP is needed as a measure of patient safety and to mark progress toward reaching the *Healthy People 2020* target of 90%.

<sup>¶</sup>Additional information available at <http://www.cdc.gov/nhsn/hps.html>.

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## Influenza Vaccination Coverage Among Pregnant Women — United States, 2010–11 Influenza Season

Women are at increased risk for morbidity and mortality from influenza during pregnancy (1). Vaccinating pregnant women for influenza can protect both the women and their infants, especially infants aged <6 months who are not old enough to receive influenza vaccination (2–4). Since 2004, the Advisory Committee on Immunization Practices and the American College of Obstetricians and Gynecologists have recommended inactivated influenza vaccine for all women who are pregnant during influenza season, regardless of trimester (1,5). Before 2009, estimated influenza vaccination coverage among pregnant women had been consistently low (approximately 15%) (1,5). However, vaccination levels increased substantially in response to the 2009 influenza A (H1N1) pandemic to nearly 50% (6–7). To estimate influenza vaccination coverage among pregnant women for the 2010–11 season, CDC analyzed data from an Internet panel survey conducted in April 2011 among women who were pregnant any time during October 2010–January 2011. Among 1,457 survey respondents, 49% reported that they had received influenza vaccination: 12% were vaccinated before pregnancy, 32% during pregnancy, and 5% after pregnancy. Women offered influenza vaccination by a health-care provider (62%) were more likely to be vaccinated (71%) than other women (14%) and were more likely to have positive attitudes about vaccine effectiveness and safety. These results indicate that the higher vaccination level achieved the previous season (2009–10) was sustained and emphasize the critical role of health-care providers in promoting influenza vaccination. Continued efforts are needed to encourage health-care providers to strongly recommend and offer influenza vaccination to pregnant patients to protect both the mothers and their infants.

CDC conducted an Internet panel survey during April 4–25, 2011, to provide end-of-season estimates of influenza vaccination coverage and information on knowledge, attitudes, and behaviors related to influenza vaccination among pregnant women. Women aged 18–49 years who were pregnant at any time since August 1, 2010, were recruited from the SurveySpot

panel operated by Survey Sampling International.\* Of all panel members contacted in April 2011, a total of 2,126 were determined to be eligible for the survey, and 1,937 (91%) completed the online survey. The sample was weighted to reflect the age and race/ethnicity distribution based on census region estimates from the U.S. population of pregnant women (8). To be consistent with a previous study (6), the study population was limited to 1,457 women reporting pregnancy at any time during the peak influenza vaccination period (October 2010–January 2011).

Survey respondents were asked if they had an influenza vaccination since August 1, 2010, and if yes, in which month and whether it was before, during, or after pregnancy. Pregnancy status questions included whether respondents were currently pregnant or pregnant at any time since August 1, 2010, and if so, what were the actual months of pregnancy. Respondents who were pregnant at the time of the survey were asked their expected delivery date. All respondents were asked if their doctor or other health professional had offered them influenza vaccination during an office visit and their attitudes toward influenza and influenza vaccination. Weighted analyses were conducted using statistical software. Confidence intervals were calculated, and chi-square tests were used to assess statistical significance of differences in vaccination coverage levels between subgroups.

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\*Additional information available at <http://www.surveysampling.com>. The SurveySpot panelists generally were recruited from Internet sites that host large and frequent numbers of visitors and diverse Internet traffic. Multiple methods of recruitment were used, including banner ads, direct invitations, pop-ups, and web intercepts. The panel represents approximately 1 million households, and new panelists are continually being recruited; existing panelists are removed from the panel if they have opted-out or have not responded to an invitation within a specified period. A minimum incentive is routinely used to maintain the panel but not for an inducement to participate in a particular survey. Pregnant women panelists in this report were recruited from the SurveySpot panel using two methods. First, a message advertising the survey was placed on the main panel website (<http://www.surveyspot.com>), inviting panelists to view the survey eligibility questions on the panel's requirements page. A total of 18,789 respondents were invited, and 1,705 (9.1%) viewed the first eligibility question. Second, an e-mail invitation was sent to a sample of 11,688 panelists whose panel profiles indicated that they were women aged 18–49 years living in the United States. Of these, 1,370 (11.7%) replied. As a result of the two methods, a total of 3,075 panelists recruited went to the survey website and answered the first eligibility question.

Of the 1,457 women pregnant at any time during October 2010–January 2011, 49% reported influenza vaccination for the 2010–11 season: 12% were vaccinated before pregnancy, 32% during pregnancy, and 5% after pregnancy. Vaccination after pregnancy was more prevalent for women delivering early in the vaccination period, and vaccination before pregnancy was more prevalent among women who were in earlier stages of pregnancy later in the vaccination period (Figure). Younger women (aged 18–24 years) were less likely to be vaccinated than older women (aged 25–49 years) (44% versus 52%) (Table 1). College graduates were more likely to be vaccinated than those with less education. Women with health insurance coverage also were more likely to report influenza vaccination compared with those who were not insured.

Overall, 62% of women reported that they were offered influenza vaccination by their health-care providers; among those offered vaccination, 71% received influenza vaccination, substantially higher than the 14% vaccination level among women whose health-care providers did not offer vaccination (Table 1). Forty-five percent of women reported influenza vaccination in a previous influenza season, and these women were four times as likely to report 2010–11 vaccination as women without previous vaccination (84% versus 21%).

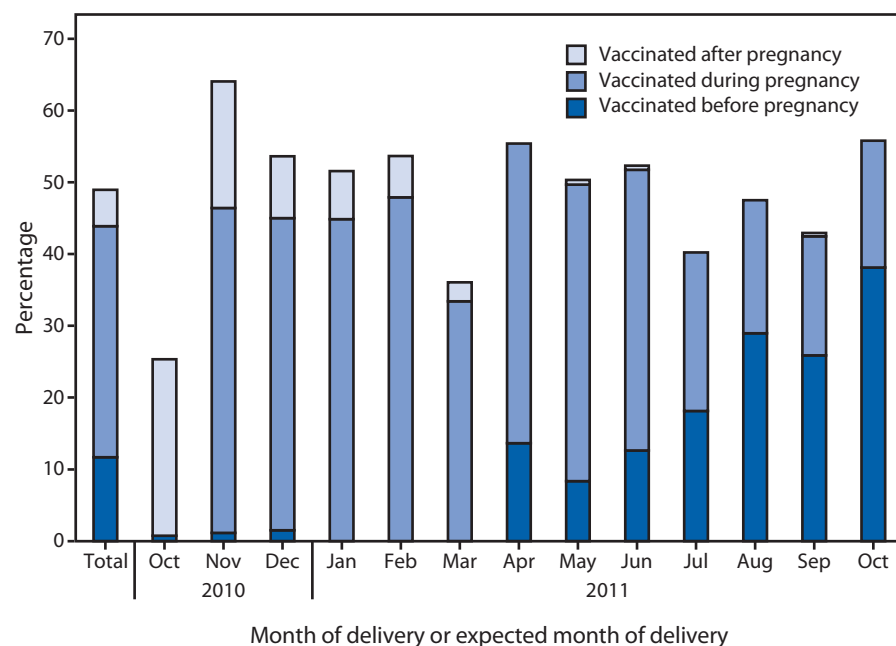
Compared with women whose health-care provider did not offer vaccination, women who received a health-care provider offer were more likely to have positive attitudes about the

effectiveness of influenza vaccination (82% versus 54%), safety of influenza vaccination for pregnant women (78% versus 53%), and safety of vaccination for their infants (75% versus 47%) (Table 2). In addition, women who received a health-care provider offer consistently had higher vaccination levels than those who did not receive a health-care provider offer, regardless of their perceptions of vaccination safety or effectiveness expressed in April 2011. Moreover, women with a negative attitude toward vaccination who had received a health-care provider offer of vaccination were more likely to be vaccinated than women who had a positive attitude without a health-care provider offer.

The top five “main” reasons for not receiving influenza vaccination were “I am concerned about possible safety risks to my baby if I got vaccinated” (20%), “I am concerned that the vaccination would give me the flu” (17%), “I don’t think the vaccination is effective in preventing flu” (14%), “I am concerned about possible safety risk to myself if I got vaccinated” (11%), and either “I don’t think I would get very sick if I got the flu” or “I think if I get the flu, I will just get some medication to treat it” (14%).

The majority of women who were vaccinated during pregnancy received vaccination at their obstetrician/gynecologist or midwife’s office (61%), followed by another doctor’s office or another medical-related place (22%), a pharmacy or grocery store (8%), health department (5%), and their workplace or school (5%). Among women vaccinated either before or after pregnancy, 18% were vaccinated in an obstetrician/gynecologist or midwife’s office, and 61% in another doctor’s office or another medical-related place.

**FIGURE.** Percentage of women aged 18–49 years pregnant at any time during October 2010–January 2011 (N = 1,457) who received influenza vaccination before, during, or after pregnancy for the 2010–11 influenza season, by month of delivery or expected month of delivery — United States, Internet panel survey, April 2011



#### Reported by

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**TABLE 1. Percentage of women aged 18–49 years pregnant at any time during October 2010–January 2011 (N = 1,457) who received influenza vaccination before, during, or after pregnancy for the 2010–11 influenza season, by selected characteristics—United States, Internet panel survey, April 2011**

Characteristic	Sample			Vaccination coverage*	
	No.	% <sup>†</sup>	(95% CI <sup>§</sup> )	%	(95% CI)
<b>Overall</b>	1,457	—	—	49.0	(±2.8)
<b>Age group (yrs)</b>					
18–24	504	34.5	(±2.6)	43.6	(±4.6)
≥25	953	65.5	(±2.6)	51.8	(±3.5)
<b>Race/Ethnicity</b>					
Hispanic	195	21.7	(±2.7)	53.2	(±7.3)
White, non-Hispanic	977	56.3	(±2.9)	46.5	(±3.3)
Black, non-Hispanic	200	16.5	(±2.1)	47.1	(±7.2)
Other	84	5.5	(±1.2)	63.8	(±10.9)
<b>Education</b>					
<College graduation	890	63.3	(±2.7)	43.4	(±3.6)
College graduate	441	30.2	(±2.6)	54.9	(±5.1)
>College graduation	93	6.5	(±1.4)	66.9	(±10.7)
<b>Marital status</b>					
Married	567	40.9	(±2.8)	53.6	(±3.6)
Not married	890	59.1	(±2.7)	42.3	(±4.4)
<b>Working status<sup>¶</sup></b>					
Working	830	56.6	(±2.8)	54.6	(±4.2)
Not working	625	43.4	(±2.7)	44.6	(±3.7)
<b>Health insurance coverage (at interview)</b>					
Any public	656	46.2	(±2.8)	46.2	(±4.1)
Private/military	688	46.1	(±2.8)	54.1	(±4.1)
None	113	7.8	(±1.5)	35.0	(±9.4)
<b>Had influenza vaccination in previous season</b>					
Yes	644	44.8	(±2.8)	83.5	(±3.0)
No	813	55.2	(±2.7)	20.9	(±3.0)
<b>Other high-risk conditions<sup>**</sup></b>					
Yes	354	26.3	(±2.5)	58.2	(±5.6)
No	1,103	73.7	(±2.5)	45.7	(±3.2)
<b>Offered influenza vaccination<sup>††</sup></b>					
Yes	836	61.7	(±2.8)	70.8	(±3.3)
No	512	38.3	(±2.8)	14.4	(±3.1)

\* Chi-square test of association between influenza vaccination and each characteristic was statistically significant ( $p < 0.05$ ).

<sup>†</sup> Weighted percentage.

<sup>§</sup> Confidence interval.

<sup>¶</sup> Those who were employed for wages and the self-employed were grouped as working; those who were out of work, homemakers, students, retired, or unable to work were grouped as not working.

<sup>\*\*</sup> Conditions associated with increased risk for serious medical complications from influenza, including chronic asthma, a lung condition other than asthma, a heart condition, diabetes, a kidney condition, a liver condition, or a weakened immune system caused by a chronic illness or by medicines taken for a chronic illness.

<sup>††</sup> Based on response to the question, "During your visits to the doctor/medical professional, did your doctor or other health professional offer the flu vaccination to you?"

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

Pregnant women are recommended by the American College of Obstetricians and Gynecologists and the Advisory Committee on Immunization Practices to receive influenza vaccination regardless of trimester. Vaccination coverage among pregnant women was approximately 50% for the 2009–10 season, much higher than coverage reported for previous influenza seasons. Health-care provider recommendation is strongly associated with vaccination among pregnant women.

#### What is added by this report?

Approximately 49% of pregnant women in an Internet panel survey were vaccinated for influenza for the 2010–11 influenza season; 32% were vaccinated during pregnancy, and 17% before pregnancy or after delivery. Among the 62% of pregnant women who received a health-care provider offer for influenza vaccination, nearly three quarters were vaccinated, which was five times the coverage among those who didn't receive a health-care provider offer.

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

Continued efforts are needed to 1) encourage health-care providers to strongly recommend and offer inactivated influenza vaccination to their pregnant patients and 2) remove barriers for health-care providers to administer influenza vaccination as part of routine practice. Messages to pregnant women from health-care providers and others should emphasize the safety and effectiveness of maternal influenza vaccination to maximize protection of pregnant patients and their infants.

#### Editorial Note

Results from this survey indicate that the record high influenza vaccination levels among pregnant women reported for the previous influenza season (2009–10) were sustained during the 2010–11 season. During 2009–10, pregnant women were included in the initial target groups to receive the inactivated 2009 H1N1 pandemic vaccine, and CDC worked closely with key partners, especially the American College of Obstetricians and Gynecologists, to increase awareness that pregnant women were at increased risk for severe illness from influenza and were recommended for influenza vaccination to protect themselves and their infants (9). However, vaccination levels are still below the *Healthy People 2020* target of 80% influenza vaccination coverage for pregnant women.<sup>†</sup>

This study found that women who received a health-care provider offer were more likely to believe influenza vaccination was effective, protective, and safe for themselves and their infants, and were nearly five times more likely to report receipt of vaccination compared with those who visited a doctor

<sup>†</sup> Additional information about *Healthy People 2020* objectives for influenza vaccination is available at <http://www.healthypeople.gov/2020/topics/objectives2020/objectiveslist.aspx?topicId=23>.



**TABLE 2. Attitudes and vaccination coverage for the 2010–11 influenza season among women aged 18–49 years pregnant at any time during October 2010–January 2011 (N = 1,457), by receipt of a health-care provider offer of influenza vaccination — United States, Internet panel survey, April 2011**

Response	Sample distribution						Vaccination coverage*			
	Offer <sup>†</sup> (n = 836)			No offer (n = 512)			Offer (n = 836)		No offer (n = 512)	
	No.	% <sup>§</sup>	(95% CI) <sup>¶</sup>	No.	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>Flu vaccine is somewhat/very effective in preventing flu</b>										
Yes	576	81.9	(±3.1)	168	53.8	(±6.0)	86.7**	(±3.0)	36.1**	(±7.6)
No	132	18.1	(±3.1)	147	46.2	(±5.9)	46.2	(±9.4)	4.5	(±3.4)
<b>Agree/strongly agree that if a pregnant woman receives the flu vaccination, it will protect the baby from getting the flu after it is born</b>										
Yes	431	52.5	(±3.7)	146	29.0	(±4.3)	81.1**	(±3.9)	24.7**	(±7.4)
No	404	47.5	(±3.7)	364	71.0	(±4.2)	59.6	(±5.3)	10.4	(±3.2)
<b>Flu vaccination is somewhat/very/completely safe for most adult women</b>										
Yes	774	92.6	(±1.9)	428	83.2	(±3.5)	73.6**	(±3.3)	16.1**	(±3.6)
No	61	7.4	(±2.0)	82	16.8	(±3.5)	39.0	(±13.3)	6.7	(±6.0)
<b>Flu vaccination is somewhat/very/completely safe for pregnant women</b>										
Yes	645	77.8	(±3.1)	272	52.7	(±4.6)	80.6**	(±3.2)	21.9**	(±5.1)
No	190	22.2	(±3.0)	240	47.3	(±4.7)	37.7	(±7.4)	6.1	(±3.1)
<b>Flu vaccination that a pregnant woman receives is somewhat/very/completely safe for her baby</b>										
Yes	618	75.1	(±3.2)	241	47.0	(±4.6)	81.7**	(±3.2)	23.3**	(±5.6)
No	217	24.9	(±3.1)	270	53.0	(±4.7)	38.9	(±7.0)	6.7	(±3.0)
<b>Somewhat/very worried about getting sick from this season's flu vaccination</b>										
Yes	397	47.9	(±3.7)	194	37.2	(±4.4)	74.2	(±4.6)	13.4	(±5.0)
No	438	52.1	(±3.7)	317	62.8	(±4.5)	68.1	(±4.6)	15.1	(±4.0)
<b>If a pregnant woman gets the flu, it is somewhat/very likely to harm the baby</b>										
Yes	445	60.1	(±3.8)	258	61.7	(±5.0)	70.8	(±4.4)	17.1	(±4.8)
No	299	39.9	(±3.8)	171	38.3	(±4.9)	72.0	(±5.5)	15.0	(±5.6)

\* The difference in vaccination coverage between those who received a health-care provider offer compared with those who did not receive a provider offer was statistically significant ( $p < 0.05$  by chi-square test) for each level (Yes or No) of each attitude.

<sup>†</sup> Based on response to the question, "During your visits to the doctor/medical professional, did your doctor or other health professional offer the flu vaccination to you?"

<sup>§</sup> Weighted percentage.

<sup>¶</sup> Confidence interval.

\*\* The difference in vaccination coverage between those classified as "Yes" response to the attitude question compared with those classified as "No" response to the attitude questions was statistically significant ( $p < 0.05$  by chi-square test).

but did not receive an offer of vaccination. Pregnant women who had previously received influenza vaccination were four times more likely to receive influenza vaccination compared with those without a prior history of influenza vaccination. Because influenza vaccination is now recommended for all persons aged  $\geq 6$  months (1), further implementation of the universal vaccination recommendation among women of childbearing age might help to increase the likelihood of influenza vaccination before and during pregnancy.

Pregnant women who receive regular prenatal care have many more opportunities for a health-care provider offer of influenza vaccination than nonpregnant women. However, nearly four out of 10 women in this survey did not receive an offer of vaccination even though they visited a health-care provider at least one

time. Barriers to providing influenza vaccination in health-care providers' offices identified by previous studies include lack of infrastructure for vaccine storage, lack of training for nurses to administer vaccines, and concern about safety and related lawsuits for vaccinating first trimester women (10). Another finding of this study was that women still reported safety risk to their infant as the most common main reason for refusing influenza vaccination, even though influenza vaccination during pregnancy can protect women and their infants (2–4). This study also indicated that a substantial proportion of women who delivered early in the influenza season received their vaccination after delivery. Vaccination of members of households with an infant aged  $< 6$  months is important for minimizing influenza risk for the upcoming influenza season.

The findings in this report are subject to at least two limitations. First, selection bias might remain after weighting adjustments, given the exclusion of women with no Internet access and the self-selection processes for entry into the panel and participation in the survey. However, influenza vaccination coverage estimated from this study, restricted to women who were pregnant at any time during December 2010 (48%), was similar to the coverage estimates based on December 2010 Behavioral Risk Factor Surveillance System (BRFSS) interviews of women who were pregnant at that time (51%) (CDC, unpublished data, 2011). BRFSS is a telephone survey and also might be subject to selection bias because of exclusion of households without landline telephone service. Pregnant women account for only 1% of the general population, and conducting a random-digit-dialing survey or a mail survey large enough to obtain an adequate sample size would be costly and time-consuming. The similar estimate from BRFSS provides more evidence to support the use of Internet panels as useful surveillance data sources for timely midseason and postseason evaluation of influenza vaccination among pregnant women. Second, the survey was self-administered, and because pregnancy and vaccination status were not validated by medical record review, all responses are subject to recall and reporting error.

This study found that the higher vaccination level achieved during the 2009–10 influenza season (the fall wave of 2009 H1N1 virus activity) among pregnant women was repeated the following season, and identified key elements highly associated with pregnant women's acceptance of influenza vaccination, such as the health-care provider offer of vaccination and past receipt of influenza vaccination. Continued efforts are needed to encourage health-care providers to strongly recommend and offer influenza vaccination to their pregnant patients. Additional efforts are needed to remove barriers for health-care providers to administer influenza vaccination as part of routine practice. Messages to pregnant women from health-care providers and others should emphasize the safety and effectiveness of maternal influenza vaccination to maximize protection of pregnant patients and their infants.

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## Legionellosis — United States, 2000–2009

Legionnaires disease (LD), a serious, sometimes lethal pneumonia, and Pontiac fever (PF), an influenza-like, self-limited illness, are the two most common forms of legionellosis, which is caused by *Legionella* bacteria. Legionellosis cases are reported to CDC through the National Notifiable Disease Surveillance System (NNDSS) and a Supplemental Legionnaires Disease Surveillance System (SLDSS) designed to manage surveillance data on travel-related cases and enhance outbreak detection. For this report, cases reported to NNDSS during 2000–2009 from the 50 states and the District of Columbia (DC) were assessed, and crude and age-adjusted incidence rates per 100,000 persons were calculated. U.S. legionellosis cases reported annually increased 217%, from 1,110 in 2000 to 3,522 in 2009, and the crude national incidence rate increased 192%, from 0.39 per 100,000 persons in 2000 to 1.15 in 2009. Because NNDSS is a passive surveillance system dependent on health-care providers and laboratories reporting cases, the actual incidence of legionellosis in the United States likely is higher. Although NNDSS does not record legionellosis cases by type, 99.5% of the legionellosis cases reported to SLDSS during 2005–2009 were classified as LD and 0.5% as PF. Legionellosis surveillance was added to the population-based Active Bacterial Core surveillance (ABCs) system in January 2011 to assess reasons for these increases in numbers of reported cases. The rise in reported cases reinforces the need for health-care providers in all parts of the United States to test and treat adults with severe community-acquired pneumonia for LD, to be vigilant for health-care-associated LD, and to report legionellosis cases to public health authorities.

NNDSS receives reports of cases of nationally notifiable diseases from state health departments, including data on case demographics, the earliest date associated with the patient's illness in public health records (i.e., the date of symptom onset, date of diagnosis, date of confirmatory laboratory test, or the date of the report of the case to the county or state, whichever is earliest), the date of report to CDC, the case status (i.e., confirmed, probable, or suspected), and whether or not the case is part of an outbreak. NNDSS data for 2000–2009 were used to describe legionellosis case demographics, assess seasonal patterns of legionellosis infection, and, using denominators from the 2000 U.S. standard population (1) and U.S. Census Bureau estimates, calculate crude and age-standardized incidence rates for the entire United States (excluding U.S. territories) and for each of the nine U.S.

Census divisions.\* Only cases considered confirmed under the 2005 Council of State and Territorial Epidemiologists' (CSTE) legionellosis case definitions are described in this report.† To be classified as confirmed, cases must be clinically compatible with legionellosis (i.e., fever, myalgia, cough, and/or clinical or radiographic evidence of pneumonia) and meet at least one of the confirmatory laboratory criteria (i.e., recovery of *Legionella* sp. in culture, detection of *Legionella pneumophila* serogroup 1 antigen in urine, or fourfold or greater rise in *L. pneumophila* serogroup 1-specific serum antibodies).

States also are encouraged to report cases to SLDSS to enhance detection of travel-related outbreaks and to provide information on additional legionellosis case variables not captured by NNDSS.§ Legionellosis cases ideally should be reported to both NNDSS and SLDSS. SLDSS collects information related to case demographics, diagnosis, diagnostic testing, hospitalization, outcome, outbreak involvement, nosocomial classification, and recent travel history. In addition to the reports of cases among U.S. residents received from state health departments, SLDSS reports occasionally come from cruise lines, health-care providers, and private citizens. Those additional reports are verified with the relevant state health departments before inclusion in the SLDSS database. Foreign public health authorities also report cases to SLDSS, usually among travelers to the United States. In 2005, CSTE issued a position statement (2) requesting that all legionellosis cases be reported to SLDSS, but such reporting is not mandatory, and case follow-up varies by state and county based on staffing availability and perceived public health importance. For this report, SLDSS data were used to characterize diagnoses, diagnostic testing, outcomes,

\* *New England*: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; *Middle Atlantic*: New Jersey, New York, and Pennsylvania; *East North Central*: Illinois, Indiana, Michigan, Wisconsin, and Ohio; *West North Central*: Iowa, Kansas, Missouri, Minnesota, Nebraska, North Dakota, and South Dakota; *South Atlantic*: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; *East South Central*: Alabama, Kentucky, Mississippi, and Tennessee; *West South Central*: Arkansas, Louisiana, Oklahoma, and Texas; *Mountain*: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; *Pacific*: Alaska, California, Hawaii, Oregon, and Washington.

† The previous case definition, in use during 1996–2004, also included detection of *Legionella pneumophila* serogroup 1 through direct fluorescent antibody testing as a confirmatory laboratory test. The 2005 case definition is available at [http://www.cdc.gov/osels/ph\\_surveillance/nndss/casedef/legionellosis\\_current.htm](http://www.cdc.gov/osels/ph_surveillance/nndss/casedef/legionellosis_current.htm). The 1996 case definition is available at [http://www.cdc.gov/osels/ph\\_surveillance/nndss/casedef/legionellosis1996.htm](http://www.cdc.gov/osels/ph_surveillance/nndss/casedef/legionellosis1996.htm).

§ A legionellosis case report form is available to state and local health departments at [http://www.cdc.gov/legionella/files/legionella\\_case\\_report.pdf](http://www.cdc.gov/legionella/files/legionella_case_report.pdf).

outbreak involvement, and recent travel.<sup>§</sup> Because of potential differences in data received by SLDSS before and after the 2005 CSTE position statement, separate analyses were conducted using cases with onset during 2000–2009 (NNDSS data) and 2005–2009 (SLDSS data).

During 2000–2009, the 50 states and DC reported 22,418 cases of legionellosis to NNDSS. The crude national incidence rate increased 192%, from 0.39 per 100,000 persons in 2000 to 1.15 in 2009, and the age-adjusted incidence of legionellosis in the United States increased 170%, from 0.40 to 1.08 cases per 100,000 persons. In 2000, the age-adjusted incidence varied substantially by U.S. Census division, from 0.09 cases per 100,000 persons in the West South Central division to 0.73 cases in the Middle Atlantic division. This disparity increased absolutely over the decade (Middle Atlantic division: 2.60 cases per 100,000 persons and West South Central division: 0.44 cases in 2009) (Table 1). All reporting divisions had an increase in age-adjusted legionellosis incidence from 2000–2001 to 2008–2009, ranging from a 101% increase in the West North Central division to 294% in the West South Central division. Nationally, 16,595 cases (74%) were in persons aged ≥50 years, and 14,255 (64%) persons were male (Table 2). Legionellosis incidence increased for all age groups from 2000 to 2009, ranging from 8% for persons aged ≤9 years to 287% for persons aged ≥80 years.

Among the 18,392 cases (82%) reported to NNDSS with available information on race, 78% were white, 19% were black, and 3% were American Indian/Alaska Native, Asian, or other (Table 2).\*\* Cases tended to occur in the summer and

early fall, with the June–October period accounting for 62% of the cases reported each year (Figure).

During 2005–2009, a total of 5,080 confirmed legionellosis cases among U.S. residents were reported to SLDSS by 47 states,<sup>††</sup> accounting for 35% of the 14,554 confirmed cases reported to NNDSS during the same period by all 50 states and DC. An additional 82 confirmed legionellosis cases were reported among foreign visitors to the United States. A total of 1,220 (24%) cases involving U.S. residents were travel-associated; 81% of these involved domestic travel only, and 5% involved cruise ship travel. Travel-associated cases accounted for at least two thirds of the cases reported to SLDSS from 21 states, 11 of which reported only travel-associated cases, suggesting a bias against reporting nontravel-associated cases to SLDSS from some states. Of 3,872 (76%) U.S. resident cases with data available, 4% were associated with a known legionellosis outbreak or possible cluster. Information on clinical outcomes was available for 4,478 (88%) U.S. resident cases, 8% of which resulted in deaths. Urine antigen tests were used to confirm 97% of U.S. resident cases reported during 2005–2009. Only 5% of cases were confirmed by culture during this period, and <1% were confirmed by either serologic or direct fluorescent antigen testing.

#### Reported by

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<sup>§</sup> A case of legionellosis was considered to be potentially travel-associated if the patient reported spending at least one night away from home during the 2 weeks before illness onset.

\*\* Data on the ethnicity of cases reported to NNDSS were not included because 39% of cases were in persons of unknown ethnicity.

<sup>††</sup> Nebraska, North Dakota, Wyoming, and DC did not report any confirmed legionellosis cases to SLDSS during 2005–2009. During this period, 29–40 states reported cases to SLDSS each year.

TABLE 1. Age-adjusted incidence of reported legionellosis cases, by U.S. Census division\* and year, 2000–2009

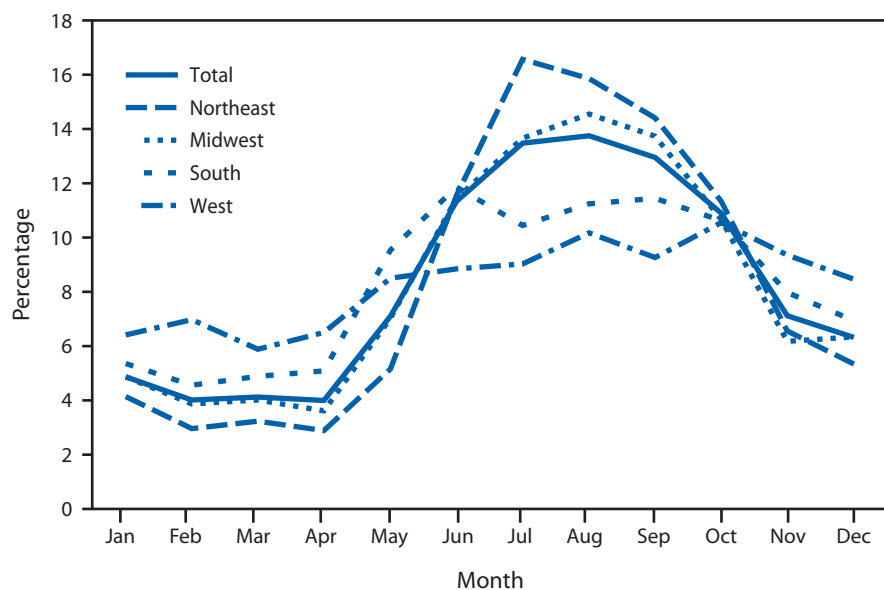
U.S. Census division	Annual incidence per 100,000 population									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
New England	0.38	0.48	0.81	0.79	0.71	1.00	1.20	1.04	1.43	1.21
Middle Atlantic	0.73	0.67	0.88	1.41	1.25	1.74	2.21	1.86	2.33	2.60
East North Central	0.64	0.68	0.64	0.97	1.03	0.96	1.26	1.24	1.34	1.44
West North Central	0.35	0.27	0.33	0.37	0.38	0.49	0.40	0.54	0.66	0.60
South Atlantic	0.40	0.42	0.42	0.97	0.72	0.73	0.81	0.74	0.79	0.93
East South Central	0.25	0.31	0.26	0.57	0.53	0.47	0.59	0.53	0.61	0.73
West South Central	0.09	0.11	0.12	0.27	0.55	0.24	0.29	0.46	0.34	0.44
Mountain	0.24	0.31	0.31	0.49	0.49	0.49	0.62	0.52	0.46	0.68
Pacific	0.18	0.16	0.17	0.24	0.19	0.26	0.28	0.32	0.48	0.43
<b>Total</b>	<b>0.40</b>	<b>0.41</b>	<b>0.45</b>	<b>0.74</b>	<b>0.70</b>	<b>0.75</b>	<b>0.91</b>	<b>0.86</b>	<b>0.99</b>	<b>1.08</b>

\* *New England:* Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; *Middle Atlantic:* New Jersey, New York, and Pennsylvania; *East North Central:* Illinois, Indiana, Michigan, Wisconsin, and Ohio; *West North Central:* Iowa, Kansas, Missouri, Minnesota, Nebraska, North Dakota, and South Dakota; *South Atlantic:* Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; *East South Central:* Alabama, Kentucky, Mississippi, and Tennessee; *West South Central:* Arkansas, Louisiana, Oklahoma, and Texas; *Mountain:* Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; *Pacific:* Alaska, California, Hawaii, Oregon, and Washington.

**TABLE 2. Demographic characteristics of legionellosis cases — National Notifiable Disease Surveillance System, United States, 2000–2009**

Characteristic	No.	(%)	Average per 100,000 population*
<b>Age group (yrs)</b>			
≤9	79	(0)	0.02
10–19	125	(1)	0.03
20–29	516	(2)	0.13
30–39	1,473	(7)	0.36
40–49	3,622	(16)	0.81
50–59	5,401	(24)	1.44
60–69	4,658	(21)	1.94
70–79	3,672	(16)	2.29
≥80	2,864	(13)	2.66
<b>Sex</b>			
Male	14,255	(63)	0.97
Female	8,018	(36)	0.53
Unknown	145	(1)	—
<b>Race</b>			
American Indian/Alaska Native	66	(0)	0.21
Asian	206	(1)	0.14
Black	3,422	(15)	0.87
White	14,287	(64)	0.59
Other	411	(2)	—
Unknown	4,026	(18)	—
<b>Total</b>	<b>22,418</b>	<b>(100)</b>	<b>0.75</b>

\* Crude incidence rates, not age-adjusted.

**FIGURE. Annual average percentage of legionellosis cases occurring annually, by month and U.S. Census region\* — United States, 2000–2009**

\* *Northeast*: Connecticut, Maine, Massachusetts, Rhode Island, Vermont, New Jersey, New York, and Pennsylvania; *Midwest*: Indiana, Illinois, Michigan, Ohio, Iowa, Nebraska, Kansas, North Dakota, Minnesota, and Missouri; *South*: Delaware, District of Columbia, Florida, South Carolina, West Virginia, Kentucky, Louisiana, Oklahoma, and Texas; *West*: Colorado, Idaho, New Mexico, Montana, Utah, Nevada, Wyoming, Alaska, California, Hawaii, Oregon, and Washington.

**Editorial Note**

Reported legionellosis incidence rates increased nearly threefold during 2000–2009. In 2009, NNDSS received 3,522 case reports, the most since legionellosis became a reportable disease in 1976 (3,4). Increased rates were observed across all age groups and geographic regions. The reported case totals likely underestimate the actual disease burden; the most recent completed U.S. population-based pneumonia etiology study estimated that 8,000–18,000 persons are hospitalized each year with LD (5).

An increasing population of older persons contributed to the increase in reported legionellosis cases. Other factors that might have contributed include an increasing population of persons at high risk for infection; improved diagnosis and reporting, possibly stimulated by the 2005 CSTE endorsement of more timely and sensitive legionellosis surveillance; and increased use of urine *Legionella* antigen testing. However, because increases in urine antigen testing began in the 1980s, its use is unlikely to account for the entire increase in legionellosis cases since 2000 (3,4).

Urine antigen tests are easy to perform and provide timely, accurate results (sensitivity: 60%–80%; specificity: >99%) for detecting *L. pneumophila* serogroup 1, the causative agent in 70%–80% of LD cases (6). In contrast, culture of respiratory

samples from possible LD cases (sensitivity: 20%–80%; specificity: >99%) can detect all forms of *Legionella* but has a lengthy turnaround time, and its sensitivity is highly dependent on the skill of laboratory personnel. Similarly, identifying legionellosis through paired serology (sensitivity: 70%–80%; specificity: >95%) involves substantial logistical challenges, whereas direct fluorescent antigen testing for LD (sensitivity: 25%–75%; specificity: >95%) can be technically demanding and can result in false positives resulting from cross-reactions with other bacteria. Only urine antigen and serology are useful for detecting PF, but the sensitivity of these tests for confirmation of PF is substantially lower than for LD (7).

Similar to the findings of previous studies, males accounted for >60% of cases, and increasing age was a major risk factor for legionellosis (3,4). However, the finding that blacks accounted for a disproportionately high number of cases relative to their 12% share of the population was unexpected. Insufficient information is available to confirm whether these patterns might be the result of differences

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

Thousands of cases of legionellosis occur each year in the United States as either Legionnaires disease, an often severe form of pneumonia, or Pontiac fever, an influenza-like, self-limited illness.

**What is added by this report?**

The incidence of reported legionellosis in the United States nearly tripled during 2000–2009, from 0.39 per 100,000 persons to 1.15. The reasons for this increase are unknown, but increases in the number of older persons and persons at high risk for infection and increased case detection or reporting might have played a role. Incidence increased with age and was highest in the Northeast.

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

Active, population-based legionellosis surveillance is needed to better assess the epidemiology and apparently increasing incidence of legionellosis in the United States. The rise in reported cases reinforces the need for health-care providers to test adults with severe community-acquired pneumonia or health-care-associated pneumonia for Legionnaires disease and report legionellosis cases to public health authorities.

in underlying risk factors or exposures to *Legionella*, and the high proportion of cases in persons of unknown race limits the interpretation of the racial differences observed.

Legionellosis demonstrates seasonal and geographic variability. During 2000–2009, nearly all regions reported their highest proportion of cases during the summer and early fall. The reported 2009 age-adjusted legionellosis rate in the Middle Atlantic division was nearly six times higher than the rate in the West South Central division. Whether these differences are related to the frequency of testing or reporting is unclear; nonetheless, clinicians should be particularly vigilant for possible LD during the summer and early fall and in geographic areas of relatively high legionellosis incidence. Although use of a urine antigen test for *Legionella* is recommended for cases of severe community-acquired pneumonia (8), collection of respiratory specimens for *Legionella*-specific culture also is encouraged as a means to detect all species and subgroups of *Legionella* and enable strain identification in the event of an outbreak. Urine antigen tests and *Legionella*-specific culture also are recommended for suspected cases of health-care-associated LD (9).

The findings in this report are subject to at least four limitations. First, current passive surveillance systems cannot determine whether the observed increase in legionellosis cases is actual or an artifact of improved detection or reporting. Second, surveillance likely is biased toward capture of more severe LD cases that are more likely to be tested for *Legionella*, missing those that have been

empirically treated with antibiotics active against *Legionella* spp. and those not requiring hospitalization. Third, the nonspecific symptoms of and lack of good diagnostic tests for PF likely result in substantial underdiagnosis of this form of legionellosis. Finally, the proportion of cases that are potentially travel-associated likely is an overestimate resulting from a bias in many states toward primarily reporting travel-associated cases to SLDSS.

A better understanding of the disease burden and the epidemiology of legionellosis is important, but current passive surveillance systems cannot provide all the information required. In January 2011, active laboratory-based and population-based surveillance was launched in 10 ABCs sites around the country.<sup>§§</sup> Data from this surveillance will be used to obtain population-based estimates of disease incidence; further describe demographic, seasonal, and geographic variability; and evaluate and improve legionellosis prevention efforts, such as the guidance provided by the American Society of Heating, Refrigerating, and Air Conditioning Engineers on preventing legionellosis associated with building water systems (10).

<sup>§§</sup> Additional information is available at <http://www.cdc.gov/abcs/index.html>.

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## Notes from the Field

### Transplant-Transmitted Hepatitis B Virus — United States, 2010

On March 29, 2011, CDC was notified about a possible transplant-associated hepatitis B virus (HBV) infection in a liver transplant recipient with no known risk factors for HBV infection. An investigation was begun to learn if other recipients of organs or tissues from the donor had been infected with HBV and to investigate potential sources of the donor's infection.

The donor, a man aged 36 years, had died from a traumatic brain injury caused by a stab wound to the head. When he was declared brain-dead, his family consented to donation of his organs. He had no evidence of liver disease on examination, and liver enzyme levels were normal; a drug screen was positive for cannabinoids. He had not received any blood products during hospitalization.

On March 23, 2010, six organs from the donor were transplanted into five recipients in multiple states; no tissues or blood vessel conduits were procured. The investigation revealed that three of the five organ recipients had evidence of acute HBV infection posttransplantation; all three were infected with a genetically identical virus. The two recipients who were not infected had serologic evidence of immunity resulting from vaccination or past infection.

Organ donors are assessed for their potential to be infected with HBV using criteria adapted from risk factors identified in CDC guidelines for human immunodeficiency virus (HIV) infection (1), because many of the risk factors for HIV and HBV infection overlap. At the time of evaluation, the donor was not identified as being at high risk for HBV infection, based on the medical history available to the organ procurement organization and its behavioral risk assessment, and was therefore screened for HBV infection using serology alone. Those test results were negative initially and when repeated by CDC. However, subsequent nucleic acid testing (NAT) of the same specimen at CDC revealed a low-level viremia (<29 HBV DNA IU/mL), a finding consistent with recent HBV infection.

The number of cases of transplant-transmitted HBV infection is unknown. The cases described in this report might not have been identified had it not been for the diligence of the hospital epidemiologist and transplant clinicians who first suspected possible transplant-associated HBV infection in one of the organ recipients who did not report any other risk factors for HBV infection. Transplanted organs from an HBV seronegative donor can be infectious for HBV if procured during the period between infection and the time when infection becomes detectable by serology. The risk for HBV transmission can be minimized if a

NAT is used for screening because it can detect HBV sooner after infection than can serologic testing (2). However, most referral laboratories used by organ procurement organizations do not have access to the ultrasensitive HBV NAT methodology that detected the low-level viremia in this organ donor. In addition, the cost of HBV NAT screening, the ability to have test results before transplantation, and concerns about possible false-positive results have contributed to the limited use of HBV NAT for low-risk organ donors. New guidelines on reducing HIV and hepatitis B and C transmission through organ transplantation currently are being written and include recommendations to use NAT. When possible, organ transplant candidates should be protected against HBV by pretransplant vaccination to further reduce the risk for transmission from an infected donor (3).

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## Notice to Readers

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### Final 2010 Reports of Nationally Notifiable Infectious Diseases

The tables listed in this report on pages 1089–1101 summarize finalized data, as of June 30, 2011, from the National Notifiable Diseases Surveillance System (NNDSS) for 2010. These data will be published in more detail in the *Summary of Notifiable Diseases — United States, 2010 (1)*. Because no cases of anthrax; diphtheria; eastern equine encephalitis virus disease, non-neuroinvasive; poliovirus infection, nonparalytic; Powassan virus disease, non-neuroinvasive; rubella, congenital syndrome; severe acute respiratory syndrome–associated coronavirus disease; smallpox; western equine encephalitis virus disease, neuroinvasive and non-neuroinvasive; or yellow fever were reported in the United States during 2010, these diseases do not appear in these early release tables.

Policies for reporting NNDSS data to CDC can vary by disease or reporting jurisdiction depending on case status classification (i.e., confirmed, probable, or suspected). The publication criteria used for the 2010 finalized tables are listed in the “Print Criteria” column of the NNDSS event code

list, available at [http://www.cdc.gov/osels/ph\\_surveillance/nndss/phs/files/nndss\\_event\\_code\\_list\\_january\\_2010.pdf](http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/nndss_event_code_list_january_2010.pdf). The NNDSS website is updated annually to include the latest national surveillance case definitions approved by the Council of State and Territorial Epidemiologists for enumerating data on nationally notifiable infectious diseases.

Population estimates for the states are from the National Center for Health Statistics. Estimates of the July 1, 2000 through July 1, 2009, U.S. resident population are from the vintage 2009 postcensal series (by year, county, age, sex, race, and Hispanic origin), and are available at [http://www.cdc.gov/nchs/nvss/bridged\\_race.htm](http://www.cdc.gov/nchs/nvss/bridged_race.htm). Population estimates for territories are 2009 estimates from the U.S. Census Bureau (2).

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TABLE 2. Reported cases of notifiable diseases,\* by geographic division and area — United States, 2010

Area	Total resident population (in thousands)	Arboviral diseases†							
		California serogroup virus		Eastern equine encephalitis virus	Powassan virus	St. Louis encephalitis virus		West Nile virus	
		Neuro-invasive	Nonneuro-invasive	Neuro-invasive	Neuro-invasive	Neuro-invasive	Nonneuro-invasive	Neuro-invasive	Nonneuro-invasive
<b>United States</b>	307,009	68	7	10	8	8	2	629	392
<b>New England</b>	14,430	—	—	2	—	—	—	14	5
Connecticut	3,518	—	—	—	—	—	—	7	4
Maine	1,318	—	—	—	—	—	—	—	—
Massachusetts	6,594	—	—	1	—	—	—	6	1
New Hampshire	1,325	—	—	—	—	—	—	1	—
Rhode Island	1,053	—	—	1	—	—	—	—	—
Vermont	622	—	—	—	—	—	—	—	—
<b>Mid. Atlantic</b>	40,855	—	1	1	1	—	—	123	63
New Jersey	8,708	—	—	—	—	—	—	15	15
New York (Upstate)	11,150	—	1	1	1	—	—	56	30
New York City	8,392	—	—	—	—	—	—	33	9
Pennsylvania	12,605	—	—	—	—	—	—	19	9
<b>E.N. Central</b>	46,501	22	4	3	4	2	—	80	30
Illinois	12,910	—	—	—	—	—	—	45	16
Indiana	6,423	—	—	—	—	—	—	6	7
Michigan	9,970	2	—	3	—	2	—	25	4
Ohio	11,543	20	4	—	—	—	—	4	1
Wisconsin	5,655	—	—	—	4	—	—	—	2
<b>W.N. Central</b>	20,337	1	—	—	3	1	—	32	75
Iowa	3,008	—	—	—	—	—	—	5	4
Kansas	2,819	—	—	—	—	—	—	4	15
Minnesota	5,266	1	—	—	3	—	—	4	4
Missouri	5,988	—	—	—	—	1	—	3	—
Nebraska	1,797	—	—	—	—	—	—	10	29
North Dakota	647	—	—	—	—	—	—	2	7
South Dakota	812	—	—	—	—	—	—	4	16
<b>S. Atlantic</b>	59,196	34	—	4	—	—	2	38	22
Delaware	885	—	—	—	—	—	—	—	—
District of Columbia	600	—	—	—	—	—	2	3	3
Florida	18,538	—	—	4	—	—	—	9	3
Georgia	9,829	2	—	—	—	—	—	4	9
Maryland	5,699	2	—	—	—	—	—	17	6
North Carolina	9,381	22	—	—	—	—	—	—	—
South Carolina	4,561	—	—	—	—	—	—	1	—
Virginia	7,883	—	—	—	—	—	—	4	1
West Virginia	1,820	8	—	—	—	—	—	—	—
<b>E.S. Central</b>	18,271	10	2	—	—	—	—	8	10
Alabama	4,709	—	—	—	—	—	—	1	2
Kentucky	4,314	1	—	—	—	—	—	2	1
Mississippi	2,952	—	—	—	—	—	—	3	5
Tennessee	6,296	9	2	—	—	—	—	2	2
<b>W.S. Central</b>	35,850	1	—	—	—	5	—	104	20
Arkansas	2,889	—	—	—	—	2	—	6	1
Louisiana	4,492	—	—	—	—	—	—	20	7
Oklahoma	3,687	—	—	—	—	—	—	1	—
Texas	24,782	1	—	—	—	3	—	77	12
<b>Mountain</b>	22,124	—	—	—	—	—	—	157	127
Arizona	6,596	—	—	—	—	—	—	107	60
Colorado	5,025	—	—	—	—	—	—	26	55
Idaho	1,546	—	—	—	—	—	—	—	1
Montana	975	—	—	—	—	—	—	—	—
Nevada	2,643	—	—	—	—	—	—	—	2
New Mexico	2,010	—	—	—	—	—	—	21	4
Utah	2,785	—	—	—	—	—	—	1	1
Wyoming	544	—	—	—	—	—	—	2	4
<b>Pacific</b>	49,445	—	—	—	—	—	—	73	40
Alaska	698	—	—	—	—	—	—	—	—
California	36,962	—	—	—	—	—	—	72	39
Hawaii	1,295	—	—	—	—	—	—	—	—
Oregon	3,826	—	—	—	—	—	—	—	—
Washington	6,664	—	—	—	—	—	—	1	1
<b>Territories</b>									
American Samoa	66	—	—	—	—	—	—	—	—
C.N.M.I.	51	—	—	—	—	—	—	—	—
Guam	178	—	—	—	—	—	—	—	—
Puerto Rico	3,967	—	—	—	—	—	—	—	—
U.S. Virgin Islands	110	—	—	—	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* No cases of anthrax; diphtheria; eastern equine encephalitis virus disease, non-neuroinvasive; poliovirus infection, nonparalytic; Powassan virus disease, non-neuroinvasive; rubella, congenital syndrome; severe acute respiratory syndrome–associated coronavirus disease (SARS-CoV); smallpox; western equine encephalitis virus disease, neuroinvasive and non-neuroinvasive; or yellow fever were reported in 2010. Data on chronic hepatitis B and hepatitis C virus infection (past or present) are not included because they are undergoing data quality review.

† Totals reported to the Division of Vector-Borne Diseases (DVBD), National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) (ArboNET Surveillance), as of May 9, 2011.

TABLE 2. (Continued) Reported cases of notifiable diseases, by geographic division and area — United States, 2010

Area	Botulism				Brucellosis	Chancroid <sup>†</sup>	Chlamydia trachomatis infection <sup>†§</sup>
	Total	Foodborne	Infant	Other*			
<b>United States</b>	112	7	80	25	115	24	1,307,893
<b>New England</b>	1	—	1	—	5	1	43,514
Connecticut	—	—	—	—	—	—	12,649
Maine	—	—	—	—	2	—	2,586
Massachusetts	1	—	1	—	2	1	21,080
New Hampshire	—	—	—	—	1	—	2,462
Rhode Island	—	—	—	—	—	—	3,480
Vermont	—	—	—	—	—	—	1,257
<b>Mid. Atlantic</b>	22	—	22	—	7	—	173,580
New Jersey	5	—	5	—	3	—	26,142
New York (Upstate)	1	—	1	—	—	—	36,279
New York City	2	—	2	—	4	—	63,641
Pennsylvania	14	—	14	—	—	—	47,518
<b>E.N. Central</b>	3	—	2	1	9	—	207,361
Illinois	—	—	—	—	1	—	60,672
Indiana	—	—	—	—	—	—	22,825
Michigan	—	—	—	—	4	—	49,478
Ohio	3	—	2	1	—	—	51,150
Wisconsin	—	—	—	—	4	—	23,236
<b>W.N. Central</b>	—	—	—	—	10	—	72,196
Iowa	—	—	—	—	—	—	10,542
Kansas	—	—	—	—	4	—	9,601
Minnesota	—	—	—	—	3	—	15,294
Missouri	—	—	—	—	3	—	26,049
Nebraska	—	—	—	—	—	—	5,114
North Dakota	—	—	—	—	—	—	2,404
South Dakota	—	—	—	N	—	—	3,192
<b>S. Atlantic</b>	14	—	13	1	15	3	259,382
Delaware	3	—	3	—	1	—	4,464
District of Columbia	—	—	—	—	1	—	5,589
Florida	1	—	1	—	9	1	74,744
Georgia	1	—	1	—	2	—	45,147
Maryland	5	—	4	1	1	—	26,192
North Carolina	—	—	—	—	1	1	42,048
South Carolina	—	—	—	—	—	1	26,525
Virginia	1	—	1	—	—	—	30,797
West Virginia	3	—	3	—	—	—	3,876
<b>E.S. Central</b>	3	1	1	1	6	2	93,161
Alabama	1	—	1	—	2	1	27,041
Kentucky	1	—	—	1	1	—	16,376
Mississippi	1	1	—	—	2	—	21,417
Tennessee	—	—	—	—	1	1	28,327
<b>W.S. Central</b>	11	—	10	1	21	12	178,749
Arkansas	1	—	—	1	—	—	15,424
Louisiana	—	—	—	—	—	—	29,151
Oklahoma	2	—	2	—	—	—	14,302
Texas	8	—	8	—	21	12	119,872
<b>Mountain</b>	8	2	6	—	12	—	83,773
Arizona	—	—	—	—	9	—	26,861
Colorado	4	1	3	—	1	—	19,447
Idaho	1	—	1	—	—	—	4,208
Montana	1	—	1	—	—	—	3,082
Nevada	—	—	—	—	—	—	9,666
New Mexico	1	1	—	—	2	—	11,706
Utah	1	—	1	—	—	—	6,690
Wyoming	—	—	—	—	—	—	2,113
<b>Pacific</b>	50	4	25	21	30	6	196,177
Alaska	3	3	—	—	—	—	6,019
California	41	1	20	20	26	5	150,443
Hawaii	1	—	1	—	2	—	6,015
Oregon	1	—	1	—	2	—	12,352
Washington	4	—	3	1	—	1	21,348
<b>Territories</b>							
American Samoa	—	—	—	—	—	—	—
C.N.M.I.	—	—	—	—	—	—	—
Guam	—	—	—	—	—	—	899
Puerto Rico	—	—	—	N	—	—	5,960
U.S. Virgin Islands	—	—	—	—	—	—	609

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Includes cases reported as wound and unspecified botulism.

† Totals reported to the Division of STD Prevention, NCHHSTP, as of June 8, 2011.

§ Name change to coincide with the National Surveillance Case Definition.

TABLE 2. (Continued) Reported cases of notifiable diseases, by geographic division and area — United States, 2010

Area	Cryptosporidiosis				Dengue Virus Infection*		
	Cholera	Total	Confirmed	Probable	Cyclosporiasis	Dengue fever	Dengue hemorrhagic fever
<b>United States</b>	13	8,944	8,375	569	179	690	10
<b>New England</b>	—	490	470	20	27	10	—
Connecticut	—	77	77	—	11	—	—
Maine	—	93	74	19	N	6	—
Massachusetts	—	173	173	—	15	—	—
New Hampshire	—	59	58	1	—	—	—
Rhode Island	—	18	18	—	1	1	—
Vermont	—	70	70	—	N	3	—
<b>Mid. Atlantic</b>	1	875	867	8	42	224	5
New Jersey	—	52	52	—	11	29	—
New York (Upstate)	—	228	224	4	13	32	2
New York City	1	107	107	—	18	141	3
Pennsylvania	—	488	484	4	N	22	—
<b>E.N. Central</b>	3	2,403	2,353	50	10	69	1
Illinois	—	334	303	31	2	23	—
Indiana	—	285	285	—	—	14	—
Michigan	—	320	319	1	6	9	—
Ohio	3	476	458	18	—	16	—
Wisconsin	—	988	988	—	2	7	1
<b>W.N. Central</b>	—	1,854	1,564	290	1	34	1
Iowa	—	396	345	51	—	2	—
Kansas	—	107	107	—	—	4	—
Minnesota	—	397	397	—	1	14	—
Missouri	—	548	358	190	—	6	—
Nebraska	—	264	233	31	—	7	—
North Dakota	—	35	35	—	N	1	—
South Dakota	—	107	89	18	—	—	1
<b>S. Atlantic</b>	7	1,080	1,021	59	86	238	2
Delaware	—	9	9	—	—	—	—
District of Columbia	—	8	8	—	6	—	—
Florida	4	408	386	22	63	189	2
Georgia	1	266	266	—	9	12	—
Maryland	—	42	37	5	4	—	—
North Carolina	1	94	93	1	1	8	—
South Carolina	—	123	98	25	2	13	—
Virginia	1	109	104	5	1	14	—
West Virginia	—	21	20	1	—	2	—
<b>E.S. Central</b>	—	348	328	20	1	7	—
Alabama	—	184	164	20	N	4	—
Kentucky	—	85	85	—	N	2	—
Mississippi	—	24	24	—	N	—	—
Tennessee	—	55	55	—	1	1	—
<b>W.S. Central</b>	2	578	514	64	10	28	1
Arkansas	—	33	32	1	1	—	1
Louisiana	—	66	66	—	—	4	—
Oklahoma	—	120	90	30	—	5	—
Texas	2	359	326	33	9	19	—
<b>Mountain</b>	—	608	588	20	—	24	—
Arizona	—	40	38	2	—	12	—
Colorado	—	134	133	1	—	—	—
Idaho	—	110	102	8	N	3	—
Montana	—	49	49	—	N	4	—
Nevada	—	38	34	4	N	4	—
New Mexico	—	137	135	2	—	1	—
Utah	—	72	72	—	—	—	—
Wyoming	—	28	25	3	—	—	—
<b>Pacific</b>	—	708	670	38	2	56	—
Alaska	—	6	6	—	—	1	—
California	—	381	381	—	—	36	—
Hawaii	—	1	1	—	—	—	—
Oregon	—	218	188	30	—	—	—
Washington	—	102	94	8	2	19	—
<b>Territories</b>							
American Samoa	—	N	N	N	N	—	—
C.N.M.I.	—	—	—	—	—	—	—
Guam	—	—	—	—	—	—	—
Puerto Rico	—	N	N	N	N	10,674	237
U.S. Virgin Islands	—	—	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Total number of reported laboratory-positive dengue cases including all confirmed cases (by anti-dengue virus (DENV) molecular diagnostic methods or seroconversion of anti-DENV IgM) and all probable cases (by a single, positive anti-DENV IgM). Totals reported to the Division of Vector-Borne Diseases (DVBD), National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) (ArboNET Surveillance), as of May 9, 2011.

TABLE 2. (Continued) Reported cases of notifiable diseases, by geographic division and area — United States, 2010

Area	Ehrlichiosis/Anaplasmosis				Giardiasis	Gonorrhea*
	<i>Ehrlichia chaffeensis</i>	<i>Ehrlichia ewingii</i>	<i>Anaplasma phagocytophilum</i>	Undetermined		
<b>United States</b>	740	10	1,761	104	19,811	309,341
<b>New England</b>	8	—	122	2	1,663	5,714
Connecticut	—	—	43	—	291	2,569
Maine	4	—	17	—	223	162
Massachusetts	—	—	—	—	725	2,483
New Hampshire	3	—	20	2	156	151
Rhode Island	1	—	40	—	83	291
Vermont	—	—	2	—	185	58
<b>Mid. Atlantic</b>	92	—	293	17	3,422	37,075
New Jersey	52	—	77	1	484	5,872
New York (Upstate)	33	—	204	13	1,230	5,916
New York City	5	—	11	—	922	12,404
Pennsylvania	2	—	1	3	786	12,883
<b>E.N. Central</b>	44	—	512	46	3,286	57,487
Illinois	16	—	9	3	691	15,777
Indiana	—	—	—	15	398	6,496
Michigan	2	—	4	—	697	13,627
Ohio	7	—	2	—	872	16,496
Wisconsin	19	—	497	28	628	5,091
<b>W.N. Central</b>	132	8	733	21	2,123	15,024
Iowa	N	N	N	N	284	1,803
Kansas	6	—	1	—	208	2,084
Minnesota	12	—	720	11	843	2,119
Missouri	112	8	12	10	426	7,159
Nebraska	2	N	—	—	222	1,187
North Dakota	N	N	N	N	37	204
South Dakota	—	—	—	—	103	468
<b>S. Atlantic</b>	254	1	64	6	4,004	76,604
Delaware	17	1	4	—	35	1,010
District of Columbia	N	N	N	N	56	2,104
Florida	10	—	3	—	2,139	20,163
Georgia	20	—	1	1	796	15,852
Maryland	22	—	15	2	262	7,413
North Carolina	99	—	28	—	N	14,111
South Carolina	5	—	1	—	147	7,970
Virginia	78	—	12	3	512	7,402
West Virginia	3	—	—	—	57	579
<b>E.S. Central</b>	88	1	20	9	220	25,594
Alabama	12	—	7	N	220	7,933
Kentucky	16	—	—	1	N	4,345
Mississippi	3	—	2	1	N	6,195
Tennessee	57	1	11	7	N	7,121
<b>W.S. Central</b>	120	—	17	1	397	49,838
Arkansas	19	—	5	—	138	4,769
Louisiana	1	—	—	—	197	8,912
Oklahoma	97	—	9	—	62	4,369
Texas	3	—	3	1	N	31,788
<b>Mountain</b>	—	—	—	—	1,764	9,592
Arizona	—	—	—	—	167	3,249
Colorado	N	N	N	N	691	2,787
Idaho	N	N	N	N	215	147
Montana	N	N	N	N	109	102
Nevada	N	—	N	N	107	1,728
New Mexico	N	N	N	N	108	1,229
Utah	—	—	—	—	313	310
Wyoming	—	—	—	—	54	40
<b>Pacific</b>	2	—	—	2	2,932	32,413
Alaska	N	N	N	N	98	1,273
California	2	—	—	2	1,773	26,441
Hawaii	N	N	N	N	59	759
Oregon	—	—	—	—	481	1,076
Washington	—	—	—	—	521	2,864
<b>Territories</b>						
American Samoa	N	N	N	N	—	—
C.N.M.I.	—	—	—	—	—	—
Guam	N	N	N	N	3	97
Puerto Rico	N	N	N	N	93	312
U.S. Virgin Islands	—	—	—	—	—	151

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Totals reported to the Division of STD Prevention, NCHHSTP, as of June 8, 2011.

TABLE 2. (Continued) Reported cases of notifiable diseases, by geographic division and area — United States, 2010

Area	<i>Haemophilus influenzae</i> , invasive disease				Hansen disease (leprosy)	Hantavirus pulmonary syndrome	Hemolytic uremic syndrome, postdiarrheal
	All ages, serotypes	Age <5 yrs					
		Serotype b	Nonserotype b	Unknown serotype			
<b>United States</b>	3,151	23	200	223	98	20	266
<b>New England</b>	201	1	13	5	5	—	9
Connecticut	49	—	1	—	—	N	3
Maine	13	—	—	—	N	—	1
Massachusetts	97	—	7	1	4	—	2
New Hampshire	12	1	1	1	—	—	3
Rhode Island	15	—	1	1	1	—	—
Vermont	15	—	3	2	N	—	—
<b>Mid. Atlantic</b>	603	3	21	43	5	—	19
New Jersey	111	—	—	5	1	—	2
New York (Upstate)	170	2	18	3	N	—	12
New York City	99	—	—	18	3	—	5
Pennsylvania	223	1	3	17	1	—	N
<b>E.N. Central</b>	515	3	36	31	1	—	31
Illinois	173	—	—	22	—	—	—
Indiana	110	—	16	—	1	—	7
Michigan	37	—	3	3	—	—	14
Ohio	121	3	10	5	—	—	2
Wisconsin	74	—	7	1	—	—	8
<b>W.N. Central</b>	233	—	9	21	—	1	33
Iowa	1	—	—	—	—	—	5
Kansas	24	—	—	6	—	1	2
Minnesota	81	—	9	—	—	—	—
Missouri	87	—	—	10	—	—	18
Nebraska	27	—	—	4	—	—	6
North Dakota	13	—	—	1	N	—	—
South Dakota	—	—	—	—	—	—	2
<b>S. Atlantic</b>	779	6	46	45	16	—	32
Delaware	6	—	—	—	—	—	—
District of Columbia	6	—	—	—	—	—	—
Florida	191	3	14	15	12	—	8
Georgia	169	—	15	10	1	—	6
Maryland	71	1	3	2	1	—	8
North Carolina	128	—	—	13	1	—	7
South Carolina	84	—	2	3	—	—	—
Virginia	85	2	10	1	1	—	2
West Virginia	39	—	2	1	N	—	1
<b>E.S. Central</b>	185	—	18	8	1	—	22
Alabama	35	—	7	—	—	N	5
Kentucky	39	—	—	8	—	—	N
Mississippi	15	—	1	—	1	—	—
Tennessee	96	—	10	—	—	—	17
<b>W.S. Central</b>	167	2	15	9	28	1	36
Arkansas	22	—	1	3	2	—	6
Louisiana	30	—	—	6	—	—	—
Oklahoma	103	—	14	—	N	—	11
Texas	12	2	—	—	26	1	19
<b>Mountain</b>	313	8	32	14	2	10	30
Arizona	115	2	16	—	1	—	2
Colorado	82	2	8	2	—	5	12
Idaho	19	—	2	3	—	2	3
Montana	2	—	—	1	—	—	2
Nevada	10	—	—	—	—	1	1
New Mexico	46	3	3	6	—	2	3
Utah	33	1	3	1	1	—	7
Wyoming	6	—	—	1	—	—	—
<b>Pacific</b>	155	—	10	47	40	8	54
Alaska	27	—	—	12	—	N	N
California	28	—	—	24	16	3	39
Hawaii	21	—	—	5	24	—	—
Oregon	69	—	—	6	N	3	14
Washington	10	—	10	—	N	2	1
<b>Territories</b>							
American Samoa	—	—	—	—	—	N	N
C.N.M.I.	—	—	—	—	—	—	—
Guam	—	—	—	—	10	N	—
Puerto Rico	1	—	—	—	—	—	N
U.S. Virgin Islands	—	—	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

TABLE 2. (Continued) Reported cases of notifiable diseases, by geographic division and area — United States, 2010

Area	Hepatitis, viral, acute			HIV diagnoses*	Influenza-associated pediatric mortality†	Legionellosis	Listeriosis
	A	B	C				
<b>United States</b>	1,670	3,374	849	35,741	61	3,346	821
<b>New England</b>	95	55	54	1,023	1	274	54
Connecticut	29	22	37	356	1	56	18
Maine	7	13	2	55	—	12	1
Massachusetts	48	13	13	446	—	131	26
New Hampshire	2	5	N	51	—	23	2
Rhode Island	9	U	U	108	—	43	3
Vermont	—	2	2	7	—	9	4
<b>Mid. Atlantic</b>	276	288	104	6,011	16	939	182
New Jersey	76	77	28	941	—	151	39
New York (Upstate)	59	60	47	1,461	10	300	52
New York City	88	79	3	2,232	4	164	45
Pennsylvania	53	72	26	1,377	2	324	46
<b>E.N. Central</b>	203	481	93	3,299	5	679	119
Illinois	48	135	1	1,068	3	149	26
Indiana	12	75	27	413	—	56	15
Michigan	73	122	45	650	1	179	31
Ohio	47	95	10	913	—	232	29
Wisconsin	23	54	10	255	1	63	18
<b>W.N. Central</b>	102	130	26	1,225	—	128	30
Iowa	11	15	—	108	—	15	3
Kansas	14	11	2	110	—	12	1
Minnesota	37	23	16	336	—	40	8
Missouri	21	67	6	533	—	37	12
Nebraska	14	12	2	95	—	9	2
North Dakota	4	—	—	11	—	6	1
South Dakota	1	2	—	32	—	9	3
<b>S. Atlantic</b>	351	913	188	11,054	8	562	144
Delaware	7	24	U	122	—	18	4
District of Columbia	1	3	2	638	—	19	1
Florida	139	297	56	4,862	2	172	54
Georgia	40	165	32	1,170	5	65	20
Maryland	23	67	24	1,195	1	113	11
North Carolina	48	113	39	1,324	—	64	22
South Carolina	26	59	1	750	—	16	13
Virginia	52	97	13	918	—	79	13
West Virginia	15	88	21	75	—	16	6
<b>E.S. Central</b>	48	387	162	2,152	3	136	34
Alabama	8	68	7	570	—	22	6
Kentucky	26	136	109	270	—	30	9
Mississippi	2	33	U	486	2	12	5
Tennessee	12	150	46	826	1	72	14
<b>W.S. Central</b>	158	630	81	4,845	14	181	84
Arkansas	2	66	1	202	—	19	4
Louisiana	11	55	4	1,164	2	11	18
Oklahoma	6	115	41	247	1	15	9
Texas	139	394	35	3,232	11	136	53
<b>Mountain</b>	144	135	66	1,568	7	173	31
Arizona	61	26	U	544	2	65	10
Colorado	36	46	20	408	4	31	9
Idaho	8	6	11	36	—	8	—
Montana	4	—	4	12	—	5	1
Nevada	14	41	7	344	—	20	1
New Mexico	5	5	14	135	1	9	6
Utah	12	8	10	68	—	27	3
Wyoming	4	3	—	21	—	8	1
<b>Pacific</b>	293	355	75	4,564	7	274	143
Alaska	5	5	U	35	—	2	1
California	242	252	31	3,786	6	224	94
Hawaii	8	6	U	51	—	2	8
Oregon	17	42	19	198	1	16	16
Washington	21	50	25	494	—	30	24
<b>Territories</b>							
American Samoa	—	—	—	—	—	N	N
C.N.M.I.	—	—	—	—	—	—	—
Guam	4	77	61	—	—	1	—
Puerto Rico	20	29	N	479	—	2	—
U.S. Virgin Islands	—	—	—	16	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Data on human immunodeficiency virus (HIV) diagnoses include persons with a diagnosis of HIV infection regardless of stage of disease (i.e., AIDS status) at diagnosis. Total number of HIV diagnoses case counts was reported to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) through December 31, 2010.

† Totals reported to the Division of Influenza, National Center for Immunization and Respiratory Diseases (NCIRD), as of December 31, 2010.

TABLE 2. (Continued) Reported cases of notifiable diseases, by geographic division and area — United States, 2010

Area	Lyme disease			Malaria	Measles		
	Total	Confirmed	Probable		Total	Indigenous	Imported*
<b>United States</b>	30,158	22,561	7,597	1,773	63	23	40
<b>New England</b>	8,958	6,119	2,839	124	4	2	2
Connecticut	3,068	1,964	1,104	22	1	1	—
Maine	751	559	192	6	—	—	—
Massachusetts	3,263	2,380	883	73	3	1	2
New Hampshire	1,339	830	509	5	—	—	—
Rhode Island	181	115	66	15	—	—	—
Vermont	356	271	85	3	—	—	—
<b>Mid. Atlantic</b>	10,942	9,003	1,939	519	10	—	10
New Jersey	3,712	3,320	392	106	—	—	—
New York (Upstate)	2,698	1,972	726	81	2	—	2
New York City	727	413	314	271	6	—	6
Pennsylvania	3,805	3,298	507	61	2	—	2
<b>E.N. Central</b>	3,840	2,799	1,041	164	2	1	1
Illinois	135	135	—	60	—	—	—
Indiana	78	62	16	15	—	—	—
Michigan	95	76	19	31	—	—	—
Ohio	44	21	23	43	2	1	1
Wisconsin	3,488	2,505	983	15	—	—	—
<b>W.N. Central</b>	2,101	1,401	700	115	6	5	1
Iowa	85	68	17	14	—	—	—
Kansas	10	7	3	13	—	—	—
Minnesota	1,960	1,293	667	48	3	2	1
Missouri	4	4	—	21	3	3	—
Nebraska	8	7	1	15	—	—	—
North Dakota	33	21	12	1	—	—	—
South Dakota	1	1	—	3	—	—	—
<b>S. Atlantic</b>	3,910	2,998	912	452	5	1	4
Delaware	656	656	—	2	—	—	—
District of Columbia	42	34	8	13	—	—	—
Florida	84	56	28	139	1	—	1
Georgia	10	10	—	71	1	—	1
Maryland	1,617	1,163	454	99	—	—	—
North Carolina	82	21	61	52	—	—	—
South Carolina	29	19	10	6	—	—	—
Virginia	1,245	911	334	67	3	1	2
West Virginia	145	128	17	3	—	—	—
<b>E.S. Central</b>	43	12	31	31	1	—	1
Alabama	2	1	1	9	—	—	—
Kentucky	5	5	—	8	1	—	1
Mississippi	—	—	—	2	—	—	—
Tennessee	36	6	30	12	—	—	—
<b>W.S. Central</b>	145	57	88	113	—	—	—
Arkansas	—	—	—	4	—	—	—
Louisiana	3	2	1	5	—	—	—
Oklahoma	—	—	—	6	—	—	—
Texas	142	55	87	98	—	—	—
<b>Mountain</b>	28	20	8	67	3	1	2
Arizona	2	2	—	28	1	—	1
Colorado	3	1	2	21	—	—	—
Idaho	9	6	3	5	—	—	—
Montana	4	3	1	3	—	—	—
Nevada	2	2	—	6	1	—	1
New Mexico	5	3	2	1	—	—	—
Utah	3	3	—	3	—	—	—
Wyoming	—	—	—	—	1	1	—
<b>Pacific</b>	191	152	39	188	32	13	19
Alaska	7	7	—	5	—	—	—
California	129	126	3	126	27	9	18
Hawaii	N	N	N	4	4	4	—
Oregon	39	7	32	14	—	—	—
Washington	16	12	4	39	1	—	1
<b>Territories</b>							
American Samoa	N	N	N	—	—	—	—
C.N.M.I.	—	—	—	—	—	—	—
Guam	—	—	—	—	—	—	—
Puerto Rico	N	N	N	5	—	—	—
U.S. Virgin Islands	—	—	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Imported cases include only those directly related to importation from other countries.

TABLE 2. (Continued) Reported cases of notifiable diseases, by geographic division and area — United States, 2010

Area	Meningococcal disease					Mumps	Novel influenza A virus infections*
	All serogroups	Serogroup A, C, Y, and W-135	Serogroup B	Other serogroup	Unknown serogroup		
<b>United States</b>	833	280	135	12	406	2,612	4
<b>New England</b>	21	8	9	—	4	25	—
Connecticut	3	2	—	—	1	11	—
Maine	5	1	3	—	1	2	—
Massachusetts	7	3	3	—	1	9	—
New Hampshire	—	—	—	—	—	3	—
Rhode Island	1	—	1	—	—	—	—
Vermont	5	2	2	—	1	—	—
<b>Mid. Atlantic</b>	83	10	8	—	65	2,147	1
New Jersey	23	—	—	—	23	354	—
New York (Upstate)	14	7	6	—	1	663	—
New York City	20	—	—	—	20	1,061	—
Pennsylvania	26	3	2	—	21	69	1
<b>E.N. Central</b>	137	56	34	1	46	84	1
Illinois	24	—	—	—	24	31	—
Indiana	33	23	8	—	2	4	—
Michigan	24	8	6	—	10	20	—
Ohio	35	14	12	—	9	24	—
Wisconsin	21	11	8	1	1	5	1
<b>W.N. Central</b>	58	20	7	1	30	86	2
Iowa	10	7	2	1	—	38	—
Kansas	8	1	4	—	3	5	—
Minnesota	9	8	1	—	—	8	2
Missouri	23	—	—	—	23	10	—
Nebraska	6	3	—	—	3	23	—
North Dakota	2	1	—	—	1	—	—
South Dakota	—	—	—	—	—	2	—
<b>S. Atlantic</b>	134	71	27	5	31	59	—
Delaware	2	—	—	—	2	—	—
District of Columbia	1	—	—	—	1	3	—
Florida	60	33	9	2	16	10	—
Georgia	12	5	5	—	2	5	—
Maryland	9	5	3	1	—	12	—
North Carolina	14	11	1	1	1	10	—
South Carolina	12	9	2	1	—	4	—
Virginia	21	6	6	—	9	13	—
West Virginia	3	2	1	—	—	2	—
<b>E.S. Central</b>	45	14	8	1	22	10	—
Alabama	9	6	3	—	—	6	—
Kentucky	18	—	—	—	18	1	—
Mississippi	5	1	2	1	1	—	—
Tennessee	13	7	3	—	3	3	—
<b>W.S. Central</b>	100	40	24	2	34	135	—
Arkansas	6	4	2	—	—	5	—
Louisiana	17	—	—	—	17	8	—
Oklahoma	18	12	3	2	1	1	—
Texas	59	24	19	—	16	121	—
<b>Mountain</b>	58	40	11	2	5	21	—
Arizona	14	8	5	—	1	5	—
Colorado	21	18	2	1	—	8	—
Idaho	5	4	1	—	—	1	—
Montana	2	2	—	—	—	—	—
Nevada	8	3	2	1	2	1	—
New Mexico	4	3	—	—	1	2	—
Utah	1	1	—	—	—	3	—
Wyoming	3	1	1	—	1	1	—
<b>Pacific</b>	197	21	7	—	169	45	—
Alaska	1	—	—	—	1	1	—
California	131	—	—	—	131	29	—
Hawaii	1	1	—	—	—	5	—
Oregon	33	—	—	—	33	3	—
Washington	31	20	7	—	4	7	—
<b>Territories</b>							
American Samoa	—	—	—	—	—	—	—
C.N.M.I.	—	—	—	—	—	—	—
Guam	—	—	—	—	—	502	—
Puerto Rico	2	—	—	—	2	1	—
U.S. Virgin Islands	—	—	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

\*Totals reported to the Influenza Division, National Center for Immunization and Respiratory Diseases (NCIRD), as of December 31, 2010.



TABLE 2. (Continued) Reported cases of notifiable diseases, by geographic division and area — United States, 2010

Area	Pertussis	Plague	Psittacosis	Q Fever			Rabies	
				Total	Acute	Chronic	Animal	Human
<b>United States</b>	27,550	2	4	131	106	25	4,331	2
<b>New England</b>	529	—	—	—	—	—	306	—
Connecticut	107	—	N	—	—	—	145	—
Maine	53	—	—	—	—	—	62	—
Massachusetts	284	—	—	—	—	—	—	—
New Hampshire	23	—	—	N	N	N	17	—
Rhode Island	44	—	—	—	—	—	29	—
Vermont	18	—	—	N	N	N	53	—
<b>Mid. Atlantic</b>	1,980	—	1	21	15	6	1,051	—
New Jersey	169	—	—	8	6	2	—	—
New York (Upstate)	721	—	—	6	5	1	498	—
New York City	111	—	—	3	1	2	145	—
Pennsylvania	979	—	1	4	3	1	408	—
<b>E.N. Central</b>	5,758	—	1	17	11	6	234	1
Illinois	1,057	—	—	6	4	2	115	—
Indiana	747	—	—	—	—	—	—	—
Michigan	1,564	—	—	5	3	2	72	—
Ohio	1,807	—	1	1	—	1	47	—
Wisconsin	583	—	—	5	4	1	N	1
<b>W.N. Central</b>	2,924	—	—	16	11	5	283	—
Iowa	697	—	—	N	N	N	27	—
Kansas	182	—	—	4	4	—	60	—
Minnesota	1,140	—	—	1	1	—	59	—
Missouri	604	—	—	3	2	1	63	—
Nebraska	214	—	—	3	—	3	52	—
North Dakota	58	—	—	1	—	1	22	—
South Dakota	29	—	—	4	—	—	—	—
<b>S. Atlantic</b>	2,030	—	—	9	8	1	1,134	—
Delaware	15	—	—	—	—	—	—	—
District of Columbia	16	—	—	1	1	—	—	—
Florida	328	—	—	2	2	—	121	—
Georgia	247	—	—	2	2	—	—	—
Maryland	139	—	—	1	1	—	362	—
North Carolina	343	—	—	1	1	—	—	—
South Carolina	392	—	—	—	—	—	N	—
Virginia	384	—	—	2	1	1	573	—
West Virginia	166	—	—	—	—	—	78	—
<b>E.S. Central</b>	848	—	—	2	2	—	170	—
Alabama	206	N	—	—	—	—	69	—
Kentucky	303	—	—	—	—	—	21	—
Mississippi	106	—	—	—	—	—	—	—
Tennessee	233	—	—	2	2	—	80	—
<b>W.S. Central</b>	3,341	—	—	16	14	2	869	1
Arkansas	245	—	—	4	4	—	34	—
Louisiana	50	—	—	—	—	—	—	1
Oklahoma	198	—	—	—	—	—	62	—
Texas	2,848	—	N	12	10	2	773	—
<b>Mountain</b>	1,940	—	—	17	14	3	66	—
Arizona	546	—	—	4	3	1	N	—
Colorado	540	—	—	4	4	—	—	—
Idaho	187	—	—	—	—	—	11	—
Montana	121	—	—	1	—	1	N	—
Nevada	38	—	—	3	3	—	8	—
New Mexico	144	—	—	4	4	—	13	—
Utah	352	—	—	—	—	—	10	—
Wyoming	12	—	—	1	—	1	24	—
<b>Pacific</b>	8,200	2	2	33	31	2	218	—
Alaska	45	—	—	—	—	—	12	—
California	7,195	—	2	26	26	—	175	—
Hawaii	67	—	—	—	—	—	—	—
Oregon	286	2	—	4	4	—	17	—
Washington	607	—	—	3	1	2	14	—
<b>Territories</b>								
American Samoa	—	—	N	N	N	N	N	N
C.N.M.I.	—	—	—	—	—	—	—	—
Guam	3	—	—	N	N	N	—	—
Puerto Rico	4	—	N	—	—	—	41	—
U.S. Virgin Islands	—	—	—	—	—	—	—	—

N: Not reportable.

U: Unavailable.

—: No reported cases.

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

TABLE 2. (Continued) Reported cases of notifiable diseases, by geographic division and area — United States, 2010

Area	Rubella	Salmonellosis	Shiga toxin-producing <i>E. Coli</i> (STEC)*	Shigellosis	Spotted Fever Rickettsiosis†		
					Total	Confirmed	Probable
<b>United States</b>	5	54,424	5,476	14,786	1,985	156	1,835
<b>New England</b>	—	2,341	210	319	5	—	5
Connecticut	—	491	60	69	—	—	—
Maine	—	133	21	8	2	—	2
Massachusetts	—	1,284	83	211	—	—	—
New Hampshire	—	177	21	14	1	—	1
Rhode Island	—	175	3	16	2	—	2
Vermont	—	81	22	1	—	—	—
<b>Mid. Atlantic</b>	—	5,853	579	1,684	106	2	104
New Jersey	—	1,203	128	372	61	1	60
New York (Upstate)	—	1,448	211	235	19	1	18
New York City	—	1,309	79	300	11	—	11
Pennsylvania	—	1,893	161	777	15	—	15
<b>E.N. Central</b>	—	5,850	812	1,548	88	4	78
Illinois	—	1,982	156	841	37	3	34
Indiana	—	770	143	64	27	1	20
Michigan	—	933	155	260	2	—	2
Ohio	—	1,311	137	309	15	—	15
Wisconsin	—	854	221	74	7	—	7
<b>W.N. Central</b>	—	3,008	911	2,070	291	13	291
Iowa	—	530	170	57	5	—	5
Kansas	—	435	77	302	—	—	13
Minnesota	—	711	290	66	2	—	2
Missouri	—	843	236	1,582	278	10	268
Nebraska	—	244	82	56	5	3	2
North Dakota	—	59	21	—	1	—	1
South Dakota	—	186	35	7	—	—	—
<b>S. Atlantic</b>	2	15,891	759	2,784	594	82	512
Delaware	—	177	6	39	22	1	21
District of Columbia	—	94	9	35	1	1	—
Florida	—	6,282	239	1,212	14	3	11
Georgia	—	2,785	102	789	57	57	—
Maryland	—	1,089	107	130	49	—	49
North Carolina	—	2,345	97	253	286	15	271
South Carolina	—	1,715	24	70	20	1	19
Virginia	2	1,210	149	145	145	4	141
West Virginia	—	194	26	111	—	—	—
<b>E.S. Central</b>	—	3,969	276	790	425	20	404
Alabama	—	1,064	56	239	83	5	78
Kentucky	—	587	70	221	6	6	—
Mississippi	—	1,218	30	60	26	1	25
Tennessee	—	1,100	120	270	310	8	301
<b>W.S. Central</b>	—	7,838	524	3,412	435	15	420
Arkansas	—	794	48	82	162	4	158
Louisiana	—	1,361	21	288	3	—	3
Oklahoma	—	754	104	416	236	8	228
Texas	—	4,929	351	2,626	34	3	31
<b>Mountain</b>	1	2,898	676	858	32	12	20
Arizona	1	996	100	465	17	9	8
Colorado	—	579	219	96	2	1	1
Idaho	—	168	112	23	5	—	5
Montana	—	95	42	9	3	2	1
Nevada	—	307	41	49	—	—	—
New Mexico	—	339	49	166	1	—	1
Utah	—	350	94	50	3	—	3
Wyoming	—	64	19	—	1	—	1
<b>Pacific</b>	2	6,776	729	1,321	9	8	1
Alaska	—	81	2	2	N	—	—
California	1	5,073	354	1,098	7	7	—
Hawaii	—	331	29	50	N	N	N
Oregon	—	511	118	59	1	—	1
Washington	1	780	226	112	1	1	—
<b>Territories</b>							
American Samoa	—	2	—	4	N	N	N
C.N.M.I.	—	—	—	—	—	—	—
Guam	—	11	—	5	N	N	N
Puerto Rico	—	622	—	7	N	N	N
U.S. Virgin Islands	—	—	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

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

† Total case count includes 7 unknown case status reports. Revision of National Surveillance Case Definition.

TABLE 2. (Continued) Reported cases of notifiable diseases, by geographic division and area — United States, 2010

Area	Streptococcal toxic-shock syndrome	<i>Streptococcus pneumoniae</i> , invasive disease*		Syphilis†			Tetanus	Toxic-shock syndrome
		All ages	Age <5 yrs	All stages	Congenital (age <1 yr)	Primary and secondary		
<b>United States</b>	142	16,569	1,877	45,834	377	13,774	26	82
<b>New England</b>	10	942	107	1,040	3	482	—	1
Connecticut	N	389	30	234	2	98	—	N
Maine	N	130	10	41	—	32	—	N
Massachusetts	4	71	47	639	1	285	—	—
New Hampshire	1	145	6	43	—	22	—	1
Rhode Island	1	123	8	79	—	41	—	—
Vermont	4	84	6	4	—	4	—	—
<b>Mid. Atlantic</b>	29	1,701	262	6,813	22	1,711	3	12
New Jersey	8	754	64	947	3	244	1	2
New York (Upstate)	15	155	120	724	16	146	1	5
New York City	—	792	78	4,135	—	952	—	—
Pennsylvania	6	N	N	1,007	3	369	1	5
<b>E.N. Central</b>	26	3,299	275	4,590	40	1,895	7	21
Illinois	—	N	N	2,236	27	908	2	3
Indiana	11	781	55	412	—	175	—	2
Michigan	2	744	82	680	2	235	2	11
Ohio	12	1,227	100	1,076	10	528	1	4
Wisconsin	1	547	38	186	1	49	2	1
<b>W.N. Central</b>	10	875	106	1,091	2	358	3	5
Iowa	—	N	N	68	—	19	1	1
Kansas	—	N	N	110	—	19	—	—
Minnesota	6	649	87	350	—	149	—	—
Missouri	4	N	N	512	2	152	2	2
Nebraska	—	139	16	33	—	12	—	2
North Dakota	—	87	3	6	—	3	—	—
South Dakota	N	N	N	12	—	4	—	—
<b>S. Atlantic</b>	24	4,282	518	10,608	73	3,286	7	12
Delaware	—	50	2	44	2	9	—	—
District of Columbia	—	78	9	495	1	134	—	—
Florida	N	1,509	204	4,069	19	1,184	5	N
Georgia	—	1,461	162	2,347	18	795	—	5
Maryland	N	526	53	1,015	22	328	1	N
North Carolina	10	N	N	1,233	10	396	1	2
South Carolina	—	519	56	579	—	155	—	3
Virginia	10	N	N	800	1	279	—	2
West Virginia	4	139	32	26	—	6	—	—
<b>E.S. Central</b>	14	1,289	107	3,108	29	904	1	5
Alabama	N	N	N	781	9	260	—	2
Kentucky	14	205	12	311	—	139	1	—
Mississippi	N	N	N	823	9	228	—	N
Tennessee	—	1,084	95	1,193	11	277	—	3
<b>W.S. Central</b>	1	2,263	276	9,701	147	2,073	2	3
Arkansas	—	194	22	534	11	205	1	2
Louisiana	1	157	28	2,484	33	546	1	1
Oklahoma	N	N	N	272	—	92	—	N
Texas	N	1,912	226	6,411	103	1,230	—	N
<b>Mountain</b>	27	1,804	226	1,973	22	625	3	9
Arizona	—	823	105	904	15	230	2	3
Colorado	1	546	63	342	—	138	—	4
Idaho	—	N	N	20	1	6	—	—
Montana	N	N	N	5	—	3	1	N
Nevada	2	N	N	412	5	130	—	—
New Mexico	—	174	20	151	—	53	—	—
Utah	24	232	34	133	1	65	—	2
Wyoming	—	29	4	6	—	—	—	—
<b>Pacific</b>	1	114	17	6,910	39	2,440	—	14
Alaska	—	110	17	15	—	3	—	N
California	N	N	N	6,114	38	2,065	—	14
Hawaii	1	4	—	73	—	35	—	N
Oregon	N	N	N	173	—	71	—	N
Washington	N	N	N	535	1	266	—	N
<b>Territories</b>								
American Samoa	N	N	N	—	—	—	—	N
C.N.M.I.	—	—	—	—	—	—	—	—
Guam	—	—	—	11	—	1	—	—
Puerto Rico	N	—	—	723	2	228	2	N
U.S. Virgin Islands	—	—	—	4	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* The previous categories of invasive pneumococcal disease among children less than 5 years and invasive, drug-resistant *Streptococcus pneumoniae* were eliminated. All cases of invasive *Streptococcus pneumoniae* disease, regardless of age or drug resistance are reported under a single disease code.

† Includes the following categories: primary, secondary, latent (including early latent, late latent, and latent syphilis of unknown duration), neurosyphilis, late (including late syphilis with clinical manifestations other than neurosyphilis), and congenital syphilis. Totals reported to the Division of STD Prevention, NCHHSTP, as of June 8, 2011.

TABLE 2. (Continued) Reported cases of notifiable diseases, by geographic division and area — United States, 2010

Area	Trichinellosis	Tuberculosis*	Tularemia	Typhoid fever	Vancomycin-intermediate <i>Staphylococcus aureus</i>	Vancomycin-resistant <i>Staphylococcus aureus</i>
<b>United States</b>	7	11,182	124	467	91	2
<b>New England</b>	2	356	4	28	7	—
Connecticut	—	85	—	8	—	—
Maine	1	8	—	2	—	—
Massachusetts	—	222	3	14	7	—
New Hampshire	—	10	1	3	N	—
Rhode Island	1	26	—	1	—	—
Vermont	—	5	—	—	—	—
<b>Mid. Atlantic</b>	1	1,597	2	122	34	—
New Jersey	1	405	1	40	7	—
New York (Upstate)	—	243	—	14	18	—
New York City	—	711	—	52	7	—
Pennsylvania	—	238	1	16	2	—
<b>E.N. Central</b>	2	891	4	45	21	—
Illinois	1	372	1	20	7	—
Indiana	—	90	3	2	N	—
Michigan	—	184	—	6	5	—
Ohio	1	190	—	10	8	—
Wisconsin	—	55	—	7	1	—
<b>W.N. Central</b>	1	390	51	16	1	—
Iowa	—	48	—	3	N	—
Kansas	—	46	16	1	N	N
Minnesota	—	135	—	6	—	—
Missouri	1	107	18	2	—	—
Nebraska	—	27	5	2	1	—
North Dakota	—	12	1	1	—	—
South Dakota	—	15	11	1	—	—
<b>S. Atlantic</b>	—	2,262	4	75	8	2
Delaware	—	20	—	1	—	2
District of Columbia	—	44	—	3	N	N
Florida	—	835	—	22	1	—
Georgia	N	411	—	18	1	—
Maryland	—	220	—	10	1	—
North Carolina	—	296	3	9	4	—
South Carolina	—	153	—	1	—	—
Virginia	—	268	1	11	1	—
West Virginia	—	15	—	—	—	—
<b>E.S. Central</b>	—	545	5	8	2	—
Alabama	—	146	—	3	N	N
Kentucky	N	90	2	3	N	N
Mississippi	—	116	—	1	2	—
Tennessee	—	193	3	1	—	—
<b>W.S. Central</b>	—	1,749	28	36	15	—
Arkansas	N	78	19	1	—	—
Louisiana	—	200	—	2	4	—
Oklahoma	—	86	8	1	1	—
Texas	—	1,385	1	32	10	—
<b>Mountain</b>	1	567	12	17	3	—
Arizona	—	283	1	6	2	—
Colorado	—	71	3	3	N	—
Idaho	1	15	—	—	N	N
Montana	—	6	1	—	N	N
Nevada	—	114	1	5	1	—
New Mexico	—	51	1	—	N	N
Utah	—	20	2	3	—	—
Wyoming	—	7	3	—	—	—
<b>Pacific</b>	—	2,825	14	120	—	—
Alaska	—	57	—	—	N	N
California	—	2,327	8	91	N	N
Hawaii	—	115	—	1	—	—
Oregon	—	87	3	6	N	N
Washington	—	239	3	22	N	N
<b>Territories</b>						
American Samoa	—	32	—	—	—	—
C.N.M.I.	—	100	—	—	—	—
Guam	N	80	—	—	—	—
Puerto Rico	—	—	—	—	—	—
U.S. Virgin Islands	—	—	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Totals reported to the Division of Tuberculosis Elimination, NCHHSTP, as of July 1, 2011.

TABLE 2. (Continued) Reported cases of notifiable diseases, by geographic division and area — United States, 2010

Area	Varicella		Vibriosis	Viral hemorrhagic fever
	Morbidity	Mortality*		
<b>United States</b>	15,427	4	846	1
<b>New England</b>	1,163	—	44	—
Connecticut	320	—	32	—
Maine	247	—	5	—
Massachusetts	258	N	—	—
New Hampshire	162	—	3	N
Rhode Island	46	—	4	—
Vermont	130	N	—	—
<b>Mid. Atlantic</b>	1,717	1	48	1
New Jersey	568	—	24	—
New York (Upstate)	N	N	N	—
New York City	—	—	15	—
Pennsylvania	1,149	1	9	1
<b>E.N. Central</b>	4,868	1	46	—
Illinois	1,195	1	13	—
Indiana	357	—	6	N
Michigan	1,450	—	10	—
Ohio	1,349	N	11	—
Wisconsin	517	—	6	N
<b>W.N. Central</b>	1,022	—	19	—
Iowa	N	N	N	—
Kansas	394	—	N	—
Minnesota	—	—	14	—
Missouri	489	—	5	—
Nebraska	25	—	N	—
North Dakota	52	—	N	—
South Dakota	62	—	N	—
<b>S. Atlantic</b>	2,105	—	291	—
Delaware	39	—	5	—
District of Columbia	20	—	5	N
Florida	977	—	130	—
Georgia	N	N	22	N
Maryland	N	—	45	—
North Carolina	N	N	28	—
South Carolina	83	—	16	—
Virginia	548	N	40	—
West Virginia	438	—	N	—
<b>E.S. Central</b>	308	—	36	—
Alabama	296	—	13	N
Kentucky	N	N	5	N
Mississippi	12	N	8	—
Tennessee	N	—	10	—
<b>W.S. Central</b>	3,070	2	108	—
Arkansas	220	—	N	—
Louisiana	90	N	28	—
Oklahoma	N	N	1	—
Texas	2,760	2	79	—
<b>Mountain</b>	1,052	—	30	—
Arizona	—	—	18	—
Colorado	404	N	8	N
Idaho	N	N	N	N
Montana	198	—	N	N
Nevada	N	N	1	—
New Mexico	95	—	2	N
Utah	334	—	1	—
Wyoming	21	N	—	—
<b>Pacific</b>	122	—	224	—
Alaska	48	N	—	—
California	36	—	115	—
Hawaii	38	—	24	—
Oregon	N	N	26	—
Washington	N	N	59	—
<b>Territories</b>				
American Samoa	N	N	N	N
C.N.M.I.	—	—	—	—
Guam	28	N	—	—
Puerto Rico	636	—	N	—
U.S. Virgin Islands	—	—	—	—

N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Totals reported to the Division of Viral Diseases, National Center for Immunization and Respiratory Diseases (NCIRD), as of June 30, 2011.

## Notifiable Diseases and Mortality Tables

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending August 13, 2011 (32nd week)\*

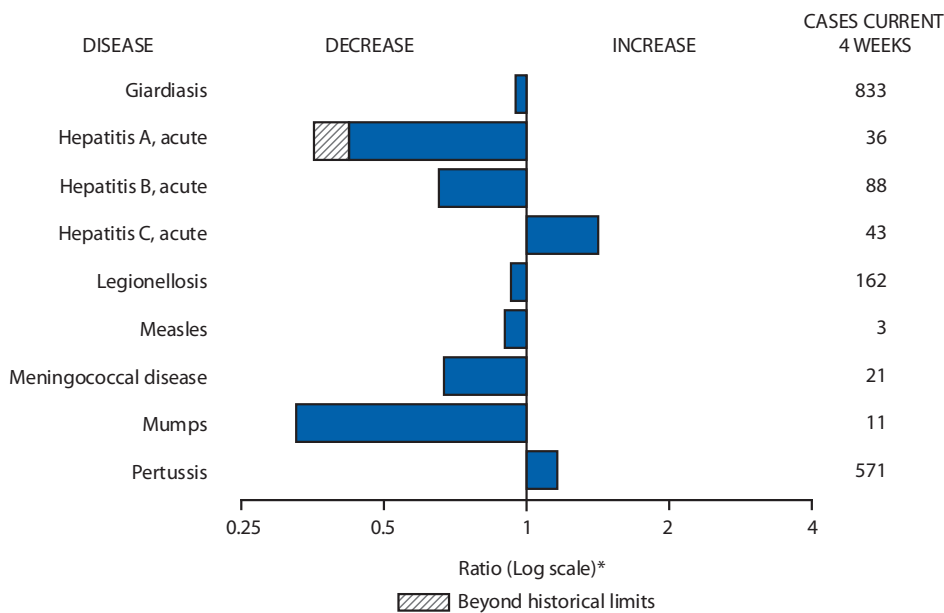
Disease	Current week	Cum 2011	5-year weekly average <sup>†</sup>	Total cases reported for previous years					States reporting cases during current week (No.)
				2010	2009	2008	2007	2006	
Anthrax	—	—	—	—	1	—	1	1	
Arboviral diseases <sup>§, ¶</sup> :									
California serogroup virus disease	—	12	5	75	55	62	55	67	
Eastern equine encephalitis virus disease	—	1	0	10	4	4	4	8	
Powassan virus disease	—	5	0	8	6	2	7	1	
St. Louis encephalitis virus disease	—	—	0	10	12	13	9	10	
Western equine encephalitis virus disease	—	—	—	—	—	—	—	—	
Babesiosis	37	268	1	NN	NN	NN	NN	NN	NY (33), PA (2), MD (1), CA (1)
Botulism, total	—	59	3	112	118	145	144	165	
foodborne	—	6	1	7	10	17	32	20	
infant	—	47	2	80	83	109	85	97	
other (wound and unspecified)	—	6	1	25	25	19	27	48	
Brucellosis	1	46	3	115	115	80	131	121	FL (1)
Chancroid	—	10	0	24	28	25	23	33	
Cholera	—	21	0	13	10	5	7	9	
Cyclosporiasis <sup>§</sup>	12	115	4	179	141	139	93	137	NY (1), FL (9), TX (2)
Diphtheria	—	—	—	—	—	—	—	—	
<i>Haemophilus influenzae</i> ,** invasive disease (age <5 yrs):									
serotype b	—	5	0	23	35	30	22	29	
nonsertotype b	1	73	2	200	236	244	199	175	NY (1)
unknown serotype	1	154	3	223	178	163	180	179	FL (1)
Hansen disease <sup>§</sup>	2	28	2	98	103	80	101	66	FL (2)
Hantavirus pulmonary syndrome <sup>§</sup>	—	16	0	20	20	18	32	40	
Hemolytic uremic syndrome, postdiarrheal <sup>§</sup>	2	82	7	266	242	330	292	288	MD (1), OK (1)
Influenza-associated pediatric mortality <sup>§, ††</sup>	—	110	1	61	358	90	77	43	
Listeriosis	9	289	23	821	851	759	808	884	NH (1), NY (1), PA (4), NV (1), CA (2)
Measles <sup>§§</sup>	1	162	1	63	71	140	43	55	WA (1)
Meningococcal disease, invasive <sup>¶¶</sup> :									
A, C, Y, and W-135	1	122	3	280	301	330	325	318	GA (1)
serogroup B	—	63	2	135	174	188	167	193	
other serogroup	—	7	0	12	23	38	35	32	
unknown serogroup	3	272	8	406	482	616	550	651	NY (1), NE (1), MD (1)
Novel influenza A virus infections <sup>***</sup>	—	2	0	4	43,774	2	4	NN	
Plague	—	1	0	2	8	3	7	17	
Poliomyelitis, paralytic	—	—	—	—	1	—	—	—	
Polio virus Infection, nonparalytic <sup>§</sup>	—	—	—	—	—	—	—	NN	
Psittacosis <sup>§</sup>	—	1	0	4	9	8	12	21	
Q fever, total <sup>§</sup>	2	46	3	131	113	120	171	169	
acute	1	31	1	106	93	106	—	—	NY (1)
chronic	1	15	0	25	20	14	—	—	CO (1)
Rabies, human	—	1	0	2	4	2	1	3	
Rubella <sup>†††</sup>	—	4	0	5	3	16	12	11	
Rubella, congenital syndrome	—	—	—	—	2	—	—	1	
SARS-CoV <sup>§</sup>	—	—	—	—	—	—	—	—	
Smallpox <sup>§</sup>	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome <sup>§</sup>	—	80	2	142	161	157	132	125	
Syphilis, congenital (age <1 yr) <sup>§§§</sup>	—	102	9	377	423	431	430	349	
Tetanus	—	6	0	26	18	19	28	41	
Toxic-shock syndrome (staphylococcal) <sup>§</sup>	2	49	1	82	74	71	92	101	PA (1), GA (1)
Trichinellosis	—	7	0	7	13	39	5	15	
Tularemia	2	67	4	124	93	123	137	95	OH (1), WA (1)
Typhoid fever	4	213	11	467	397	449	434	353	MD (1), FL (1), AR (1), OK (1)
Vancomycin-intermediate <i>Staphylococcus aureus</i> <sup>§</sup>	1	37	1	91	78	63	37	6	NY (1)
Vancomycin-resistant <i>Staphylococcus aureus</i> <sup>§</sup>	—	—	0	2	1	—	2	1	
Vibriosis (noncholera <i>Vibrio</i> species infections) <sup>§</sup>	12	327	25	846	789	588	549	NN	MI (1), MD (1), GA (1), FL (5), CO (1), AZ (1), WA (2)
Viral hemorrhagic fever <sup>¶¶¶</sup>	—	—	—	1	NN	NN	NN	NN	
Yellow fever	—	—	—	—	—	—	—	—	

See Table 1 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 August 13, 2011 (32nd week)\***

—: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts.  
 \* Case counts for reporting years 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see [http://www.cdc.gov/osels/ph\\_surveillance/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf](http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf).  
 † Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, the 2 weeks following the current week, for a total of 5 preceding years. Additional information is available at [http://www.cdc.gov/osels/ph\\_surveillance/nndss/phs/files/5yearweeklyaverage.pdf](http://www.cdc.gov/osels/ph_surveillance/nndss/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 arboviral diseases, STD data, TB data, and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at [http://www.cdc.gov/osels/ph\\_surveillance/nndss/phs/infdis.htm](http://www.cdc.gov/osels/ph_surveillance/nndss/phs/infdis.htm).  
 ¶ Includes both neuroinvasive and nonneuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for West Nile virus are available in Table II.  
 \*\* Data for H. influenzae (all ages, all serotypes) are available in Table II.  
 †† Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Since October 3, 2010, 114 influenza-associated pediatric deaths occurring during the 2010-11 influenza season have been reported.  
 ‡‡ The one measles case reported for the current week was imported.  
 ¶¶ Data for meningococcal disease (all serogroups) are available in Table II.  
 \*\*\* CDC discontinued reporting of individual confirmed and probable cases of 2009 pandemic influenza A (H1N1) virus infections on July 24, 2009. During 2009, four cases of human infection with novel influenza A viruses, different from the 2009 pandemic influenza A (H1N1) strain, were reported to CDC. The four cases of novel influenza A virus infection reported to CDC during 2010, and the two cases reported during 2011, were identified as swine influenza A (H3N2) virus and are unrelated to the 2009 pandemic influenza A (H1N1) virus. Total case counts for 2009 were provided by the Influenza Division, National Center for Immunization and Respiratory Diseases (NCIRD).  
 ††† No rubella cases were reported for the current week.  
 †††† Updated weekly from reports to the Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention.  
 ¶¶¶ There was one case of viral hemorrhagic fever reported during week 12 of 2010. The one case report was confirmed as lassa fever. See Table II for dengue hemorrhagic fever.

**FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals August 13, 2011, 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 August 13, 2011, and August 14, 2010 (32nd week)\*

Reporting area	Dengue Virus Infection†									
	Dengue Fever§					Dengue Hemorrhagic Fever¶				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
	Med	Max				Med	Max			
<b>United States</b>	—	3	55	58	395	—	0	2	—	5
<b>New England</b>	—	0	3	1	4	—	0	0	—	—
Connecticut	—	0	0	—	—	—	0	0	—	—
Maine**	—	0	2	—	3	—	0	0	—	—
Massachusetts	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	0	0	—	—	—	0	0	—	—
Rhode Island**	—	0	1	—	—	—	0	0	—	—
Vermont**	—	0	1	1	1	—	0	0	—	—
<b>Mid. Atlantic</b>	—	1	25	19	128	—	0	1	—	3
New Jersey	—	0	3	—	16	—	0	0	—	—
New York (Upstate)	—	0	5	—	18	—	0	1	—	1
New York City	—	0	17	10	77	—	0	1	—	2
Pennsylvania	—	0	2	9	17	—	0	0	—	—
<b>E.N. Central</b>	—	0	7	4	32	—	0	1	—	—
Illinois	—	0	2	1	9	—	0	0	—	—
Indiana	—	0	2	1	7	—	0	0	—	—
Michigan	—	0	2	—	4	—	0	0	—	—
Ohio	—	0	2	—	9	—	0	0	—	—
Wisconsin	—	0	2	2	3	—	0	1	—	—
<b>W.N. Central</b>	—	0	6	—	21	—	0	1	—	—
Iowa	—	0	1	—	1	—	0	0	—	—
Kansas	—	0	1	—	3	—	0	0	—	—
Minnesota	—	0	1	—	12	—	0	0	—	—
Missouri	—	0	1	—	4	—	0	0	—	—
Nebraska**	—	0	6	—	—	—	0	0	—	—
North Dakota	—	0	0	—	1	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	1	—	—
<b>S. Atlantic</b>	—	1	17	15	147	—	0	1	—	1
Delaware	—	0	0	—	—	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	0	—	—
Florida	—	1	13	11	114	—	0	1	—	1
Georgia	—	0	2	3	8	—	0	0	—	—
Maryland**	—	0	0	—	—	—	0	0	—	—
North Carolina	—	0	1	1	4	—	0	0	—	—
South Carolina**	—	0	2	—	12	—	0	0	—	—
Virginia**	—	0	3	—	7	—	0	0	—	—
West Virginia	—	0	0	—	2	—	0	0	—	—
<b>E.S. Central</b>	—	0	1	—	4	—	0	0	—	—
Alabama**	—	0	1	—	2	—	0	0	—	—
Kentucky	—	0	1	—	1	—	0	0	—	—
Mississippi	—	0	0	—	—	—	0	0	—	—
Tennessee**	—	0	0	—	1	—	0	0	—	—
<b>W.S. Central</b>	—	0	4	4	17	—	0	0	—	1
Arkansas**	—	0	0	—	—	—	0	0	—	1
Louisiana	—	0	2	1	2	—	0	0	—	—
Oklahoma	—	0	1	—	3	—	0	0	—	—
Texas**	—	0	2	3	12	—	0	0	—	—
<b>Mountain</b>	—	0	2	3	13	—	0	0	—	—
Arizona	—	0	2	2	5	—	0	0	—	—
Colorado	—	0	0	—	—	—	0	0	—	—
Idaho**	—	0	1	—	1	—	0	0	—	—
Montana**	—	0	1	—	3	—	0	0	—	—
Nevada**	—	0	1	—	3	—	0	0	—	—
New Mexico**	—	0	0	—	1	—	0	0	—	—
Utah	—	0	1	1	—	—	0	0	—	—
Wyoming**	—	0	0	—	—	—	0	0	—	—
<b>Pacific</b>	—	0	7	12	29	—	0	0	—	—
Alaska	—	0	0	—	1	—	0	0	—	—
California	—	0	5	2	21	—	0	0	—	—
Hawaii	—	0	4	5	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—
Washington	—	0	2	5	7	—	0	0	—	—
<b>Territories</b>										
American Samoa	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	24	544	387	6,340	—	0	20	4	141
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

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

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

\* Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see [http://www.cdc.gov/osels/ph\\_surveillance/nndss/phs/files/ProvisionalNationalNotifiableDiseasesSurveillanceData20100927.pdf](http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationalNotifiableDiseasesSurveillanceData20100927.pdf). Data for TB 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).

§ Dengue Fever includes cases that meet criteria for Dengue Fever with hemorrhage, other clinical and unknown case classifications.

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

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

















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TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending August 13, 2011, and August 14, 2010 (32nd week)\*

Reporting area	<i>Streptococcus pneumoniae</i> , <sup>†</sup> invasive disease										Syphilis, primary and secondary				
	All ages					Age <5									
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	80	298	937	9,183	10,248	8	23	101	678	1,261	96	258	363	7,330	8,214
<b>New England</b>	—	11	79	371	590	—	1	5	28	76	3	8	18	226	287
Connecticut	—	0	49	94	246	—	0	3	6	22	—	1	8	32	55
Maine <sup>§</sup>	—	2	13	89	83	—	0	1	3	6	—	0	3	10	14
Massachusetts	—	0	3	21	53	—	0	3	8	37	3	5	11	142	179
New Hampshire	—	2	8	70	76	—	0	1	5	4	—	0	3	13	13
Rhode Island <sup>§</sup>	—	1	8	46	73	—	0	1	1	4	—	0	7	24	24
Vermont <sup>§</sup>	—	1	6	51	59	—	0	2	5	3	—	0	2	5	2
<b>Mid. Atlantic</b>	—	32	81	937	1,056	—	3	27	82	162	11	31	46	868	1,055
New Jersey	—	13	35	442	474	—	1	4	28	40	—	5	12	132	150
New York (Upstate)	—	2	10	57	104	—	1	9	32	80	6	3	20	114	86
New York City	—	14	42	438	478	—	0	14	22	42	2	15	31	416	590
Pennsylvania	N	0	0	N	N	N	0	0	N	N	3	6	13	206	229
<b>E.N. Central</b>	17	66	113	2,051	2,085	—	4	10	115	188	2	32	53	878	1,205
Illinois	N	0	0	N	N	N	0	0	N	N	2	13	23	349	577
Indiana	—	15	32	452	469	—	0	4	20	37	—	3	14	99	114
Michigan	2	15	29	459	479	—	1	4	25	58	—	5	10	136	163
Ohio	15	26	45	846	812	—	2	7	58	67	—	9	21	263	319
Wisconsin	—	9	24	294	325	—	0	3	12	26	—	1	4	31	32
<b>W.N. Central</b>	—	5	35	95	536	—	0	5	6	73	2	7	18	180	190
Iowa	N	0	0	N	N	N	0	0	N	N	—	0	2	12	15
Kansas	N	0	0	N	N	N	0	0	N	N	—	0	3	14	11
Minnesota	—	0	24	—	404	—	0	5	—	59	2	3	10	79	68
Missouri	N	0	0	N	N	N	0	0	N	N	—	2	9	70	90
Nebraska <sup>§</sup>	—	2	9	77	91	—	0	2	6	12	—	0	2	5	5
North Dakota	—	0	18	18	41	—	0	1	—	2	—	0	1	—	—
South Dakota	N	0	0	N	N	N	0	0	N	N	—	0	1	—	1
<b>S. Atlantic</b>	41	72	170	2,569	2,771	3	7	22	191	348	30	63	178	1,904	1,887
Delaware	—	1	6	35	24	—	0	1	—	—	—	0	4	13	4
District of Columbia	—	1	3	28	52	—	0	1	4	7	—	3	8	106	93
Florida	8	23	68	935	1,031	1	3	13	86	140	3	22	44	677	685
Georgia	4	22	54	653	876	1	2	7	44	106	15	12	130	356	399
Maryland <sup>§</sup>	6	10	32	383	351	—	1	4	25	40	—	8	17	263	173
North Carolina	N	0	0	N	N	N	0	0	N	N	5	8	19	222	265
South Carolina <sup>§</sup>	—	8	25	314	350	—	1	3	19	39	2	4	10	131	88
Virginia <sup>§</sup>	N	0	0	N	N	N	0	0	N	N	5	4	16	134	177
West Virginia	23	0	48	221	87	1	0	6	13	16	—	0	2	2	3
<b>E.S. Central</b>	1	19	36	614	700	—	1	4	38	68	10	15	34	431	530
Alabama <sup>§</sup>	N	0	0	N	N	N	0	0	N	N	2	4	11	113	155
Kentucky	N	0	0	N	N	N	0	0	N	N	5	2	16	72	80
Mississippi	N	0	0	N	N	N	0	0	N	N	1	3	16	93	126
Tennessee <sup>§</sup>	1	19	36	614	700	—	1	4	38	68	2	5	12	153	169
<b>W.S. Central</b>	13	31	368	1,242	1,244	4	4	30	118	167	23	35	71	1,007	1,244
Arkansas <sup>§</sup>	2	3	26	154	119	—	0	3	12	12	4	3	10	120	148
Louisiana	—	3	11	108	67	—	0	2	9	16	—	6	36	190	271
Oklahoma	N	0	0	N	N	N	0	0	N	N	2	1	6	32	58
Texas <sup>§</sup>	11	26	333	980	1,058	4	3	27	97	139	17	23	33	665	767
<b>Mountain</b>	8	32	72	1,198	1,194	1	3	8	91	163	2	12	23	339	358
Arizona	7	12	45	575	583	1	1	5	42	76	2	4	9	141	140
Colorado	1	11	23	365	353	—	1	4	26	47	—	2	8	67	79
Idaho <sup>§</sup>	N	0	0	N	N	N	0	0	N	N	—	0	2	5	2
Montana <sup>§</sup>	N	0	0	N	N	N	0	0	N	N	—	0	1	3	3
Nevada <sup>§</sup>	N	0	0	N	N	N	0	0	N	N	—	3	9	82	57
New Mexico <sup>§</sup>	—	3	13	165	113	—	0	2	11	14	—	1	4	36	29
Utah	—	3	8	74	135	—	0	3	12	24	—	0	4	5	48
Wyoming <sup>§</sup>	—	0	15	19	10	—	0	1	—	2	—	0	0	—	—
<b>Pacific</b>	—	3	11	106	72	—	0	2	9	16	13	51	66	1,497	1,458
Alaska	—	2	11	105	72	—	0	2	9	16	—	0	1	1	3
California	N	0	0	N	N	N	0	0	N	N	10	41	57	1,250	1,235
Hawaii	—	0	3	1	—	—	0	0	—	—	—	0	5	8	26
Oregon	N	0	0	N	N	N	0	0	N	N	—	1	7	56	41
Washington	N	0	0	N	N	N	0	0	N	N	3	5	13	182	153
<b>Territories</b>															
American Samoa	N	0	0	N	N	N	0	0	N	N	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	3	4	13	142	137
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

\* Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see [http://www.cdc.gov/osels/ph\\_surveillance/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf](http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf). Data for TB are displayed in Table IV, which appears quarterly.

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

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending August 13, 2011, and August 14, 2010 (32nd week)\*

Reporting area	Varicella (chickenpox)					West Nile virus disease <sup>†</sup>									
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Neuroinvasive					Nonneuroinvasive <sup>§</sup>				
		Med	Max			Current week	Previous 52 weeks	Cum 2011	Cum 2010	Current week	Previous 52 weeks	Cum 2011	Cum 2010		
<b>United States</b>	99	273	367	7,655	9,920	—	1	71	32	175	—	0	53	21	163
<b>New England</b>	—	22	46	646	695	—	0	3	—	1	—	0	2	—	3
Connecticut	—	5	16	149	210	—	0	2	—	1	—	0	2	—	3
Maine <sup>¶</sup>	—	5	16	135	125	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	6	18	260	187	—	0	2	—	—	—	0	1	—	—
New Hampshire	—	0	9	9	84	—	0	1	—	—	—	0	0	—	—
Rhode Island <sup>¶</sup>	—	1	6	28	19	—	0	0	—	—	—	0	0	—	—
Vermont <sup>¶</sup>	—	2	10	65	70	—	0	0	—	—	—	0	0	—	—
<b>Mid. Atlantic</b>	29	34	70	1,263	1,098	—	0	19	—	38	—	0	13	1	20
New Jersey	19	11	53	673	395	—	0	3	—	4	—	0	6	1	—
New York (Upstate)	N	0	0	N	N	—	0	9	—	23	—	0	7	—	15
New York City	—	0	0	—	—	—	0	7	—	7	—	0	4	—	5
Pennsylvania	10	19	41	590	703	—	0	3	—	4	—	0	3	—	—
<b>E.N. Central</b>	12	68	118	1,797	3,250	—	0	15	—	6	—	0	7	—	5
Illinois	—	17	31	444	823	—	0	10	—	2	—	0	4	—	1
Indiana <sup>¶</sup>	—	4	18	140	239	—	0	2	—	—	—	0	2	—	2
Michigan	3	20	38	592	980	—	0	6	—	3	—	0	1	—	1
Ohio	9	20	58	620	865	—	0	1	—	1	—	0	1	—	—
Wisconsin	—	0	22	1	343	—	0	0	—	—	—	0	1	—	1
<b>W.N. Central</b>	—	11	42	224	530	—	0	7	1	10	—	0	11	3	34
Iowa	N	0	0	N	N	—	0	1	—	—	—	0	2	—	1
Kansas <sup>¶</sup>	—	4	15	73	226	—	0	1	—	2	—	0	3	—	7
Minnesota	—	0	0	—	—	—	0	1	—	2	—	0	3	—	—
Missouri	—	5	24	102	247	—	0	1	—	2	—	0	0	—	—
Nebraska <sup>¶</sup>	—	0	5	3	7	—	0	3	—	3	—	0	7	1	10
North Dakota	—	0	10	25	29	—	0	2	—	—	—	0	2	2	5
South Dakota	—	1	7	21	21	—	0	2	1	1	—	0	2	—	11
<b>S. Atlantic</b>	15	36	64	1,165	1,444	—	0	6	9	12	—	0	4	1	5
Delaware <sup>¶</sup>	—	0	3	6	22	—	0	0	—	—	—	0	0	—	—
District of Columbia	—	0	2	12	15	—	0	1	—	1	—	0	1	—	1
Florida <sup>¶</sup>	12	15	38	581	700	—	0	4	8	3	—	0	1	—	—
Georgia	N	0	0	N	N	—	0	1	—	2	—	0	3	1	4
Maryland <sup>¶</sup>	N	0	0	N	N	—	0	3	—	4	—	0	2	—	—
North Carolina	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
South Carolina <sup>¶</sup>	—	0	9	12	74	—	0	1	—	—	—	0	0	—	—
Virginia <sup>¶</sup>	3	8	25	275	350	—	0	1	1	2	—	0	1	—	—
West Virginia	—	8	32	279	283	—	0	0	—	—	—	0	0	—	—
<b>E.S. Central</b>	1	5	15	173	192	—	0	3	8	2	—	0	3	6	3
Alabama <sup>¶</sup>	—	5	14	163	185	—	0	0	—	1	—	0	0	—	2
Kentucky	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
Mississippi	1	0	3	10	7	—	0	3	8	1	—	0	2	6	1
Tennessee <sup>¶</sup>	N	0	0	N	N	—	0	1	—	—	—	0	2	—	—
<b>W.S. Central</b>	38	43	258	1,535	1,915	—	0	16	4	21	—	0	3	4	9
Arkansas <sup>¶</sup>	—	3	17	131	139	—	0	2	—	3	—	0	1	—	—
Louisiana	—	2	6	51	50	—	0	3	—	7	—	0	1	2	4
Oklahoma	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Texas <sup>¶</sup>	38	37	247	1,353	1,726	—	0	15	4	11	—	0	2	2	5
<b>Mountain</b>	—	19	65	777	718	—	0	18	2	56	—	0	15	4	60
Arizona	—	2	50	370	—	—	0	13	2	48	—	0	5	2	33
Colorado <sup>¶</sup>	—	5	31	155	259	—	0	5	—	6	—	0	11	1	21
Idaho <sup>¶</sup>	N	0	0	N	N	—	0	0	—	—	—	0	1	—	1
Montana <sup>¶</sup>	—	2	28	103	153	—	0	0	—	—	—	0	0	—	—
Nevada <sup>¶</sup>	N	0	0	N	N	—	0	0	—	—	—	0	1	—	2
New Mexico <sup>¶</sup>	—	1	8	23	72	—	0	6	—	1	—	0	2	—	1
Utah	—	4	26	119	221	—	0	1	—	—	—	0	1	—	—
Wyoming <sup>¶</sup>	—	0	3	7	13	—	0	1	—	1	—	0	1	1	2
<b>Pacific</b>	4	2	6	75	78	—	0	8	8	29	—	0	6	2	24
Alaska	—	1	4	35	30	—	0	0	—	—	—	0	0	—	—
California	—	0	3	7	25	—	0	8	8	29	—	0	6	2	24
Hawaii	4	1	4	33	23	—	0	0	—	—	—	0	0	—	—
Oregon	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
Washington	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
<b>Territories</b>															
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	4	16	19	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	5	21	102	405	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

\* Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see [http://www.cdc.gov/osels/ph\\_surveillance/ndss/phs/files/ProvisionalNationalNotifiableDiseasesSurveillanceData20100927.pdf](http://www.cdc.gov/osels/ph_surveillance/ndss/phs/files/ProvisionalNationalNotifiableDiseasesSurveillanceData20100927.pdf). Data for TB 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/osels/ph\\_surveillance/ndss/phs/infdis.htm](http://www.cdc.gov/osels/ph_surveillance/ndss/phs/infdis.htm).

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

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TABLE III. Deaths in 122 U.S. cities,\* week ending August 13, 2011 (32nd week)

Reporting area	All causes, by age (years)						P&I†	Reporting area (Continued)	All causes, by age (years)						P&I†
	All Ages	≥65	45-64	25-44	1-24	<1			Total	All Ages	≥65	45-64	25-44	1-24	
<b>New England</b>	536	365	122	29	10	10	47	<b>S. Atlantic</b>	1,124	711	277	80	37	19	64
Boston, MA	118	77	29	7	4	1	17	Atlanta, GA	126	73	26	20	5	2	9
Bridgeport, CT	44	33	9	1	1	—	3	Baltimore, MD	153	85	46	16	4	2	7
Cambridge, MA	17	12	4	—	1	—	—	Charlotte, NC	120	82	21	6	8	3	2
Fall River, MA	25	16	6	3	—	—	1	Jacksonville, FL	107	62	37	7	—	1	9
Hartford, CT	60	38	14	3	1	4	5	Miami, FL	93	60	23	6	4	—	8
Lowell, MA	18	16	2	—	—	—	—	Norfolk, VA	58	39	15	2	1	1	—
Lynn, MA	6	3	1	2	—	—	—	Richmond, VA	55	34	15	1	3	2	4
New Bedford, MA	28	21	6	—	—	1	3	Savannah, GA	57	44	10	2	1	—	1
New Haven, CT	39	25	12	1	1	—	5	St. Petersburg, FL	54	35	12	4	2	1	5
Providence, RI	56	41	12	2	1	—	2	Tampa, FL	198	135	42	12	5	4	8
Somerville, MA	2	1	1	—	—	—	—	Washington, D.C.	93	56	27	3	4	3	9
Springfield, MA	36	25	5	3	1	2	3	Wilmington, DE	10	6	3	1	—	—	2
Waterbury, CT	34	23	7	3	—	1	2	<b>E.S. Central</b>	838	542	205	53	19	19	64
Worcester, MA	53	34	14	4	—	1	6	Birmingham, AL	176	106	48	15	3	4	18
<b>Mid. Atlantic</b>	1,812	1,254	409	103	28	18	74	Chattanooga, TN	81	52	21	4	2	2	2
Albany, NY	47	36	7	3	1	—	2	Knoxville, TN	98	65	25	5	2	1	9
Allentown, PA	15	11	2	1	1	—	—	Lexington, KY	43	29	7	3	3	1	5
Buffalo, NY	73	52	16	3	1	1	9	Memphis, TN	176	109	53	8	2	4	14
Camden, NJ	25	15	3	5	1	1	3	Mobile, AL	88	57	21	6	2	2	4
Elizabeth, NJ	14	13	1	—	—	—	—	Montgomery, AL	39	29	5	2	2	1	1
Erie, PA	56	38	13	4	1	—	4	Nashville, TN	137	95	25	10	3	4	11
Jersey City, NJ	14	9	5	—	—	—	1	<b>W.S. Central</b>	1,236	756	332	77	26	45	40
New York City, NY	1,044	733	234	62	11	4	33	Austin, TX	86	51	27	5	2	1	2
Newark, NJ	38	15	16	4	1	2	1	Baton Rouge, LA	73	49	15	4	3	2	—
Paterson, NJ	25	16	5	3	—	1	—	Corpus Christi, TX	57	39	14	2	—	2	6
Philadelphia, PA	135	78	40	7	6	4	1	Dallas, TX	201	106	66	13	3	13	6
Pittsburgh, PA <sup>§</sup>	40	28	10	1	1	—	4	El Paso, TX	93	69	12	9	2	1	7
Reading, PA	19	13	6	—	—	—	—	Fort Worth, TX	U	U	U	U	U	U	U
Rochester, NY	84	60	16	5	—	3	3	Houston, TX	193	87	69	18	5	14	1
Schenectady, NY	13	12	1	—	—	—	—	Little Rock, AR	78	47	23	4	1	3	2
Scranton, PA	25	21	3	1	—	—	2	New Orleans, LA	U	U	U	U	U	U	U
Syracuse, NY	98	68	22	2	4	2	10	San Antonio, TX	248	167	55	16	6	4	7
Trenton, NJ	10	7	2	1	—	—	—	Shreveport, LA	46	27	14	1	1	3	2
Utica, NY	14	10	4	—	—	—	—	Tulsa, OK	161	114	37	5	3	2	7
Yonkers, NY	23	19	3	1	—	—	1	<b>Mountain</b>	1,055	703	257	64	16	14	59
<b>E.N. Central</b>	1,875	1,225	446	124	33	47	104	Albuquerque, NM	92	66	18	4	1	3	6
Akron, OH	33	18	12	3	—	—	2	Boise, ID	46	33	11	1	—	1	1
Canton, OH	24	18	4	1	—	1	1	Colorado Springs, CO	75	55	15	3	1	1	2
Chicago, IL	254	163	58	23	6	4	15	Denver, CO	82	51	25	5	—	1	2
Cincinnati, OH	101	63	25	5	2	6	4	Las Vegas, NV	267	182	68	13	3	1	22
Cleveland, OH	225	164	42	11	3	5	12	Ogden, UT	30	23	5	1	1	—	5
Columbus, OH	186	122	45	12	—	7	7	Phoenix, AZ	154	85	44	15	7	2	7
Dayton, OH	127	91	23	8	2	3	9	Pueblo, CO	36	26	5	2	1	2	—
Detroit, MI	159	72	61	15	7	4	3	Salt Lake City, UT	124	87	25	10	—	2	8
Evansville, IN	53	33	15	5	—	—	3	Tucson, AZ	149	95	41	10	2	1	6
Fort Wayne, IN	61	44	9	1	3	4	6	<b>Pacific</b>	1,658	1,134	364	89	44	27	128
Gary, IN	14	8	3	1	2	—	—	Berkeley, CA	11	6	4	1	—	—	2
Grand Rapids, MI	48	27	14	5	—	2	4	Fresno, CA	132	89	31	6	3	3	15
Indianapolis, IN	177	107	50	9	4	7	15	Glendale, CA	28	27	1	—	—	—	2
Lansing, MI	58	42	11	5	—	—	4	Honolulu, HI	68	49	14	3	1	1	9
Milwaukee, WI	70	39	24	5	1	1	2	Long Beach, CA	63	39	18	4	1	1	3
Peoria, IL	34	26	6	1	—	1	3	Los Angeles, CA	258	167	61	18	7	5	21
Rockford, IL	50	36	10	3	—	1	2	Pasadena, CA	16	13	—	1	1	1	3
South Bend, IN	40	33	5	1	—	1	4	Portland, OR	140	90	35	6	6	3	9
Toledo, OH	88	61	16	8	3	—	—	Sacramento, CA	181	123	42	12	3	1	15
Youngstown, OH	73	58	13	2	—	—	8	San Diego, CA	159	116	35	5	3	—	17
<b>W.N. Central</b>	526	340	134	27	12	12	34	San Francisco, CA	98	65	22	7	2	2	10
Des Moines, IA	35	28	5	1	1	—	1	San Jose, CA	185	141	27	11	5	1	12
Duluth, MN	38	25	9	3	—	1	4	Santa Cruz, CA	33	25	6	1	1	—	—
Kansas City, KS	28	18	7	2	1	—	1	Seattle, WA	107	66	26	4	4	7	3
Kansas City, MO	93	61	20	7	2	2	5	Spokane, WA	52	36	10	3	1	2	2
Lincoln, NE	35	24	8	1	1	1	2	Tacoma, WA	127	82	32	7	6	—	5
Minneapolis, MN	66	38	19	5	2	2	4	<b>Total¶</b>	<b>10,660</b>	<b>7,030</b>	<b>2,546</b>	<b>646</b>	<b>225</b>	<b>211</b>	<b>614</b>
Omaha, NE	92	64	22	3	2	1	10								
St. Louis, MO	13	5	6	1	1	—	—								
St. Paul, MN	38	28	9	—	—	1	3								
Wichita, KS	88	49	29	4	2	4	4								

U: Unavailable. —: No reported cases.

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

† Pneumonia and influenza.

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

¶ Total includes unknown ages.

## Morbidity and Mortality Weekly Report

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