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Hepatitis A Vaccination Coverage Among Children Aged 24–35 Months — United States, 2006 and 2007

During 1995–1996, hepatitis A vaccines were licensed in the United States as 2-dose regimens for children aged ≥24 months. In 1996, the Advisory Committee on Immunization Practices (ACIP) recommended vaccinating children aged ≥24 months who lived in communities or states with high rates of hepatitis A (*1*). In 1999, ACIP updated its guidelines, recommending routine vaccination for children aged ≥24 months in areas with hepatitis A rates twice the national average, and recommending consideration of routine vaccination in areas with rates higher than the national average (*2*). However, in 2005, this regional vaccination strategy was reevaluated because national hepatitis A rates had decreased to such an extent that differences among states were no longer substantial (*3*). Additionally, in 2005, hepatitis A vaccine was licensed for children aged 12–23 months. As a result of these developments, in 2006, ACIP expanded its hepatitis A vaccination recommendation to all children in the United States and reduced the recommended age for vaccination to 12–23 months (*4*). This report updates previous findings regarding hepatitis A vaccination coverage, providing estimates based on National Immunization Survey (NIS) data for 2006 and 2007. From 2006 to 2007, estimated national hepatitis A vaccination coverage levels among children aged 24–35 months who received at least 1 dose increased from 26.3% to 47.4%. The increase in hepatitis A vaccination coverage likely is the result of the expanded 2006 ACIP recommendations; adherence to these recommendations should lead to further declines in hepatitis A incidence in the United States.

NIS is an ongoing, random-digit–dialed survey of households with children aged 19–35 months at the time of interview, followed by a mail survey of each child's vaccination provider to obtain vaccination data (*5*). Data from NIS are used to produce timely estimates of vaccination coverage rates for all childhood vaccinations recommended by ACIP.* Data are weighted to adjust for households with multiple telephone lines, household nonresponse, and exclusion of households without landline telephones. The 2006 NIS interviews were conducted during January 2006–February 2007 and included children who were born during January 2003–July 2005. The 2007 NIS interviews were conducted during January 2007–February 2008 and included children who were born during January 2004–July 2006. In 2006, the survey was conducted in all 50 states and 30 local areas.† In 2007, the number of local areas

* Additional information available at http://www.cdc.gov/nis.

† The 30 local areas sampled separately for the 2006 NIS included six areas that receive federal immunization grant funds and have been included in the NIS every year since its inception in 1994 (District of Columbia; Chicago, Illinois; New York, New York; Philadelphia County, Pennsylvania; Bexar County, Texas; and Houston, Texas). Also included were 18 areas that had been included each year during 1994–2004 (Maricopa County, Arizona; Los Angeles County, California; San Diego County, California; Santa Clara County, California; Duval County, Florida; Miami-Dade County, Florida; Fulton and DeKalb counties, Georgia; Marion County, Indiana; Baltimore, Maryland; Boston, Massachusetts; Detroit, Michigan; Newark, New Jersey; Cuyahoga County, Ohio; Shelby County, Tennessee; Dallas County, Texas; El Paso County, Texas; King County, Washington; and Milwaukee County, Wisconsin). Also included were six areas sampled for the first time (northern California counties; Fresno County, California; eastern Kansas counties; southern New Mexico counties; Allegheny County, Pennsylvania; and eastern Washington counties).

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was reduced to 14.[§] The NIS household survey response rate was 64.5% in 2006 and 64.9% in 2007.

Among children aged 19–35 months for whom NIS household interviews were completed, health-care provider vaccination records were obtained for 21,044 children (70.4%) in 2006 and 17,017 children (68.6%) in 2007. Among the children with vaccination records, 14,804 children in 2006 and 12,018 in 2007 met the age criteria of 24–35 months for this study. Although hepatitis A vaccine is licensed as a 2-dose regimen (with the second dose recommended 6–18 months after the initial dose), this analysis was of vaccination coverage among children who had received at least 1 dose of vaccine. Tests for differences in 2006 and 2007 coverage estimates were conducted using t-tests with significant differences at $p<0.05$.

Nationally, among children aged 24–35 months, estimated hepatitis A vaccination coverage with at least 1 dose increased from 26.3% in 2006 to 47.4% in 2007 (Table). By ACIP vaccination recommendation status, the largest increase in vaccination coverage, from 7.2% to 32.7%, was observed in the 33 states[¶] (and the District of Columbia [DC]) that had not been recommended for vaccination before 2006. Vaccination coverage also increased (from 62.8% to 74.1%) in the 11 states where vaccination had been recommended since 1999 and in the six states where vaccination had been recommended for consideration since 1999 for children aged ≥24 months (from 48.8% to 66.6%).

By individual state, substantial variability in estimated vaccination coverage was observed. Among the 33 states (and DC) first recommended for hepatitis A vaccination in 2006, coverage in 2006 ranged from 0.4% (Maine) to 17.7% (Tennessee), and coverage in 2007 ranged from 11.6% (Maine) to 60.1% (Rhode Island). Among the 11 states where vaccination had been recommended since 1999, coverage in 2006 ranged from 7.4% (South Dakota) to 73.7% (Oklahoma), and coverage in 2007 ranged from 31.6% (South Dakota) to 82.8% (Alaska). Among the six states where vaccination had been recommended for consideration since 1999, coverage in 2006 ranged from

[§] Fourteen local areas were sampled separately for the 2007 NIS. These included the six areas that receive federal immunization grant funds and have been included in the NIS sample every year since its inception in 1994. Also included were seven previously sampled areas (Alameda County, California; Los Angeles County, California; San Bernardino County, California; Miami-Dade County, Florida; Marion County, Indiana; Dallas County, Texas; and El Paso County, Texas) and one area sampled for the first time (western Washington). Local areas sampled by NIS might change yearly as state immunization programs conduct local assessments where they are most needed.

[¶] The 17 other states included 11 where routine hepatitis A vaccination had been recommended since 1999 (Alaska, Arizona, California, Idaho, Nevada, New Mexico, Oklahoma, Oregon, South Dakota, Utah, and Washington) and six states where routine vaccination had been recommended for consideration include (Arkansas, Colorado, Missouri, Montana, Texas, and Wyoming).

TABLE. Estimated hepatitis A vaccination coverage (at least 1 dose) among children aged 24–35 months,* by ACIP vaccination recommendation status† and state/local area — National Immunization Survey (NIS), United States, 2006 and 2007

State/Local area	2006§ %	2006§ (95% CI**)	2007¶ %	2007¶ (95% CI)	% point difference from 2006 to 2007
United States	**26.3**	**(25.1–27.4)**	**47.4**	**(45.9–49.0)**	**21.1††**
Vaccination recommended since 1999 (11 states overall)††	**62.8**	**(59.5–66.1)**	**74.1**	**(70.2–77.9)**	**11.3††**
Alaska	65.9	(57.1–73.7)	82.8	(75.4–88.4)	16.9††
Arizona	66.2	(60.4–71.5)	76.3	(68.2–82.8)	10.1††
Maricopa County	69.5	(62.3–76.0)	—§§	—	—
Rest of state	59.9	(50.0–69.0)	—	—	—
California	66.5	(60.8–71.8)	77.3	(70.1–83.2)	10.8††
Alameda County	—	—	76.4	(68.7–82.6)	—
Fresno County	70.8	(62.8–77.7)	—	—	—
Los Angeles County	75.9	(68.3–82.2)	79.3	(71.6–85.4)	3.4
Northern California	45.7	(37.4–54.2)	—	—	—
San Bernardino County	—	—	79.6	(72.7–85.1)	—
San Diego County	65.4	(57.4–72.7)	—	—	—
Santa Clara County	67.0	(58.4–74.5)	—	—	—
Rest of state	62.2	(52.4–71.0)	76.2	(64.9–84.8)	14.0††
Idaho	56.3	(47.5–64.6)	66.2	(57.0–74.3)	9.9
Nevada	61.7	(52.9–69.8)	71.3	(62.9–78.5)	9.6
New Mexico	48.9	(42.3–55.6)	67.9	(57.8–76.5)	19.0††
Southern New Mexico	56.8	(48.2–65.0)	—	—	—
Rest of state	45.5	(36.9–54.3)	—	—	—
Oklahoma	73.7	(65.9–80.3)	79.8	(72.5–85.6)	6.1
Oregon	50.1	(41.2–58.9)	59.3	(49.5–68.5)	9.2
South Dakota	7.4	(4.4–12.3)	31.6	(23.8–40.6)	24.2††
Utah	68.3	(59.7–75.8)	78.2	(70.3–84.4)	9.9
Washington	45.9	(40.0–51.9)	62.0	(53.6–69.8)	16.1††
Eastern Washington	36.2	(28.6–44.5)	—	—	—
King County	69.8	(60.3–77.8)	—	—	—
Western Washington	—	—	59.6	(51.1–67.6)	—
Rest of state	36.4	(28.1–45.6)	62.6	(52.4–71.7)	26.2††
Vaccination recommended to be considered since 1999 (six states overall)††	**48.8**	**(45.1–52.5)**	**66.6**	**(62.7–70.5)**	**17.8††**
Arkansas	3.6	(1.0–11.9)	11.7	(7.7–17.4)	8.1††
Colorado	¶¶		¶¶		¶¶
Missouri	26.5	(19.7–34.6)	54.0	(44.7–63.1)	27.5††
Montana	16.9	(11.9–23.4)	39.1	(31.0–47.9)	22.2††
Texas	62.5	(57.2–67.5)	77.5	(72.0–82.2)	15.0††
Bexar County	65.9	(56.6–74.1)	75.7	(67.7–82.2)	9.8
City of Houston	67.7	(59.9–74.7)	81.3	(74.7–86.5)	13.6††
Dallas County	60.0	(50.2–69.1)	78.9	(71.2–84.9)	18.9††
El Paso County	77.6	(70.6–83.3)	89.3	(83.0–93.5)	11.7††
Rest of state	60.7	(53.1–67.9)	76.0	(67.7–82.8)	15.3††
Wyoming	19.8	(13.9–27.4)	33.8	(26.0–42.6)	14.0††
Vaccination recommended since 2006 (33 states and District of Columbia overall)††	**7.2**	**(6.5–7.9)**	**32.7**	**(31.0–34.3)**	**25.5††**
Alabama	3.0	(1.3–6.7)	28.7	(21.4–37.2)	25.7††
Connecticut	3.7	(1.8–7.6)	22.0	(15.6–30.0)	18.3††
Delaware	4.4	(2.2–8.5)	28.1	(21.2–36.3)	23.7††
District of Columbia	8.8	(5.6–13.7)	52.2	(43.5–60.7)	43.4††
Florida	5.1	(3.3–8.0)	28.1	(21.0–36.5)	23.0††
Duval County	6.1	(3.5–10.4)	—	—	—
Miami-Dade County	10.4	(6.2–17.0)	27.1	(20.2–35.4)	16.7††
Rest of state	4.0	(2.0–7.8)	28.2	(20.1–38.1)	24.2††
Georgia	9.8	(7.2–13.2)	32.7	(24.8–41.6)	22.9††
Fulton/DeKalb counties	24.8	(18.3–32.7)	—	—	—
Rest of state	6.5	(4.0–10.6)	—	—	—
Hawaii	12.4	(7.2–20.5)	54.1	(44.7–63.3)	41.7††
Illinois	12.1	(9.1–16.0)	37.2	(31.2–43.5)	25.1††

TABLE. (*Continued*) Estimated hepatitis A vaccination coverage (at least 1 dose) among children aged 24–35 months,* by ACIP vaccination recommendation status† and state/local area — National Immunization Survey (NIS), United States, 2006 and 2007

State/Local area	2006§ %	2006§ (95% CI**)	2007¶ %	2007¶ (95% CI)	% point difference from 2006 to 2007
City of Chicago	30.7	(23.7–38.7)	47.2	(38.4–56.3)	16.5††
Rest of state	5.5	(2.8–10.4)	33.7	(26.4–41.8)	28.2††
Indiana	6.1	(3.5–10.3)	31.8	(25.5–38.9)	25.7††
Marion County	12.0	(6.8–20.3)	27.7	(21.6–34.8)	15.7††
Rest of state	4.9	(2.3–10.1)	32.6	(25.2–41.1)	27.7††
Iowa	7.2	(4.1–12.3)	25.5	(19.4–32.7)	18.3††
Kansas	14.1	(10.5–18.6)	34.3	(26.6–43.0)	20.2††
Eastern Kansas	28.6	(21.8–36.5)	—	—	—
Rest of state	8.9	(5.1–14.9)	—	—	—
Kentucky	3.2	(1.3–7.6)	27.8	(21.3–35.3)	24.6††
Louisiana	4.9	(2.5–9.5)	38.4	(30.0–47.5)	33.5††
Maine	0.4	(0.1–3.1)	11.6	(6.5–19.9)	11.2††
Maryland	13.9	(9.9–19.2)	49.6	(39.8–59.4)	35.7††
City of Baltimore	42.7	(34.2–51.6)	—	—	—
Rest of state	9.8	(5.8–16.2)	—	—	—
Massachusetts	3.3	(1.5–6.9)	20.0	(12.0–31.5)	16.7††
City of Boston	4.5	(2.3–8.7)	—	—	—
Rest of state	3.1	(1.3–7.3)	—	—	—
Michigan	1.8	(0.7–4.5)	29.8	(22.2–38.6)	28.0††
City of Detroit	4.2	(2.1–8.4)	—	—	—
Rest of state	1.5	(0.4–5.0)	—	—	—
Minnesota	3.1	(1.3–7.3)	23.2	(17.0–30.7)	20.1††
Mississippi	1.7	(0.5–5.5)	21.6	(14.8–30.4)	19.9††
Nebraska	8.9	(5.6–13.9)	38.5	(29.9–47.9)	29.6††
New Hampshire	1.2	(0.3–5.0)	22.2	(15.3–31.1)	21.0††
New Jersey	9.7	(5.7–15.9)	40.9	(32.5–49.9)	31.2††
City of Newark	3.6	(1.8–7.0)	—	—	—
Rest of state	9.9	(5.8–16.4)	—	—	—
New York	11.7	(8.6–15.6)	31.6	(26.3–37.4)	19.9††
City of New York	16.1	(11.6–22.1)	34.6	(27.8–42.1)	18.5††
Rest of state	7.5	(3.9–13.7)	28.8	(21.1–38.0)	21.3††
North Carolina	3.3	(1.3–7.7)	31.9	(23.8–41.2)	28.6††
North Dakota	10.5	(5.6–19.0)	47.1	(39.0–55.3)	36.6††
Ohio	3.6	(1.9–6.7)	23.5	(17.9–30.2)	19.9††
Cuyahoga County	3.1	(1.3–7.2)	—	—	—
Rest of state	3.7	(1.8–7.3)	—	—	—
Pennsylvania	3.8	(2.3–6.1)	41.0	(35.1–47.1)	37.2††
Allegheny County	6.8	(3.2–13.7)	—	—	—
Philadelphia County	6.0	(3.0–11.8)	49.6	(40.2–58.9)	43.6††
Rest of state	2.9	(1.4–6.1)	39.4	(32.8–46.5)	36.5††
Rhode Island	13.0	(8.9–18.6)	60.1	(49.8–69.6)	47.1††
South Carolina	2.4	(1.1–5.1)	29.4	(23.4–36.2)	27.0††
Tennessee	17.7	(11.9–25.3)	48.2	(39.4–57.1)	30.5††
Shelby County	27.0	(19.6–36.0)	—	—	—
Rest of state	15.6	(9.1–25.3)	—	—	—
Vermont	1.3	(0.3–5.3)	23.1	(15.3–33.2)	21.8††
Virginia	8.6	(5.1–14.2)	34.5	(27.5–42.2)	25.9††
West Virginia	2.5	(1.0–5.9)	23.9	(18.0–31.1)	21.4††
Wisconsin	11.1	(8.2–15.0)	34.6	(26.6–43.5)	23.5††
Milwaukee County	33.2	(24.8–42.8)	—	—	—
Rest of state	5.2	(2.7–9.6)	—	—	—

* 2006: n = 14,804; 2007: n = 12,018.
† CDC. Prevention of hepatitis A through active or passive immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1999;48(No. RR-12). CDC. Prevention of hepatitis A through active or passive immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2006;55(No. RR-7).
§ Among children born during January 2003–March 2005.
¶ Among children born during January 2004–March 2006.
** Confidence interval.
†† Difference is statistically significant ($p<0.05$).
§§ Area was not sampled. Local areas sampled by NIS might change yearly as state immunization programs conduct local assessments where they are most needed.
¶¶ Estimate not reported because it is unstable; 95% CI >20 percentage points.

3.6% (Arkansas) to 62.5% (Texas), and coverage in 2007 ranged from 11.7% (Arkansas) to 77.5% (Texas).

In 2006, children who were American Indian/Alaska Native (AI/AN) (64.0%) or Hispanic (63.0%) had significantly higher estimates of hepatitis A vaccination coverage than non-Hispanic whites (50.3%). In 2007, children who were AI/AN (86.2%), Hispanic (78.9%), or Asian (75.1%) had significantly higher coverage than non-Hispanic whites (62.4%) (Figure 1). No other significant differences were found in the pairwise comparisons of race/ethnicity for either year.

After the 2006 ACIP recommendations lowered the minimum age for hepatitis A vaccination from ≥24 months to 12–23 months, approximately half of children in the 2007 NIS received their first dose at age <24 months in states where routine vaccination had been recommended or recommended for consideration since 1999 (Figure 2). Among states where vaccination was not recommended until 2006, approximately two thirds received their first dose at age <24 months.

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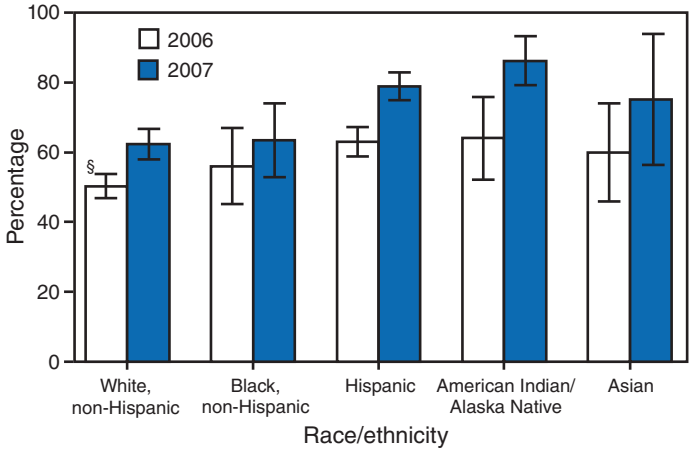
Editorial Note: The estimated 21.1% increase in hepatitis A vaccination coverage observed in 2007 overall in the United States, and particularly among those 33 states where no previous recommendation was in effect, likely resulted in large part from the 2006 ACIP recommendations that expanded use of hepatitis A vaccine to children nationwide and reduced the recommended age for vaccination from ≥24 months to 12–23 months. The percentage of children in compliance with the well-child visit recommendations of the American Academy of Pediatrics has been found substantially higher among infants and children aged <24 months, when well-child visits are more frequent, than children aged ≥24 months, when such visits occur annually (*6*). Therefore, incorporation of hepatitis A vaccine into the routine early childhood vaccination schedule was an important strategy to improve vaccination coverage after the 2006 ACIP recommendation.

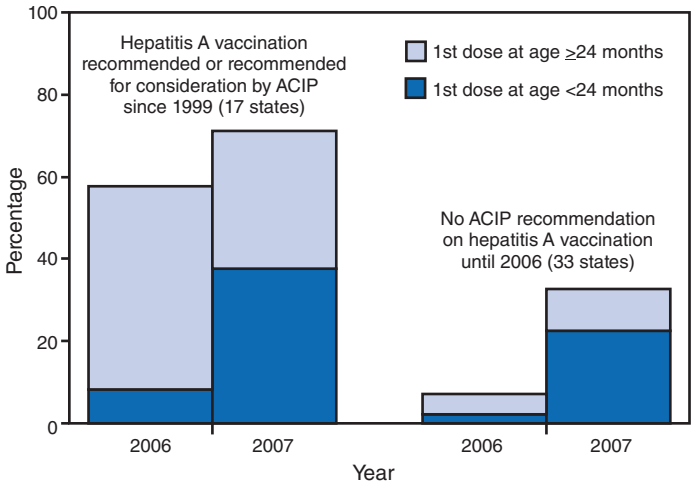
Compared with the prevaccination era, the number of cases and rates of acute hepatitis A in the United States have declined substantially (*7*). Historically, hepatitis A rates have differed by race/ethnicity. In the prevaccination era, rates of acute hepatitis A were five times greater among AI/ANs and three times greater among Hispanics than the national average (*7–9*). However, after several years of focused efforts to increase hepatitis A vaccination in AI/AN communities, during 2001–2007, hepatitis A rates among AI/ANs were lower than rates among persons in other racial/ethnic populations. In 2007, the hepatitis A rate was 0.5 cases per 100,000 population among AI/ANs and 1.4 cases per 100,000 population among Hispanics (a decline of

FIGURE 1. Estimated hepatitis A vaccination coverage (at least 1 dose) among children aged 24–35 months* in states and local areas where routine vaccination has been recommended or recommended for consideration by ACIP since 1999,† by race/ethnicity — National Immunization Survey, United States, 2006 and 2007



* 2006: n = 14,804; 2007: n = 12,018.
† CDC. Prevention of hepatitis A through active or passive immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1999;48(No. RR-12).
§ 95% confidence interval.

FIGURE 2. Estimated hepatitis A vaccination coverage (at least 1 dose) among children aged 24–35 months,* by age at first vaccine dose and by state's ACIP vaccination recommendation status† — National Immunization Survey, United States, 2006 and 2007



* 2006: n = 14,804; 2007: n = 12,018.
† CDC. Prevention of hepatitis A through active or passive immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1999;48(No. RR-12). CDC. Prevention of hepatitis A through active or passive immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2006;55(No. RR-7).

94% since 1997) (*7*). In this report, the significantly higher percentages in 2006 and 2007 of hepatitis A vaccination coverage among AI/AN and Hispanic children compared with non-Hispanic white children likely reflect earlier emphasis on these minority populations in areas with elevated rates of hepatitis A and exemplify the substantial progress made toward eliminating racial/ethnic disparities.

The findings in this report are subject to at least three limitations. First, NIS is a landline telephone survey; although statistical adjustments compensate for nonresponse and households without telephones, some bias might remain. Second, NIS relies on provider-verified vaccination histories; incomplete records and reporting might result in biased estimates. Finally, estimates for certain state and local areas with small sample sizes and wide confidence intervals should be interpreted with caution.

Studies have found that 97%–100% of children aged 2–18 years had protective levels of antibody 1 month after receiving their first dose of hepatitis A vaccine and 100% had protective levels 1 month after receiving their second dose (*4*). Although current studies show long-term protection more than a decade after vaccination, the second dose might be more important for lasting vaccine-induced immunity as younger children aged 12–23 months are vaccinated. Thus, for hepatitis A vaccination to be effective, the vaccine must confer long-term protection.

Continued surveillance and monitoring is critical because the hypothetical possibility of waning immunity might lead to the higher probability of symptomatic infections during adolescence and adulthood (*4*). Despite the increase in hepatitis A vaccination coverage with at least 1 dose observed in 2007, the impact of the 2006 ACIP recommendation cannot yet be fully assessed. Based on 2007 NIS data, national estimated vaccination coverage with at least 2 doses of hepatitis A vaccine was 36.7% for children who were aged <12 months on May 19, 2006, when the new ACIP recommendations were published (CDC, unpublished data, 2009). Measurement of vaccination coverage with at least 2 doses of hepatitis A vaccine among children aged 19–35 months is important to assess the effect of hepatitis A immunization on the control and potential elimination of hepatitis A in the United States.

References

1. CDC. Prevention of hepatitis A through active or passive immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1996;45(No. RR-15).
2. CDC. Prevention of hepatitis A through active or passive immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1999;48(No. RR-12).
3. CDC. Surveillance for acute viral hepatitis—United States, 2006. MMWR 2008;57(No. SS-2).
4. CDC. Prevention of hepatitis A through active or passive immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2006;55(No. RR-7).
5. Smith PJ, Hoaglin DC, Battaglia MP, Khare M, Barker LE. Statistical methodology of the National Immunization Survey, 1994–2002. Vital Health Stat 2 2005(138).
6. Selden TM. Compliance with well-child visit recommendations: evidence from the Medical Expenditure Panel Survey, 2000–2002. Pediatrics 2006;118:e1766–78.
7. CDC. Surveillance for acute viral hepatitis—United States, 2007. MMWR 2009;58(No. SS-3).
8. Bialek SR, Thoroughman DA, Hu D, et al. Hepatitis A incidence and hepatitis A vaccination among American Indians and Alaska Natives, 1990–2001. Am J Public Health 2004;94:996–1001.
9. Bulkow LR, Wainwright RB, McMahon BJ, Middaugh JP, Jenkerson SA, Margolis HS. Secular trends in hepatitis A virus infection among Alaska Natives. J Infect Dis 1993;168:1017–20.

Recurring Norovirus Outbreaks in a Long-Term Residential Treatment Facility — Oregon, 2007

On November 9, 2007, the Oregon Public Health Division (OPHD) was notified of an outbreak of acute gastroenteritis in a long-term residential treatment facility. Two previous outbreaks caused by norovirus had occurred at the facility in March and July 2007. OPHD initiated an in-depth epidemiologic investigation, which included submitting archived and recent specimens from the three outbreaks to CDC for genotyping. This report summarizes findings of the outbreak investigation and laboratory testing. The overall attack rate for the most recent outbreak was approximately 14% among patients and 7% among employees. The outbreak was unusual in that it lasted 63 days, versus 24–27 days for the two previous outbreaks in 2007. Person-to-person transmission was suggested by a prolonged and dispersed epidemic curve and lack of illness in some wards, although all wards were served by one central kitchen. Barriers to conducting adequate hygiene (e.g., lack of handwashing stations) and multiple lapses in infection control (e.g., noncompliance with staff wellness policies) were identified. Timely and sustained implementation of comprehensive and effective infection control measures are needed to prevent and contain norovirus outbreaks in large institutional settings.

At the time of the third outbreak, the long-term treatment facility had 740 employees and approximately 690 adult patients in 22 wards in multiple buildings. Each ward houses 20–45 patients, and 1–6 patients live in each room. The median length of stay for patients is >12 months and patients' mobility outside and within the facility is restricted. Staffing in each ward often includes 4–5 physicians and social workers,

3–6 nurses, and 12–18 nursing aides. Housekeeping staff and approximately 27 nurses and nursing aides work from ward to ward as needed. A single kitchen prepares food solely for patients of the facility. Nursing aides often help serve the food to patients in each ward.

The first two norovirus outbreaks occurred in March and July of 2007, lasting 24 and 27 days, respectively (Table 1). Both outbreaks were thought to be transmitted primarily from person to person, and each affected eight wards. During the first two outbreaks, basic control measures were recommended by OPHD (*1*), including hand hygiene, asking ill employees to stay home until 72 hours after symptom resolution, segregating patients and employees on affected wards from unaffected wards, and using detergents registered by the U.S. Environmental Protection Agency (EPA) for thorough environmental surface disinfection.

For the third norovirus outbreak, infection control staff in the facility recorded daily information about patients and employees who had norovirus-like illnesses beginning on November 8 and retrospectively from the end of October. Demographic characteristics, onset dates and times, symptoms, and outcomes of the infection were recorded. A case was defined as acute onset of vomiting or diarrhea (three or more loose stools within any 24-hour period) in an employee or patient of the facility during October 26–December 27, 2007.

A notable increase in cases (23 patients and one employee) was observed on November 9 in three wards that had reported sporadic cases on November 6 and November 7, which prompted reporting the outbreak to OPHD (Figure). On November 9, the same basic control measures recommended during the first two outbreaks were recommended again.

Although similar foods were distributed to all wards, no kitchen staff reported norovirus-like illness and not all wards were infected, suggesting that the outbreak did not result from a common foodborne source. The outbreak lasted 63 days and affected 16 (73%) wards, 94 (14%) patients, and 51 (7%) employees. The median age among ill persons was 51 years (range: 19–85 years) for patients and 46 years (range: 21–60 years) for employees. No deaths were reported.

Infection control staff at the facility collected 25 stool specimens from 25 ill patients and employees in six wards with 10 or more reported cases for norovirus testing. OPHD investigators collected 20 environmental swab samples from surfaces of patient rooms, door knobs, bathrooms, dining tables, and work stations in these six wards on November 20, 2007. Stool and environmental specimens were tested at the Oregon State Public Health Laboratory for norovirus by real-time reverse transcription–polymerase chain reaction. To determine whether all three outbreaks were caused by the same norovirus strain, positive stool specimens from all three 2007 outbreaks were genotyped at CDC.

Of the 25 stool specimens collected during the third outbreak, 15 (60%) from five of the six wards were positive for a norovirus GII.4 variant that was different from all previously named GII.4 variants. Stool specimens from the previous two norovirus outbreaks were positive for GII.6 and GII.4 Minerva, respectively. One of the 20 environmental specimens collected from one ill patient's room was positive for norovirus GII; no sequencing was done for this specimen. Results for other environmental specimens were negative.

Because most patients in the facility were unable to give reliable information regarding potential risk factors, risk factor assessment was limited to employees. All employees in the six wards with 10 or more cases were asked to complete a printed questionnaire anonymously. The questionnaire included information on illness status, onset dates and times, duration and outcomes of illness, and potential risk factors (e.g., length of employment at the facility, previous infection in the 2007 norovirus outbreaks, cleaning vomitus, use of gloves and masks when cleaning vomitus, and hand hygiene behaviors). Questionnaires were distributed from the nursing station of each ward, beginning November 20, 2007. Completed questionnaires were collected at the nursing stations. On January 3, 2008, 1 week after the illness onset of the last case, all completed questionnaires were sent to OPHD for data entry and

TABLE 1. Epidemiologic characteristics of three norovirus outbreaks in a 22-ward, long-term residential treatment facility — Oregon, 2007

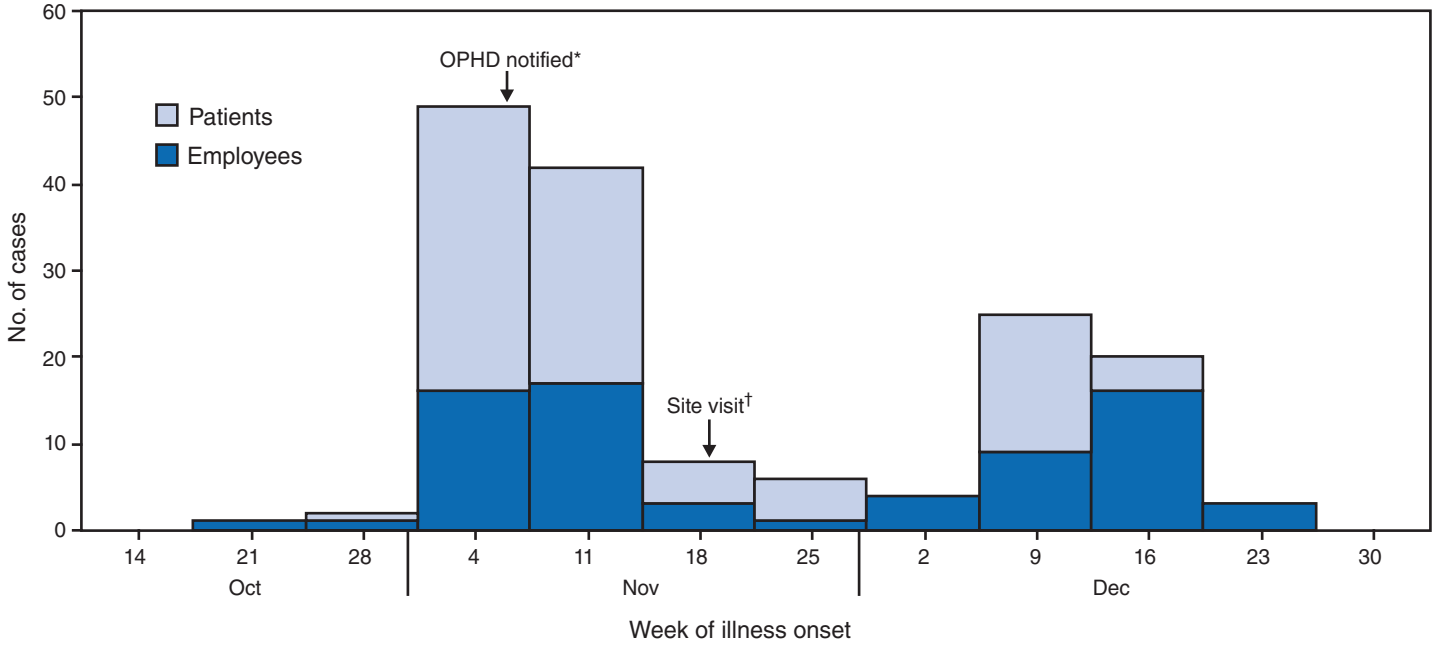
Starting date	Ending date	Duration (days)	No. of cases*		No. of laboratory-confirmed cases	No. of wards affected	Genotype (variant)
			Patients	Employees			
March 30	April 22	24	14	43	2	8	GII.6
July 24	August 19	27	28	58	5	8	GII.4 (Minerva)
October 26	December 27	63	94	51	15†	16	GII.4 (uncharacterized)§

* Defined as acute onset of vomiting or diarrhea (three or more loose stools within any 24-hour period) in an employee or patient of the facility during the outbreak period.

† From 25 stool specimens (15–20 g of whole stool per specimen) collected from 25 ill patients and employees on six wards and submitted to the Oregon State Public Health Laboratory for norovirus testing by real-time reverse transcription–polymerase chain reaction.

§ Different from all previously named GII.4 strains.

FIGURE. Number of cases (N = 145) of acute gastroenteritis among patients and employees during a norovirus outbreak at a long-term residential treatment facility, by symptom onset week — Oregon, October–December 2007



* Oregon Public Health Division (OPHD) was notified of outbreak November 9, 2007, and recommended initial control measures.
† OPHD conducted site visit November 20, 2007, collected environmental swabs, initiated self-adminstered, anonymous employee questionnaires, and identified control barriers.

analysis. Pearson chi-square testing was used to compare attack rates between different exposure groups. Variables associated with illness with $p<0.2$ in bivariate analyses were included in a multivariate binomial regression model to assess independent associations with illness.

From among 242 employees on surveyed wards, 146 (60%) completed surveys were returned, and 51 (35%) respondents reported illnesses meeting the case definition. The symptom profile included diarrhea (100%), nausea (82%), cramps (76%), fatigue (65%), vomiting (61%), and headache (61%). The median duration of vomiting or diarrhea was 3 days (range: 1–12). Two (4%) of the ill employees reported seeing a physician. Among surveyed ill employees, 94% went to work while ill, and 8% vomited at work.

A total of 29 employees reported cleaning up vomitus at work, including in patient rooms (55%), hallways (45%), and bathrooms (48%). Of the 29 employees, 97% reported wearing gloves, 17% reported wearing masks, and none reported wearing gowns when cleaning up vomitus. Employees who reported having cleaned up vomitus were more likely to contract illness than those who did not (adjusted risk ratio [$_a$RR] = 1.6) (Table 2). Shorter length of employment in the facility was also associated with an increased risk of illness ($_a$RR = 1.6).

During a site visit on November 20, 2007, OPHD interviewed the infection control staff and identified major barriers or lapses in infection control. First, staff shortages and restrictions on sick-leave days made it difficult to ask ill employees to stay at home for the period recommended by OPHD guidelines and to restrict employees from working across wards (*1*). Second, most patients cleaned their own rooms (without EPA-registered disinfectants) because of a lack of housekeeping staff. Third, the number of handwashing stations was insufficient in most wards, and no handwashing sinks were available in dining areas or patient rooms.

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Editorial Note: Although norovirus outbreaks are common in health-care settings (*2*), recurrences within a short period in a single facility are rare. This facility experienced a substantial increase in norovirus activities in 2007 compared with previous years, with three norovirus outbreaks reported in 2007, one reported in 2006, and none reported during 2003–2005. Statewide in Oregon, no increase in norovirus outbreaks in similar settings was observed during 2006–2007. Each of the three outbreaks at the facility in 2007 was caused by different norovirus variants, indicating that the recurrences of outbreaks likely resulted from repeated introduction of different norovirus variants.

TABLE 2. Attack rate and adjusted risk ratio for illness among employees of wards with ≥10 cases,* by potential risk factors in a norovirus outbreak at a long-term residential treatment facility — Oregon, October–December 2007

Potential risk factors	Response	No. ill	Attack rate (%)	p value	$_{a}$RR†	(95% CI§)
Sex						
Male	43	12	(28)	0.19		
Female	99	39	(39)			
Age						
20–39	36	15	(42)	0.51		
40–49	50	15	(30)			
50 or more	48	18	(38)			
Job type						
Nurse or doctor	58	17	(29)	0.43		
Nursing aide	70	26	(37)			
Other positions	18	8	(44)			
Cleaned vomitus						
Yes	29	17	(59)	<0.01	1.6	(1.1–2.5)
No (Referent)	117	34	(29)			
Wore mask when cleaning vomitus						
Yes	5	4	(80)	0.22		
No	22	11	(50)			
Wore gloves when cleaning vomitus						
Yes	28	15	(55)	0.37		
No	1	1	(100)			
Handwashing before eating						
Sometimes	19	4	(21)	0.16		
All/Most of the time	125	47	(38)			
Handwashing after touching patients						
Sometimes	47	17	(36)	0.87		
All/Most of the time	95	33	(35)			
Previously infected during 2007						
Yes	12	7	(58)	0.08	1.3	(0.8–2.1)
No (Referent)	132	44	(33)			
Length of employment at facility						
<4 yrs	61	29	(48)	0.01	1.6	(1.0–2.5)
≥4 yrs (Referent)	83	22	(27)			

* Based on 146 self-administered, anonymous questionnaires submitted by employees of wards with 10 or more cases; some employees did not answer all questions.
† Adjusted risk ratio: cleaned vomitus, previous infection in 2007, and length of employment variables were mutually adjusted in the multivariate analysis.
§ Confidence interval.

Although all wards were served by a common food supply, prolonged transmission occurred only within certain wards, suggesting that this third outbreak, similar to the two previous outbreaks, likely resulted from to person-to-person transmission rather than a foodborne source. Because of the patients' long-term residency and lack of mobility outside and within the facility, employees or visitors were more likely to have contributed to the introduction of new infection and dissemination across wards. In fact, the six unaffected wards were administratively separate from the other 16 wards; neither patients nor employees transferred from the 16 affected wards to the six unaffected wards. In this facility, employees are required to use their limited sick leave days (approximately 12 days/year) when furloughed. This administrative policy and the concurrent shortage of staff might account for the number of infected employees reporting to work while sick. Barriers to conducting adequate hygiene (e.g., lack of handwashing stations), multiple lapses in infection control (e.g., noncompliance with staff wellness policies), and permitting employee mobility between affected and unaffected wards likely contributed to the recurrent and sustained outbreaks.

Facility employees who cleaned up vomitus were at higher risk for illness. This is consistent with previous reports of norovirus transmission through aerosolized vomitus (*3*). Gloves were worn by 97% of surveyed employees who cleaned vomitus, but they rarely wore gowns or aprons and masks while cleaning vomitus. Masks have been shown to reduce the risk for norovirus infection among nursing home employees (*4*). To reduce the risk for norovirus transmission through aerosolized vomitus, OPHD recommends the following steps: 1) remove vomitus and fecal material carefully to limit aerosolization (e.g., soaking up vomitus or diarrhea with paper towels or other disposable cloths with minimal agitation and removing those in impervious bags), 2) thoroughly clean surfaces and

disinfect with freshly made 5,000 ppm hypochlorite solution or other EPA-registered norovirus disinfectants, and 3) wear appropriate personal protective equipment (PPE) (e.g., gloves, masks, and gowns) when cleaning vomitus or feces (*1,5*).

The findings in this report are subject to at least four limitations. First, illness among patients and employees might have been underreported. Second, the employee survey was anonymous; an employee could have submitted multiple questionnaires containing differing responses to health status or other questions. Third, only limited information regarding employee characteristics was collected. The difference in attack rate between short-term and long-term employees cannot be fully explained by hand hygiene or practices of cleaning vomitus. Finally, because only six wards were surveyed and the response rate was relatively low, the findings might not be generalizable to all employees of the facility.

Norovirus is infectious at low doses (as few as 10 viral particles), and long-term or cross-strain immunity is limited. Norovirus is transmitted readily in health-care settings with close contacts between ill and well persons, which makes rapid implementation of effective control measures important (*6,7*). The findings of this report highlight the importance of timely implementation of standard infection control practices (*8*) and targeted norovirus control measures as recommended by CDC for the use of masks (*9*), and by OPHD to prevent and control norovirus outbreaks in large residential treatment facilities (*1,5*). In addition, when inconsistent use of PPE is identified, CDC recommends thorough evaluation of workplace programs, such as a review of workplace policies and practices, training, selection of PPE, and disposal of used PPE. In response to this outbreak, OPHD officials worked with facility administrators to increase staff capacity and emphasize the importance of employees staying home while ill. In addition, patient rooms are now cleaned by housekeeping staff using EPA-registered products.

Acknowledgments

The findings in this report are based, in part, on contributions by K Hedberg, MD, WE Keene, PhD, M Schmidt, PhD, E Debess, DVM, H Purcell, MPH, J Terry, PhD, Oregon Public Health Div, Portland; R Obrien, W Lockett, A Melendy, Oregon Dept of Human Services, Portland; and S Lyss, MD, and E Weiss, MD, Office of Workforce and Career Development, CDC.

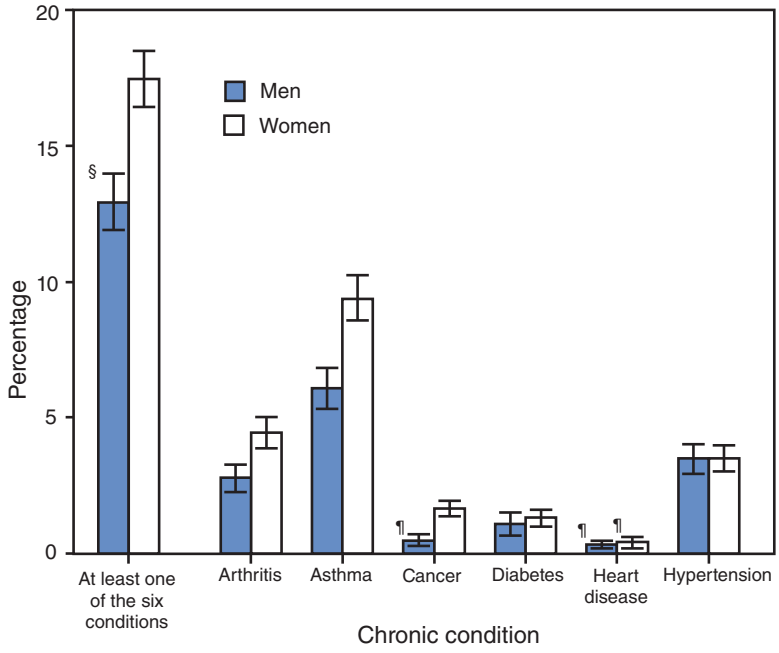
References

1. Oregon Public Health Division. Guidelines for controlling person-to-person transmission of norovirus in nursing homes and similar settings. Available at http://www.oregon.gov/DHS/ph/acd/outbreak/control.pdf.
2. van Duynhoven YT, de Jager CM, Kortbeek LM, et al. A one-year intensified study of outbreaks of gastroenteritis in The Netherlands. Epidemiol Infect 2005;133:9–21.
3. Chadwick PR, McCann R. Transmission of a small round structured virus by vomiting during a hospital outbreak of gastroenteritis. J Hosp Infect 1994;26:251–9.
4. Friesema IH, Vennema H, Heijne JC, et al. Norovirus outbreaks in nursing homes: the evaluation of infection control measures. Epidemiol Infect 2009;May 11:1–12 [Epub ahead of print].
5. Chadwick PR, Beards G, Brown D, et al. Management of hospital outbreaks of gastro-enteritis due to small roundstructured viruses. J Hosp Infect 2000;45:1–10.
6. Wu HM, Fornek M, Schwab KJ, et al. A norovirus outbreak at a long-term-care facility: the role of environmental surface contamination. Infect Control Hosp Epidemiol 2005;26:802–10.
7. Cheng FW, Leung TF, Lai RW, Chan PK, Hon EK, Ng PC. Rapid control of norovirus gastroenteritis outbreak in an acute paediatric ward. Acta Paediatr 2006;95:581–6.
8. CDC. 2007 Guideline for isolation precautions: preventing transmission of infectious agents in healthcare settings. Atlanta, GA: US Department of Health and Human Services, CDC; 2007. Available at http://www.cdc.gov/ncidod/dhqp/pdf/guidelines/Isolation2007.pdf.
9. CDC. "Norwalk-like viruses." Public health consequences and outbreak management. MMWR 2001;50(No. RR-9).

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage of Young Adults Aged 18–29 Years* with Selected Chronic Conditions,† by Sex — National Health Interview Survey, United States, 2005–2007



* Overall respondents: 6,898 men and 8,532 women.
† Estimates are based on household interviews with a sample of the civilian, noninstitutionalized, adult U.S. population. The prevalence of diagnosed chronic conditions was determined by asking respondents if a doctor or other health professional ever told them that they had a specified condition. Asthma estimates are for current asthma and are based on the additional question "Do you still have asthma?" Arthritis includes arthritis, rheumatoid arthritis, gout, lupus, and fibromyalgia. Cancer excludes nonmelanoma skin cancer or skin cancer of unknown type. Diabetes includes all types with the exception of diabetic conditions related to pregnancy. Heart disease includes coronary heart disease, angina or angina pectoris, or heart attack or myocardial infarction. Hypertension is based on respondents indicating that on two or more separate visits they were told by a doctor or health professional that they had hypertension. Young adults who reported more than one condition are counted in each category.
§ 95% confidence interval.
¶ Estimate is statistically unreliable; data have a relative standard error of 20%–30%.

During 2005–2007, young women aged 18–29 years (17.4%) were more likely to report having at least one of six selected chronic conditions than young men (12.9%) in the same age group. For both young men and young women, asthma, arthritis, and hypertension were the three most common of the six conditions. Greater percentages of women than men reported having asthma, arthritis, or cancer; similar percentages of women and men reported having hypertension or diabetes.

SOURCE: National Health Inteview Survey data files, 2005, 2006, and 2007. Available at http://www.cdc.gov/nchs/nhis.htm.

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending June 27, 2009 (25th week)*

Disease	Current week	Cum 2009	5-year weekly average†	Total cases reported for previous years 2008	2007	2006	2005	2004	States reporting cases during current week (No.)
Anthrax	—	—	—	—	1	1	—	—	
Botulism:									
foodborne	—	9	0	17	32	20	19	16	
infant	—	25	2	109	85	97	85	87	
other (wound and unspecified)	—	12	1	19	27	48	31	30	
Brucellosis	4	41	2	80	131	121	120	114	VA (1), FL (1), CA (2)
Chancroid	—	18	0	25	23	33	17	30	
Cholera	—	2	0	3	7	9	8	6	
Cyclosporiasis§	3	41	13	139	93	137	543	160	NY (2), FL (1)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup	—	—	2	62	55	67	80	112	
eastern equine	—	—	0	4	4	8	21	6	
Powassan	—	—	0	2	7	1	1	1	
St. Louis	—	—	0	13	9	10	13	12	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§,**:									
Ehrlichia chaffeensis	12	144	21	1,137	828	578	506	338	NY (2), OH (1), MD (2), NC (2), SC (1), FL (1), TN (2), OK (1)
Ehrlichia ewingii	—	—	0	9	—	—	—	—	
Anaplasma phagocytophilum	4	70	24	1,026	834	646	786	537	ME (1), CT (1), NY (2)
undetermined	—	28	10	180	337	231	112	59	
Haemophilus influenzae,††									
invasive disease (age <5 yrs):									
serotype b	—	13	0	30	22	29	9	19	
nonserotype b	1	97	3	244	199	175	135	135	NC (1)
unknown serotype	4	103	3	163	180	179	217	177	NY (1), FL (1), AR (1), AZ (1)
Hansen disease§	—	30	2	80	101	66	87	105	
Hantavirus pulmonary syndrome§	—	3	1	18	32	40	26	24	
Hemolytic uremic syndrome, postdiarrheal§	2	66	6	330	292	288	221	200	CT (1), CO (1)
Hepatitis C viral, acute	12	416	15	878	845	766	652	720	NY (2), MI (1), IA (3), NC (1), FL (1), KY (2), WA (1), CA (1)
HIV infection, pediatric (age <13 years)§§	—	—	3	—	—	—	380	436	
Influenza-associated pediatric mortality§,¶¶	8	85	1	85	77	43	45	—	RI (1), NJ (2), TX (1), AZ (1), UT (1), OR (1), WI (1)
Listeriosis	4	228	16	759	808	884	896	753	MD (1), FL (1), AR (1), WA (1)
Measles***	3	29	3	140	43	55	66	37	NYC (3)
Meningococcal disease, invasive†††:									
A, C, Y, and W-135	—	143	6	330	325	318	297	—	
serogroup B	4	78	4	188	167	193	156	—	MI (1), SC (1), GA (1), OK (1)
other serogroup	—	13	1	38	35	32	27	—	
unknown serogroup	5	231	12	616	550	651	765	—	MI (1), KS (1), ID (1), CA (2)
Mumps	—	167	25	454	800	6,584	314	258	
Novel influenza A virus infections§§§	—	27,717	—	2	4	N	N	N	
Plague	—	—	0	2	7	17	8	3	
Poliomyelitis, paralytic	—	—	—	—	—	—	1	—	
Polio virus infection, nonparalytic§	—	—	—	—	—	N	N	N	
Psittacosis§	—	6	0	8	12	21	16	12	
Q fever total§,¶¶¶:	—	32	4	124	171	169	136	70	
acute	—	28	2	110	—	—	—	—	
chronic	—	4	0	14	—	—	—	—	
Rabies, human	—	—	0	1	1	3	2	7	
Rubella****	—	1	0	16	12	11	11	10	
Rubella, congenital syndrome	—	1	—	—	—	1	1	—	
SARS-CoV§,††††	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	—	79	2	157	132	125	129	132	
Syphilis, congenital (age <1 yr)	—	77	8	420	430	349	329	353	
Tetanus	—	4	1	19	28	41	27	34	
Toxic-shock syndrome (staphylococcal)§	—	39	2	71	92	101	90	95	
Trichinellosis	1	10	0	39	5	15	16	5	CA (1)
Tularemia	—	18	5	123	137	95	154	134	
Typhoid fever	2	156	6	447	434	353	324	322	MN (1), GA (1)
Vancomycin-intermediate *Staphylococcus aureus*§	1	29	0	63	37	6	2	—	NY (1)
Vancomycin-resistant *Staphylococcus aureus*§	—	—	—	—	2	1	3	1	
Vibriosis (noncholera *Vibrio* species infections)§	6	112	5	492	549	N	N	N	FL (2), AL (2), OK (1), CA (1)
Yellow fever	—	—	—	—	—	—	—	—	

See Table I footnotes on next page.

TABLE I. (*Continued*) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending June 27, 2009 (25th week)*

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

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

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

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

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

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

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

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

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

*** The three measles cases reported for the current week were indigenous.

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

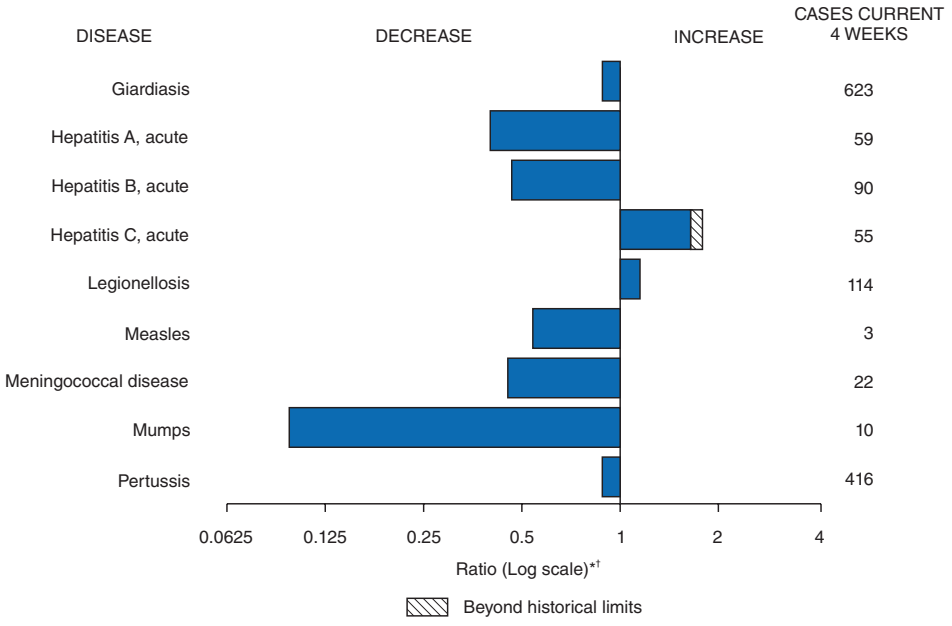
§§§ These cases were obtained from state and territorial health departments in response to the pandemic influenza A (H1N1) virus infections and include both confirmed and probable cases in addition to those reported to the National Notifiable Diseases Surveillance System (NNDSS). Because of the volume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

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

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

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

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals June 27, 2009, with historical data



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

Notifiable Disease Data Team and 122 Cities Mortality Data Team

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TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending June 27, 2009, and June 21, 2008 (25th week)*

Reporting area	Chlamydia†					Coccidiodomycosis					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 week		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	12,578	22,815	25,700	509,692	560,133	94	140	383	4,167	3,174	71	110	482	2,148	2,022
New England	550	773	1,655	19,097	16,930	—	0	1	1	1	—	5	23	108	155
Connecticut	279	233	1,306	5,669	4,681	N	0	0	N	N	—	0	14	14	41
Maine§	61	48	72	1,224	1,187	N	0	0	N	N	—	1	6	13	10
Massachusetts	182	326	949	9,399	8,162	N	0	0	N	N	—	2	13	35	45
New Hampshire	4	32	63	627	965	—	0	1	1	1	—	1	4	17	32
Rhode Island§	12	58	244	1,617	1,386	—	0	0	—	—	—	0	3	2	4
Vermont§	12	22	53	561	549	N	0	0	N	N	—	1	7	27	23
Mid. Atlantic	1,702	2,852	6,734	72,114	71,758	—	0	0	—	—	2	13	35	248	238
New Jersey	—	425	879	10,184	10,875	N	0	0	N	N	—	0	4	1	16
New York (Upstate)	488	566	4,563	14,116	12,937	N	0	0	N	N	2	4	17	63	69
New York City	1,214	1,087	3,130	29,227	27,767	N	0	0	N	N	—	1	8	29	46
Pennsylvania	—	793	1,072	18,587	20,179	N	0	0	N	N	—	7	15	155	107
E.N. Central	1,216	3,464	4,382	75,417	93,287	—	0	3	17	27	16	25	126	513	500
Illinois	—	1,104	1,356	22,254	27,809	N	0	0	N	N	—	2	13	38	46
Indiana	355	405	713	10,925	10,426	N	0	0	N	N	—	3	17	83	67
Michigan	647	833	1,321	21,906	22,597	—	0	3	7	20	1	5	13	101	94
Ohio	107	782	1,300	12,518	22,029	—	0	2	10	7	11	8	59	172	109
Wisconsin	107	384	494	7,814	10,426	N	0	0	N	N	4	8	46	119	184
W.N. Central	267	1,330	1,547	30,416	31,698	—	0	1	2	—	13	17	68	324	299
Iowa	125	193	257	4,637	4,073	N	0	0	N	N	3	4	30	73	67
Kansas	42	178	401	4,201	4,338	N	0	0	N	N	2	1	8	36	24
Minnesota	—	267	326	5,376	7,010	—	0	0	—	—	2	4	14	78	76
Missouri	—	497	583	12,060	11,701	—	0	1	2	—	—	3	13	53	67
Nebraska§	39	98	254	2,212	2,372	N	0	0	N	N	—	2	8	30	42
North Dakota	1	27	60	471	868	N	0	0	N	N	5	0	10	6	1
South Dakota	60	57	85	1,459	1,336	N	0	0	N	N	1	2	9	48	22
S. Atlantic	2,654	4,386	5,730	86,928	109,834	—	0	1	5	2	14	21	49	417	354
Delaware	84	73	180	2,308	1,794	—	0	1	1	—	—	0	1	1	6
District of Columbia	155	129	228	3,346	3,271	—	0	0	—	—	—	0	2	—	7
Florida	—	1,384	1,596	32,134	34,751	N	0	0	N	N	11	8	35	132	150
Georgia	1	749	1,909	11,657	19,368	N	0	0	N	N	2	6	20	172	106
Maryland§	—	436	772	9,498	11,067	—	0	1	4	2	—	1	5	19	12
North Carolina	—	509	1,814	—	10,801	N	0	0	N	N	—	1	16	47	11
South Carolina§	1,474	534	887	11,213	12,548	N	0	0	N	N	1	1	6	19	21
Virginia§	903	608	903	14,995	14,705	N	0	0	N	N	—	1	4	22	30
West Virginia	37	68	101	1,777	1,529	N	0	0	N	N	—	0	3	5	11
E.S. Central	1,097	1,695	2,166	40,430	39,117	—	0	0	—	—	3	3	9	64	52
Alabama§	—	470	600	9,862	12,095	N	0	0	N	N	—	1	6	17	19
Kentucky	458	238	380	5,227	5,281	N	0	0	N	N	—	1	4	18	11
Mississippi	—	440	841	10,917	8,780	N	0	0	N	N	—	0	2	4	6
Tennessee§	639	564	796	14,424	12,961	N	0	0	N	N	3	1	5	25	16
W.S. Central	3,208	2,875	4,004	69,778	71,268	—	0	1	—	2	4	8	271	72	95
Arkansas§	371	278	418	7,031	6,754	N	0	0	N	N	3	1	10	15	16
Louisiana	100	434	1,134	11,289	9,797	—	0	1	—	2	—	1	5	7	20
Oklahoma	2,737	181	1,753	5,461	6,268	N	0	0	N	N	1	2	16	36	19
Texas§	—	1,963	2,509	45,997	48,449	N	0	0	N	N	—	3	258	14	40
Mountain	330	1,360	2,145	28,754	35,388	26	93	343	3,033	2,192	7	8	38	152	165
Arizona	78	417	627	6,858	11,768	23	91	341	2,993	2,131	1	1	10	17	22
Colorado	—	335	1,109	8,688	8,607	N	0	0	N	N	5	2	12	52	31
Idaho§	—	69	314	1,766	1,818	N	0	0	N	N	1	1	5	19	31
Montana§	28	58	88	1,466	1,474	N	0	0	N	N	—	0	4	14	21
Nevada§	124	174	365	4,585	4,835	3	1	3	33	31	—	0	4	6	6
New Mexico§	100	159	540	3,253	3,388	—	0	2	2	19	—	2	23	30	31
Utah	—	85	251	1,175	2,797	—	0	1	5	9	—	0	6	1	13
Wyoming§	—	32	97	963	701	—	0	1	—	2	—	0	2	13	10
Pacific	1,554	3,618	4,607	86,758	90,853	68	39	172	1,109	950	12	11	19	250	164
Alaska	—	93	199	2,138	2,223	N	0	0	N	N	—	0	1	2	1
California	1,194	2,866	3,584	68,779	70,657	68	39	172	1,109	950	10	6	14	133	89
Hawaii	—	113	247	2,532	2,795	N	0	0	N	N	—	0	1	1	1
Oregon§	172	201	631	4,605	4,874	N	0	0	N	N	—	2	8	80	36
Washington	188	400	557	8,704	10,304	N	0	0	N	N	2	2	7	34	37
American Samoa	—	0	8	—	62	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	3	9	—	93	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	130	269	3,479	3,447	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	9	22	173	332	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 27, 2009, and June 21, 2008 (25th week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive All ages, all serotypes†				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	147	320	641	6,725	7,209	2,972	5,713	7,164	119,536	156,551	30	48	124	1,327	1,545
New England	4	26	64	438	620	77	98	301	2,356	2,363	—	3	16	83	85
Connecticut	—	5	14	84	148	50	49	275	1,079	1,028	—	0	12	29	18
Maine§	4	4	12	89	57	5	2	9	70	46	—	0	2	12	8
Massachusetts	—	10	27	150	265	14	38	112	973	1,051	—	1	5	32	43
New Hampshire	—	2	10	39	55	—	2	6	52	58	—	0	2	5	6
Rhode Island§	—	1	8	23	39	8	5	16	159	162	—	0	7	2	4
Vermont§	—	3	15	53	56	—	1	4	23	18	—	0	1	3	6
Mid. Atlantic	19	60	116	1,225	1,407	323	590	1,138	14,007	15,544	5	11	25	275	278
New Jersey	—	7	21	85	227	—	92	127	2,056	2,539	—	1	7	31	46
New York (Upstate)	19	24	81	523	459	88	111	664	2,478	2,913	5	2	20	70	79
New York City	—	15	30	321	402	235	209	577	5,419	4,787	—	2	11	65	47
Pennsylvania	—	16	46	296	319	—	181	267	4,054	5,305	—	4	10	109	106
E.N. Central	20	45	90	965	1,125	499	1,143	1,627	23,267	33,068	2	7	27	169	251
Illinois	—	10	32	171	304	—	364	499	6,624	9,451	—	2	9	63	76
Indiana	N	0	11	N	N	126	154	256	3,597	4,202	—	1	22	32	45
Michigan	1	12	22	263	249	304	290	493	7,193	8,274	—	0	3	12	14
Ohio	16	16	31	362	371	45	251	482	3,832	8,044	2	1	6	53	79
Wisconsin	3	9	19	169	201	24	101	149	2,021	3,097	—	1	4	9	37
W.N. Central	9	26	143	610	698	59	297	393	6,495	7,954	1	3	15	78	113
Iowa	5	6	18	128	122	24	33	53	779	714	—	0	0	—	2
Kansas	—	3	11	54	53	28	39	83	1,000	1,055	1	0	2	11	14
Minnesota	—	0	106	137	191	—	46	78	879	1,556	—	0	10	18	27
Missouri	—	8	22	183	190	—	141	184	2,991	3,797	—	1	4	31	48
Nebraska§	—	3	10	67	96	5	26	51	633	657	—	0	2	13	15
North Dakota	4	0	16	8	10	—	2	7	26	53	—	0	4	5	7
South Dakota	—	2	11	33	36	2	8	20	187	122	—	0	0	—	—
S. Atlantic	45	66	108	1,631	1,199	624	1,396	2,142	24,309	37,988	16	13	27	391	390
Delaware	—	0	3	13	19	10	16	35	409	563	—	0	2	3	4
District of Columbia	—	0	5	—	26	40	53	89	1,372	1,184	—	0	2	—	3
Florida	21	31	57	804	533	—	416	507	9,262	11,733	6	5	10	141	96
Georgia	17	14	67	483	274	—	276	876	3,826	7,016	1	2	9	77	82
Maryland§	4	5	10	105	110	—	121	212	2,468	2,911	4	1	6	50	62
North Carolina	N	0	0	N	N	—	218	647	—	4,981	4	1	17	48	40
South Carolina§	1	2	8	42	59	422	167	316	3,463	4,641	—	1	5	24	36
Virginia§	—	8	31	164	146	148	157	308	3,259	4,589	1	1	6	30	54
West Virginia	2	1	5	20	32	4	11	26	250	370	—	0	3	18	13
E.S. Central	3	8	22	151	194	322	517	771	11,606	14,153	1	3	6	84	86
Alabama§	2	4	12	66	108	—	153	216	2,794	4,793	1	0	4	23	14
Kentucky	N	0	0	N	N	132	77	153	1,536	2,061	—	0	3	13	6
Mississippi	N	0	0	N	N	—	143	253	3,331	3,244	—	0	1	—	11
Tennessee§	1	4	13	85	86	190	159	301	3,945	4,055	—	2	5	48	55
W.S. Central	7	8	22	150	130	768	924	1,307	20,014	24,337	4	2	22	61	72
Arkansas§	2	2	8	54	50	115	86	167	2,121	2,097	1	0	2	10	6
Louisiana	—	2	10	43	48	37	162	420	3,592	4,419	—	0	1	8	7
Oklahoma	5	3	18	53	32	616	69	437	1,936	2,312	3	1	20	43	53
Texas§	N	0	0	N	N	—	572	725	12,365	15,509	—	0	1	—	6
Mountain	6	26	62	485	570	57	186	374	3,685	5,817	1	5	11	127	183
Arizona	—	3	10	87	51	16	53	82	812	1,725	1	1	7	47	76
Colorado	4	9	27	171	212	—	61	293	1,411	1,781	—	1	5	41	34
Idaho§	2	3	14	50	65	—	3	13	46	78	—	0	2	2	8
Montana§	—	2	9	40	30	—	2	6	38	53	—	0	1	1	1
Nevada§	—	2	8	36	51	25	32	86	828	1,198	—	0	2	10	10
New Mexico§	—	2	8	34	41	16	23	52	453	669	—	1	3	15	28
Utah	—	7	18	47	102	—	5	15	63	267	—	0	2	11	26
Wyoming§	—	1	4	20	18	—	2	8	34	46	—	0	2	—	—
Pacific	34	54	130	1,070	1,266	243	561	755	13,797	15,327	—	2	7	59	87
Alaska	—	2	10	33	32	—	14	24	338	238	—	0	3	8	11
California	29	35	59	764	886	193	473	657	11,747	12,599	—	0	3	12	31
Hawaii	—	0	4	5	15	—	13	19	274	284	—	0	2	13	10
Oregon§	—	7	17	137	204	31	20	48	493	611	—	1	3	23	33
Washington	5	8	74	131	129	19	49	81	945	1,595	—	0	2	3	2
American Samoa	—	0	0	—	—	—	0	1	—	2	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	1	15	—	37	—	0	0	—	—
Puerto Rico	—	2	15	25	78	—	4	16	101	137	—	0	1	—	—
U.S. Virgin Islands	—	0	0	—	—	—	2	7	54	61	N	0	0	N	N

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 27, 2009, and June 21, 2008 (25th week)*

Reporting area	Hepatitis (viral, acute), by type† A: Current week	A: Previous 52 weeks Med	A: Previous 52 weeks Max	A: Cum 2009	A: Cum 2008	B: Current week	B: Previous 52 weeks Med	B: Previous 52 weeks Max	B: Cum 2009	B: Cum 2008	Legionellosis: Current week	Legionellosis: Previous 52 weeks Med	Legionellosis: Previous 52 weeks Max	Legionellosis: Cum 2009	Legionellosis: Cum 2008
United States	13	37	89	793	1,285	21	69	197	1,440	1,790	34	48	152	753	971
New England	—	2	8	34	61	—	1	4	16	41	5	2	18	27	47
Connecticut	—	0	4	12	11	—	0	3	6	14	5	0	5	17	8
Maine§	—	0	5	1	3	—	0	2	7	8	—	0	2	—	1
Massachusetts	—	1	3	14	31	—	0	2	1	12	—	1	7	6	18
New Hampshire	—	0	2	3	5	—	0	2	2	3	—	0	5	1	7
Rhode Island§	—	0	2	3	10	—	0	1	—	3	—	0	14	2	9
Vermont§	—	0	1	1	1	—	0	1	—	1	—	0	1	1	4
Mid. Atlantic	—	5	13	85	139	—	6	17	134	229	5	13	60	185	232
New Jersey	—	0	5	5	32	—	1	5	22	65	—	1	14	11	27
New York (Upstate)	—	1	4	24	31	—	1	11	33	33	5	5	24	74	62
New York City	—	2	6	26	42	—	1	4	27	50	—	2	12	20	30
Pennsylvania	—	1	4	30	34	—	2	8	52	81	—	5	35	80	113
E.N. Central	—	4	12	90	191	—	9	21	191	239	5	8	41	125	205
Illinois	—	1	4	21	72	—	2	7	24	88	—	1	13	8	29
Indiana	—	0	3	7	10	—	1	18	34	17	—	0	6	8	19
Michigan	—	1	5	33	69	—	3	8	60	69	1	2	16	27	53
Ohio	—	1	4	24	22	—	2	13	55	54	4	4	18	77	95
Wisconsin	—	0	3	5	18	—	0	4	18	11	—	0	6	5	9
W.N. Central	—	2	16	56	164	—	2	16	69	37	3	2	8	28	45
Iowa	—	1	5	13	77	—	0	3	11	11	—	0	2	8	8
Kansas	—	0	1	6	9	—	0	2	4	6	—	0	1	2	1
Minnesota	—	0	12	12	18	—	0	11	11	4	3	0	4	5	4
Missouri	—	0	3	14	21	—	1	5	33	13	—	1	7	9	22
Nebraska§	—	0	2	10	37	—	0	2	9	3	—	0	3	3	9
North Dakota	—	0	2	—	—	—	0	1	—	—	—	0	3	1	—
South Dakota	—	0	1	1	2	—	0	1	1	—	—	0	1	—	1
S. Atlantic	7	7	15	192	160	12	18	31	454	453	10	9	22	179	197
Delaware	—	0	1	3	4	—	0	1	—	—	—	0	1	2	5
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	—	7
Florida	2	4	8	95	69	5	6	11	151	160	2	3	7	68	66
Georgia	1	1	4	30	26	1	3	9	64	83	2	1	5	25	16
Maryland§	1	0	4	17	18	1	2	6	41	42	6	2	9	40	50
North Carolina	2	1	9	22	17	4	0	19	119	47	—	0	7	29	11
South Carolina§	1	0	3	12	6	1	1	5	21	35	—	0	1	2	4
Virginia§	—	1	6	13	17	—	2	10	35	47	—	1	5	13	25
West Virginia	—	0	1	—	3	—	1	6	23	39	—	0	3	—	13
E.S. Central	1	1	5	19	39	—	8	13	145	174	2	2	5	43	61
Alabama§	—	0	2	6	5	—	2	7	45	48	—	0	2	5	7
Kentucky	—	0	2	3	15	—	2	7	40	48	—	1	3	20	30
Mississippi	—	0	2	5	2	—	1	3	6	16	—	0	1	1	1
Tennessee§	1	0	4	5	17	—	2	8	54	62	2	0	4	17	23
W.S. Central	—	4	43	73	127	4	11	99	210	370	—	2	21	40	33
Arkansas§	—	0	1	4	3	—	1	5	14	25	—	0	2	2	5
Louisiana	—	0	2	2	7	1	1	4	20	50	—	0	2	1	4
Oklahoma	—	0	6	1	3	2	2	17	50	41	—	0	6	3	3
Texas§	—	3	37	66	114	1	6	76	126	254	—	1	19	34	21
Mountain	2	3	31	74	100	1	3	10	61	86	1	2	8	41	37
Arizona	1	1	28	36	42	—	1	5	23	33	—	0	3	22	9
Colorado	—	0	5	20	20	—	0	3	12	12	1	0	2	3	3
Idaho§	1	0	1	1	13	—	0	2	2	3	—	0	1	—	2
Montana§	—	0	1	3	—	—	0	1	—	—	—	0	2	4	3
Nevada§	—	0	3	6	3	1	0	3	14	21	—	0	2	6	6
New Mexico§	—	0	1	5	14	—	0	2	5	7	—	0	2	—	3
Utah	—	0	2	3	5	—	0	3	3	6	—	0	2	5	11
Wyoming§	—	0	0	—	3	—	0	1	2	4	—	0	1	1	—
Pacific	3	8	25	170	304	4	7	36	160	161	3	3	10	85	114
Alaska	—	0	1	3	2	—	0	1	3	5	—	0	1	2	1
California	2	6	25	128	244	3	5	28	121	113	3	3	9	66	86
Hawaii	—	0	2	3	6	—	0	1	3	3	—	0	1	1	4
Oregon§	—	0	3	10	20	—	1	3	17	21	—	0	2	6	11
Washington	1	1	4	26	32	1	1	8	16	19	—	0	4	10	12
American Samoa	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	2	7	15	—	0	5	3	25	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 27, 2009, and June 21, 2008 (25th week)*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All groups				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	232	461	1,915	4,433	8,417	9	23	46	410	434	9	17	48	465	692
New England	40	69	837	539	3,306	3	1	5	13	22	—	0	4	15	18
Connecticut	—	15	264	—	1,376	3	0	4	4	5	—	0	1	1	1
Maine§	36	5	73	122	68	—	0	1	1	1	—	0	1	2	3
Massachusetts	—	17	403	117	1,324	—	0	4	6	11	—	0	3	9	13
New Hampshire	—	13	145	217	400	—	0	1	1	2	—	0	1	1	1
Rhode Island§	—	0	78	13	105	—	0	1	—	1	—	0	1	1	—
Vermont§	4	5	41	70	33	—	0	1	1	2	—	0	1	1	—
Mid. Atlantic	142	206	1,401	2,549	3,095	1	5	17	95	111	—	2	5	49	75
New Jersey	—	30	231	509	1,469	—	0	4	—	19	—	0	1	2	10
New York (Upstate)	142	87	1,368	970	641	1	0	10	20	13	—	0	2	11	19
New York City	—	5	54	—	172	—	3	11	58	63	—	0	2	9	13
Pennsylvania	—	51	338	1,070	813	—	1	3	17	16	—	1	4	27	33
E.N. Central	1	9	205	102	563	—	3	6	53	74	2	3	8	80	116
Illinois	—	0	13	4	36	—	1	5	20	35	—	1	6	17	42
Indiana	—	0	8	9	2	—	0	1	7	3	—	0	4	20	16
Michigan	1	1	10	12	3	—	0	3	9	9	2	0	3	14	15
Ohio	—	0	6	8	8	—	0	2	14	18	—	0	3	23	27
Wisconsin	—	9	187	69	514	—	0	2	3	9	—	0	1	6	16
W.N. Central	—	7	336	66	139	—	1	10	25	21	1	1	9	39	63
Iowa	—	1	9	24	50	—	0	3	5	2	—	0	1	4	11
Kansas	—	0	4	8	4	—	0	2	2	3	1	0	2	8	3
Minnesota	—	2	326	28	81	—	0	8	10	6	—	0	4	8	18
Missouri	—	0	1	2	1	—	0	2	5	5	—	0	2	13	20
Nebraska§	—	0	2	3	2	—	0	1	2	5	—	0	1	4	9
North Dakota	—	0	10	—	—	—	0	0	—	—	—	0	3	—	1
South Dakota	—	0	1	1	1	—	0	1	1	—	—	0	1	2	1
S. Atlantic	45	63	223	1,061	1,206	4	6	16	146	109	2	3	9	89	93
Delaware	14	12	36	283	360	—	0	1	1	1	—	0	1	2	1
District of Columbia	—	0	5	—	24	—	0	2	—	—	—	0	0	—	—
Florida	1	1	6	15	14	1	1	7	37	22	—	1	4	31	33
Georgia	—	0	6	18	15	1	1	4	32	26	1	0	2	17	12
Maryland§	22	27	163	506	570	2	1	8	39	34	—	0	1	4	12
North Carolina	7	1	6	30	2	—	1	7	18	4	—	0	5	15	5
South Carolina§	—	0	3	12	11	—	0	1	1	4	1	0	1	7	14
Virginia§	1	13	61	163	158	—	1	4	17	17	—	0	2	9	13
West Virginia	—	1	17	34	52	—	0	1	1	1	—	0	2	4	3
E.S. Central	1	0	5	10	18	—	0	2	12	8	—	0	3	16	36
Alabama§	—	0	1	1	7	—	0	1	3	3	—	0	1	4	3
Kentucky	—	0	2	1	1	—	0	2	5	3	—	0	1	3	7
Mississippi	—	0	0	—	1	—	0	1	—	—	—	0	1	1	9
Tennessee§	1	0	3	8	9	—	0	2	4	2	—	0	1	8	17
W.S. Central	—	2	21	12	37	—	1	10	11	22	1	1	12	41	73
Arkansas§	—	0	0	—	—	—	0	1	—	—	—	0	2	5	10
Louisiana	—	0	1	—	—	—	0	1	1	2	—	0	3	9	17
Oklahoma	—	0	2	—	—	—	0	2	1	2	1	0	3	3	9
Texas§	—	2	21	12	37	—	1	10	9	18	—	1	9	24	37
Mountain	—	1	13	13	14	1	0	3	5	13	1	1	4	40	38
Arizona	—	0	2	1	2	—	0	2	1	5	—	0	2	8	5
Colorado	—	0	1	1	2	1	0	1	2	3	—	0	2	12	8
Idaho§	—	0	2	5	3	—	0	1	1	—	1	0	1	5	4
Montana§	—	0	13	1	1	—	0	0	—	—	—	0	2	4	4
Nevada§	—	0	2	5	2	—	0	1	—	4	—	0	2	3	7
New Mexico§	—	0	2	—	3	—	0	1	—	1	—	0	1	3	4
Utah	—	0	1	—	—	—	0	1	1	—	—	0	1	1	4
Wyoming§	—	0	1	—	1	—	0	0	—	—	—	0	2	4	2
Pacific	3	3	13	81	39	—	3	10	50	54	2	4	14	96	180
Alaska	—	0	2	1	1	—	0	1	1	2	—	0	2	2	3
California	3	2	6	72	26	—	2	8	38	42	2	2	8	61	139
Hawaii	N	0	0	N	N	—	0	1	1	2	—	0	1	3	2
Oregon§	—	0	3	5	12	—	0	2	5	4	—	1	7	21	21
Washington	—	0	12	3	—	—	0	3	5	4	—	0	6	9	15
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	2	—	1	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	1	2	—	0	1	—	2
U.S. Virgin Islands	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 27, 2009, and June 21, 2008 (25th week)*

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	101	241	1,697	5,232	3,631	43	69	120	1,552	1,884	12	32	179	461	438
New England	—	17	35	224	415	9	8	15	158	183	—	0	2	4	2
Connecticut	—	0	4	13	30	8	3	10	73	89	—	0	0	—	—
Maine†	—	1	10	56	14	—	1	5	22	28	—	0	2	4	—
Massachusetts	—	12	30	105	327	—	0	0	—	—	—	0	1	—	—
New Hampshire	—	1	6	37	13	—	1	7	18	17	—	0	0	—	1
Rhode Island†	—	1	6	5	25	—	0	3	17	16	—	0	2	—	1
Vermont†	—	0	2	8	6	1	1	6	28	33	—	0	0	—	—
Mid. Atlantic	8	24	64	458	417	11	17	30	295	381	—	1	29	14	47
New Jersey	—	4	12	56	76	—	0	0	—	—	—	0	6	—	32
New York (Upstate)	5	6	41	89	131	11	8	20	177	195	—	0	29	1	4
New York City	3	0	21	47	44	—	0	2	—	10	—	0	3	10	6
Pennsylvania	—	11	33	266	166	—	7	17	118	176	—	0	2	3	5
E.N. Central	42	44	238	1,129	681	5	2	28	49	65	—	1	15	19	29
Illinois	—	14	45	234	78	—	1	20	6	26	—	1	10	9	22
Indiana	—	2	158	87	21	—	0	6	6	1	—	0	3	1	1
Michigan	4	9	21	242	91	1	1	9	22	26	—	0	1	3	2
Ohio	38	14	57	523	447	4	0	7	15	12	—	0	4	6	4
Wisconsin	—	4	10	43	44	N	0	0	N	N	—	0	0	—	—
W.N. Central	—	32	872	907	298	—	5	17	118	121	—	3	33	58	106
Iowa	—	5	21	74	45	—	0	5	9	10	—	0	1	1	5
Kansas	—	2	12	91	30	—	1	6	49	39	—	0	1	1	—
Minnesota	—	1	808	165	69	—	0	11	20	18	—	0	0	—	—
Missouri	—	14	51	479	115	—	1	8	17	13	—	3	32	52	96
Nebraska†	—	4	32	86	27	—	0	2	—	17	—	0	4	4	2
North Dakota	—	0	24	1	1	—	0	9	4	13	—	0	1	—	—
South Dakota	—	0	10	11	11	—	0	4	19	11	—	0	0	—	3
S. Atlantic	19	26	71	703	348	11	25	93	699	890	10	16	72	252	111
Delaware	—	0	3	6	5	—	0	0	—	—	—	0	5	3	6
District of Columbia	—	0	2	—	1	—	0	0	—	—	—	0	1	—	3
Florida	10	8	33	249	81	—	0	77	77	138	—	0	3	4	3
Georgia	—	3	9	79	30	—	5	52	154	197	—	1	5	13	29
Maryland†	—	3	10	47	49	—	6	13	146	221	1	1	7	22	17
North Carolina	4	0	65	178	76	N	4	4	N	N	9	10	55	175	14
South Carolina†	3	3	11	77	46	—	0	0	—	—	—	1	9	12	12
Virginia†	2	3	24	62	54	8	11	24	266	278	—	2	15	22	22
West Virginia	—	0	2	5	6	3	1	6	56	56	—	0	1	1	5
E.S. Central	8	12	33	329	120	2	3	7	63	83	1	4	23	77	72
Alabama†	1	3	19	121	19	—	0	0	—	—	1	1	8	14	17
Kentucky	—	5	15	103	20	2	1	4	29	13	—	0	0	—	1
Mississippi	—	1	5	21	53	—	0	2	—	2	—	0	3	4	4
Tennessee†	7	2	14	84	28	—	2	6	34	68	—	3	19	59	50
W.S. Central	2	40	389	759	393	—	0	9	26	51	1	2	161	29	57
Arkansas†	—	2	38	33	38	—	0	5	21	33	1	0	61	14	1
Louisiana	—	2	7	39	23	—	0	0	—	—	—	0	2	—	3
Oklahoma	2	0	45	15	12	—	0	9	4	16	—	0	98	5	40
Texas†	—	35	304	672	320	—	0	1	1	2	—	1	6	10	13
Mountain	11	15	31	379	455	—	2	9	47	28	—	1	3	7	13
Arizona	—	3	8	86	132	N	0	0	N	N	—	0	2	2	5
Colorado	10	4	12	138	70	—	0	0	—	—	—	0	1	—	—
Idaho†	1	1	5	39	20	—	0	2	—	1	—	0	1	—	—
Montana†	—	0	4	9	58	—	0	4	13	1	—	0	1	3	1
Nevada†	—	0	3	6	18	—	0	5	1	2	—	0	2	—	—
New Mexico†	—	1	10	30	25	—	0	2	15	17	—	0	1	1	1
Utah	—	4	19	70	124	—	0	6	1	1	—	0	1	1	2
Wyoming†	—	0	2	1	8	—	0	4	17	6	—	0	2	—	4
Pacific	11	22	98	344	504	5	4	13	97	82	—	0	1	1	1
Alaska	—	3	21	28	42	—	0	2	9	12	N	0	0	N	N
California	—	5	19	58	266	5	3	12	88	68	—	0	1	1	—
Hawaii	—	0	3	13	6	—	0	0	—	—	N	0	0	N	N
Oregon†	—	4	14	106	74	—	0	2	—	2	—	0	1	—	1
Washington	11	6	76	139	116	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	1	—	—	1	5	15	27	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 27, 2009, and June 21, 2008 (25th week)*

Reporting area	Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†					Shigellosis				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	554	825	2,318	14,924	16,546	41	76	255	1,300	1,565	148	411	1,268	6,748	8,179
New England	3	28	206	701	1,118	—	3	43	87	111	—	3	18	66	109
Connecticut	—	0	180	180	491	—	0	43	43	47	—	0	13	13	40
Maine§	2	2	8	49	62	—	0	3	9	3	—	0	6	2	3
Massachusetts	—	20	51	263	434	—	1	11	15	38	—	2	9	40	56
New Hampshire	1	3	33	136	61	—	1	3	16	11	—	0	1	1	2
Rhode Island§	—	2	9	50	34	—	0	1	—	7	—	0	1	7	7
Vermont§	—	1	7	23	36	—	0	6	4	5	—	0	2	3	1
Mid. Atlantic	30	84	201	1,629	2,063	4	6	27	89	164	4	54	93	1,184	1,034
New Jersey	—	14	55	122	488	—	1	12	14	57	—	18	38	249	268
New York (Upstate)	30	26	65	469	488	4	3	12	39	45	4	7	23	98	304
New York City	—	19	49	418	489	—	1	5	30	22	—	10	23	196	404
Pennsylvania	—	28	78	620	598	—	0	8	6	40	—	18	38	641	58
E.N. Central	40	88	194	1,881	2,064	4	12	74	212	231	18	86	132	1,323	1,426
Illinois	—	25	50	460	625	—	1	10	34	37	—	16	34	284	474
Indiana	—	7	53	124	187	—	1	14	19	18	—	2	39	27	362
Michigan	3	18	38	405	375	—	3	43	57	49	—	5	24	118	44
Ohio	37	27	49	632	560	4	3	15	52	62	18	42	80	677	388
Wisconsin	—	14	30	260	317	—	3	16	50	65	—	10	42	217	158
W.N. Central	28	51	148	1,138	1,089	13	12	58	205	247	3	14	49	360	427
Iowa	3	7	16	180	187	—	3	21	52	56	—	3	12	41	75
Kansas	9	7	29	154	150	1	1	7	18	18	2	3	11	120	7
Minnesota	14	11	69	277	278	11	2	21	63	53	1	3	25	34	113
Missouri	—	12	48	209	288	—	2	11	41	71	—	3	33	151	131
Nebraska§	—	5	41	188	106	—	2	30	26	29	—	0	3	9	—
North Dakota	2	0	30	17	18	1	0	28	2	1	—	0	9	3	27
South Dakota	—	3	22	113	62	—	0	4	3	19	—	0	1	2	74
S. Atlantic	241	234	457	4,021	3,932	5	13	48	268	271	53	47	85	1,069	1,655
Delaware	—	2	9	33	60	—	0	2	6	7	—	0	8	40	6
District of Columbia	—	0	2	—	36	—	0	1	—	4	—	0	2	—	8
Florida	131	100	174	1,728	1,695	3	2	10	78	70	10	10	26	207	453
Georgia	39	39	96	707	684	—	1	8	26	27	19	13	30	295	667
Maryland§	11	16	35	278	320	1	2	11	38	42	10	5	12	153	30
North Carolina	49	25	106	657	356	1	2	21	63	24	12	6	27	219	47
South Carolina§	5	16	57	245	344	—	1	3	9	18	2	4	17	65	345
Virginia§	2	19	88	302	340	—	3	27	40	58	—	4	59	85	80
West Virginia	4	3	10	71	97	—	0	3	8	21	—	0	3	5	19
E.S. Central	39	49	140	906	1,019	3	5	12	88	108	12	24	58	465	1,018
Alabama§	7	16	49	250	274	2	1	4	22	37	—	4	12	75	241
Kentucky	11	10	18	190	168	1	2	7	25	21	4	2	25	124	183
Mississippi	5	13	57	203	295	—	0	1	6	3	—	1	6	14	229
Tennessee§	16	14	62	263	282	—	2	6	35	47	8	14	48	252	365
W.S. Central	36	108	1,328	1,092	1,881	3	5	139	52	144	39	91	967	1,267	1,633
Arkansas§	20	12	39	207	186	1	0	5	8	25	8	10	27	168	186
Louisiana	1	14	54	191	333	—	0	1	—	4	—	6	26	64	307
Oklahoma	15	14	102	232	221	2	0	82	9	13	5	4	61	98	45
Texas§	—	75	1,199	462	1,141	—	3	55	35	102	26	61	889	937	1,095
Mountain	31	55	109	1,077	1,373	4	9	40	160	183	8	27	54	501	301
Arizona	5	20	43	410	377	—	1	4	21	26	6	17	35	372	134
Colorado	23	12	19	258	369	2	3	18	77	54	2	2	11	40	34
Idaho§	2	3	12	69	74	1	2	15	23	36	—	0	2	3	5
Montana§	—	2	7	49	44	—	0	3	6	18	—	0	5	11	1
Nevada§	1	4	12	108	100	1	0	3	10	9	—	2	13	31	90
New Mexico§	—	6	25	88	241	—	1	4	15	19	—	3	12	41	24
Utah	—	6	19	73	132	—	1	9	7	16	—	0	3	3	10
Wyoming§	—	1	5	22	36	—	0	2	1	5	—	0	1	—	3
Pacific	106	123	537	2,479	2,007	5	10	31	139	106	11	29	82	513	576
Alaska	—	1	4	25	20	—	0	1	—	3	—	0	1	2	—
California	93	90	516	1,894	1,477	2	5	15	83	59	9	25	75	408	499
Hawaii	—	5	15	106	98	—	0	2	2	3	—	0	3	10	19
Oregon§	—	8	20	178	171	—	1	7	12	13	—	1	10	17	25
Washington	13	11	85	276	241	3	3	16	42	28	2	2	13	76	33
American Samoa	—	0	1	—	1	—	0	0	—	—	—	0	2	3	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	—	6	—	0	0	—	—	—	0	2	—	11
Puerto Rico	3	10	40	85	267	—	0	0	—	—	—	0	4	1	9
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 27, 2009, and June 21, 2008 (25th week)*

Reporting area	Streptococcal diseases, invasive, group A					*Streptococcus pneumoniae*, invasive disease, nondrug resistant† Age <5 years				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max		
United States	50	95	239	2,945	3,322	17	33	122	901	1,029
New England	—	5	28	162	245	—	1	12	24	51
Connecticut	—	0	21	49	66	—	0	11	—	—
Maine§	—	0	3	10	17	—	0	1	2	1
Massachusetts	—	2	10	60	118	—	1	2	15	39
New Hampshire	—	1	4	27	16	—	0	1	5	7
Rhode Island§	—	0	2	4	18	—	0	2	—	4
Vermont§	—	0	3	12	10	—	0	1	2	—
Mid. Atlantic	5	18	38	566	699	7	4	33	136	133
New Jersey	—	1	6	5	126	—	1	4	14	38
New York (Upstate)	5	6	25	215	220	2	2	17	70	60
New York City	—	4	12	117	132	5	0	31	52	35
Pennsylvania	—	6	18	229	221	N	0	2	N	N
E.N. Central	6	16	42	596	659	—	5	18	131	190
Illinois	—	5	12	163	181	—	1	5	15	54
Indiana	—	3	23	99	85	—	0	13	15	20
Michigan	1	3	11	100	113	—	1	5	42	53
Ohio	5	4	13	158	180	—	1	6	43	35
Wisconsin	—	2	10	76	100	—	1	4	16	28
W.N. Central	3	6	37	259	252	—	2	11	68	48
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	1	1	5	37	26	N	0	1	N	N
Minnesota	—	0	34	105	122	—	0	7	31	11
Missouri	—	2	8	61	61	—	1	4	26	22
Nebraska§	—	1	3	29	23	—	0	1	3	5
North Dakota	1	0	4	10	8	—	0	3	4	5
South Dakota	1	0	3	17	12	—	0	2	4	5
S. Atlantic	24	22	47	655	652	3	6	16	184	198
Delaware	—	0	1	8	6	—	0	0	—	—
District of Columbia	—	0	2	—	7	N	0	0	N	N
Florida	7	5	12	161	144	3	1	6	46	37
Georgia	1	5	13	149	146	—	2	6	47	53
Maryland§	9	3	10	97	119	—	1	3	39	38
North Carolina	5	2	12	72	83	N	0	0	N	N
South Carolina§	—	1	5	40	40	—	1	6	29	32
Virginia§	1	3	9	101	82	—	0	4	15	33
West Virginia	1	1	4	27	25	—	0	2	8	5
E.S. Central	4	4	10	118	113	—	1	6	35	56
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	2	1	5	23	24	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	2	—	7
Tennessee§	2	3	8	95	89	—	1	6	35	49
W.S. Central	2	9	79	259	271	7	6	46	170	150
Arkansas§	—	0	2	9	7	1	0	4	17	9
Louisiana	—	0	3	9	11	—	0	3	13	8
Oklahoma	1	3	20	90	63	1	1	7	32	45
Texas§	1	6	59	151	190	5	4	34	108	88
Mountain	6	9	22	256	363	—	4	16	135	172
Arizona	3	3	7	86	123	—	2	10	77	79
Colorado	2	3	9	96	92	—	1	4	28	39
Idaho§	—	0	2	3	11	—	0	2	6	3
Montana§	N	0	0	N	N	N	0	0	N	N
Nevada§	1	0	1	5	6	—	0	1	—	2
New Mexico§	—	2	7	44	92	—	0	4	13	25
Utah	—	1	6	21	34	—	0	4	11	23
Wyoming§	—	0	1	1	5	—	0	1	—	1
Pacific	—	3	9	74	68	—	1	3	18	31
Alaska	—	0	4	10	16	—	0	2	13	20
California	N	0	0	N	N	N	0	0	N	N
Hawaii	—	3	8	64	52	—	0	2	5	11
Oregon§	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	—	0	8	—	22	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 27, 2009, and June 21, 2008 (25th week)*

Reporting area	*Streptococcus pneumoniae*, invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages					Aged <5 years									
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	19	56	276	1,661	1,926	1	9	21	254	282	89	262	452	5,836	5,847
New England	—	1	48	30	39	—	0	5	1	5	5	5	15	149	150
Connecticut	—	0	48	—	—	—	0	5	—	—	3	1	5	32	10
Maine§	—	0	2	8	12	—	0	1	—	—	—	0	2	1	6
Massachusetts	—	0	1	1	—	—	0	1	1	—	2	3	11	102	116
New Hampshire	—	0	3	5	—	—	0	0	—	—	—	0	2	10	7
Rhode Island§	—	0	6	7	14	—	0	1	—	3	—	0	5	4	6
Vermont§	—	0	1	9	13	—	0	0	—	2	—	0	2	—	5
Mid. Atlantic	1	4	14	96	198	—	0	3	19	16	25	32	51	869	826
New Jersey	—	0	0	—	—	—	0	0	—	—	—	4	13	101	99
New York (Upstate)	1	1	10	41	38	—	0	2	10	5	1	2	8	53	67
New York City	—	0	4	2	83	—	0	2	—	—	24	22	36	552	517
Pennsylvania	—	1	8	53	77	—	0	2	9	11	—	6	12	163	143
E.N. Central	3	9	41	362	425	—	1	7	51	58	6	24	44	455	523
Illinois	N	0	0	N	N	N	0	0	N	N	—	9	19	119	199
Indiana	—	2	32	110	149	—	0	6	17	18	1	2	10	74	66
Michigan	—	0	2	16	15	—	0	1	2	2	3	4	18	116	96
Ohio	3	7	18	236	261	—	1	4	32	38	1	6	16	122	139
Wisconsin	—	0	0	—	—	—	0	0	—	—	1	1	4	24	23
W.N. Central	1	3	161	87	139	—	1	3	20	28	—	6	14	141	195
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	12	10
Kansas	—	1	5	38	56	—	0	2	13	3	—	0	3	13	17
Minnesota	—	0	156	—	20	—	0	3	—	20	—	2	6	29	46
Missouri	—	1	5	37	58	—	0	1	5	2	—	3	10	69	116
Nebraska§	—	0	0	—	—	—	0	0	—	—	—	0	2	14	6
North Dakota	1	0	3	10	2	—	0	0	—	—	—	0	1	3	—
South Dakota	—	0	2	2	3	—	0	2	2	3	—	0	1	1	—
S. Atlantic	9	25	53	795	760	1	4	14	115	116	26	63	262	1,386	1,230
Delaware	—	0	2	10	2	—	0	0	—	—	3	0	3	17	6
District of Columbia	N	0	0	N	N	N	0	0	N	N	2	3	9	86	62
Florida	7	15	36	488	410	1	3	13	80	72	—	20	31	435	477
Georgia	2	8	25	220	266	—	1	5	28	37	1	14	227	270	215
Maryland§	—	0	1	4	4	—	0	0	—	1	—	6	16	125	153
North Carolina	N	0	0	N	N	N	0	0	N	N	8	8	19	257	139
South Carolina§	—	0	0	—	—	—	0	0	—	—	2	2	6	51	43
Virginia§	N	0	0	N	N	N	0	0	N	N	10	5	16	143	130
West Virginia	—	2	13	73	78	—	0	3	7	6	—	0	1	2	5
E.S. Central	4	5	25	181	216	—	1	3	26	38	8	22	36	499	502
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	15	179	222
Kentucky	3	1	5	51	52	—	0	2	7	9	1	1	10	25	44
Mississippi	—	0	3	—	26	—	0	1	—	8	—	3	18	87	67
Tennessee§	1	3	22	130	138	—	0	3	19	21	7	8	19	208	169
W.S. Central	—	1	6	52	71	—	0	3	10	12	6	51	80	1,128	959
Arkansas§	—	0	5	33	13	—	0	3	7	3	6	4	35	97	55
Louisiana	—	1	5	19	58	—	0	1	3	9	—	14	40	271	234
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	7	29	40
Texas§	—	0	0	—	—	—	0	0	—	—	—	30	44	731	630
Mountain	1	2	7	56	77	—	0	3	11	8	2	9	18	142	310
Arizona	—	0	0	—	—	—	0	0	—	—	—	3	11	21	157
Colorado	—	0	0	—	—	—	0	0	—	—	—	1	5	42	86
Idaho§	N	0	1	N	N	N	0	1	N	N	—	0	2	3	1
Montana§	—	0	1	—	—	—	0	0	—	—	—	0	7	—	—
Nevada§	1	1	4	27	37	—	0	2	6	3	1	2	7	52	36
New Mexico§	—	0	0	—	—	—	0	0	—	—	1	1	5	23	15
Utah	—	1	6	22	40	—	0	3	4	5	—	0	2	—	13
Wyoming§	—	0	2	7	—	—	0	1	1	—	—	0	1	1	2
Pacific	—	0	1	2	1	—	0	1	1	1	11	46	66	1,067	1,152
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
California	N	0	0	N	N	N	0	0	N	N	7	42	60	977	1,047
Hawaii	—	0	1	2	1	—	0	1	1	1	—	0	3	15	11
Oregon§	N	0	0	N	N	N	0	0	N	N	4	0	3	20	5
Washington	N	0	0	N	N	N	0	0	N	N	—	2	9	55	89
American Samoa	N	0	0	N	N	N	0	0	N	N	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	—	3	11	102	84
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 27, 2009, and June 21, 2008 (25th week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive§				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	58	356	711	7,919	18,366	—	0	75	1	14	—	0	77	1	36
New England	—	14	46	152	949	—	0	2	—	—	—	0	1	—	2
Connecticut	—	7	21	—	471	—	0	2	—	—	—	0	1	—	2
Maine¶	—	0	11	—	156	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
New Hampshire	—	4	11	109	157	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Vermont¶	—	3	17	43	165	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	—	38	58	883	1,460	—	0	8	—	—	—	0	4	—	—
New Jersey	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
New York (Upstate)	N	0	0	N	N	—	0	5	—	—	—	0	2	—	—
New York City	—	0	0	—	—	—	0	2	—	—	—	0	2	—	—
Pennsylvania	—	38	58	883	1,460	—	0	2	—	—	—	0	1	—	—
E.N. Central	34	151	254	3,867	4,535	—	0	8	—	—	—	0	3	—	—
Illinois	—	33	73	822	628	—	0	4	—	—	—	0	2	—	—
Indiana	—	0	19	153	—	—	0	1	—	—	—	0	1	—	—
Michigan	9	48	90	1,219	1,935	—	0	4	—	—	—	0	2	—	—
Ohio	9	42	91	1,334	1,478	—	0	3	—	—	—	0	1	—	—
Wisconsin	16	14	52	339	494	—	0	2	—	—	—	0	1	—	—
W.N. Central	—	22	114	623	732	—	0	6	—	1	—	0	21	1	6
Iowa	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
Kansas	—	6	22	171	295	—	0	2	—	1	—	0	3	—	2
Minnesota	—	0	0	—	—	—	0	2	—	—	—	0	4	—	—
Missouri	—	11	51	400	411	—	0	3	—	—	—	0	1	—	—
Nebraska¶	N	0	0	N	N	—	0	1	—	—	—	0	6	—	—
North Dakota	—	0	108	52	—	—	0	2	—	—	—	0	11	—	3
South Dakota	—	0	4	—	26	—	0	5	—	—	—	0	6	1	1
S. Atlantic	23	57	146	1,190	2,885	—	0	4	—	2	—	0	4	—	—
Delaware	—	0	5	2	16	—	0	0	—	—	—	0	1	—	—
District of Columbia	—	0	3	—	17	—	0	2	—	—	—	0	1	—	—
Florida	17	28	67	835	1,052	—	0	2	—	—	—	0	0	—	—
Georgia	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
Maryland¶	N	0	0	N	N	—	0	2	—	—	—	0	3	—	—
North Carolina	N	0	0	N	N	—	0	1	—	1	—	0	1	—	—
South Carolina¶	—	5	39	82	548	—	0	0	—	—	—	0	1	—	—
Virginia¶	—	8	119	28	840	—	0	0	—	—	—	0	1	—	—
West Virginia	6	10	32	243	412	—	0	0	—	1	—	0	0	—	—
E.S. Central	—	3	28	17	804	—	0	7	—	2	—	0	9	—	7
Alabama¶	—	3	28	16	795	—	0	3	—	—	—	0	2	—	1
Kentucky	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	1	1	9	—	0	4	—	1	—	0	8	—	4
Tennessee¶	N	0	0	N	N	—	0	2	—	1	—	0	3	—	2
W.S. Central	—	56	308	492	5,582	—	0	8	1	7	—	0	7	—	8
Arkansas¶	—	3	47	19	409	—	0	1	—	3	—	0	1	—	—
Louisiana	—	1	4	38	47	—	0	3	—	—	—	0	5	—	1
Oklahoma	N	0	0	N	N	—	0	1	—	2	—	0	1	—	3
Texas¶	—	42	282	435	5,126	—	0	6	1	2	—	0	4	—	4
Mountain	1	26	83	634	1,353	—	0	12	—	2	—	0	22	—	9
Arizona	—	0	0	—	—	—	0	10	—	1	—	0	8	—	—
Colorado	1	13	44	326	551	—	0	4	—	—	—	0	10	—	6
Idaho¶	N	0	0	N	N	—	0	1	—	1	—	0	6	—	1
Montana¶	—	2	27	70	182	—	0	0	—	—	—	0	2	—	—
Nevada¶	N	0	0	N	N	—	0	2	—	—	—	0	3	—	—
New Mexico¶	—	2	10	67	137	—	0	1	—	—	—	0	1	—	—
Utah	—	10	31	171	474	—	0	2	—	—	—	0	5	—	1
Wyoming¶	—	0	1	—	9	—	0	0	—	—	—	0	2	—	1
Pacific	—	2	7	61	66	—	0	38	—	—	—	0	23	—	4
Alaska	—	1	6	40	27	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	37	—	—	—	0	20	—	4
Hawaii	—	1	4	21	39	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	2	—	—	—	0	4	—	—
Washington	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	3	—	55	—	0	0	—	—	—	0	0	—	—
Puerto Rico	5	7	17	126	335	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE III. Deaths in 122 U.S. cities,* week ending June 27, 2009 (25th week)

Reporting area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45–64	25–44	1–24	<1	
New England	491	328	111	40	6	6	47
Boston, MA	133	80	38	8	2	5	12
Bridgeport, CT	33	27	5	1	—	—	6
Cambridge, MA	16	12	3	1	—	—	1
Fall River, MA	22	17	3	2	—	—	2
Hartford, CT	60	36	15	6	3	—	7
Lowell, MA	18	15	2	1	—	—	—
Lynn, MA	9	6	2	1	—	—	—
New Bedford, MA	21	19	2	—	—	—	2
New Haven, CT	23	17	5	—	—	1	3
Providence, RI	55	34	13	7	1	—	2
Somerville, MA	U	U	U	U	U	U	U
Springfield, MA	30	16	7	7	—	—	1
Waterbury, CT	22	15	7	—	—	—	2
Worcester, MA	49	34	9	6	—	—	9
Mid. Atlantic	1,583	1,105	323	90	27	37	76
Albany, NY	34	22	8	1	1	2	—
Allentown, PA	27	22	3	1	—	1	1
Buffalo, NY	64	49	6	3	5	1	9
Camden, NJ	39	21	11	3	1	3	2
Elizabeth, NJ	16	12	2	1	1	—	—
Erie, PA	45	32	10	1	1	1	2
Jersey City, NJ	U	U	U	U	U	U	U
New York City, NY	805	565	168	48	12	12	31
Newark, NJ	25	10	9	3	—	2	1
Paterson, NJ	10	7	3	—	—	—	1
Philadelphia, PA	150	87	40	11	3	9	10
Pittsburgh, PA§	38	26	7	1	1	3	4
Reading, PA	27	20	6	1	—	—	3
Rochester, NY	113	90	17	4	1	1	7
Schenectady, NY	25	14	6	5	—	—	1
Scranton, PA	26	21	3	2	—	—	—
Syracuse, NY	80	56	17	4	1	2	3
Trenton, NJ	30	28	1	1	—	—	—
Utica, NY	11	8	3	—	—	—	—
Yonkers, NY	18	15	3	—	—	—	1
E.N. Central	1,816	1,189	418	130	44	33	125
Akron, OH	45	27	12	2	3	1	5
Canton, OH	38	31	6	1	—	—	7
Chicago, IL	275	161	65	34	10	3	24
Cincinnati, OH	81	49	23	6	1	2	8
Cleveland, OH	196	148	37	8	3	—	6
Columbus, OH	191	118	46	19	4	4	9
Dayton, OH	133	93	30	5	2	3	9
Detroit, MI	123	65	37	14	4	3	11
Evansville, IN	46	32	12	—	2	—	2
Fort Wayne, IN	67	48	10	2	4	3	5
Gary, IN	21	13	3	3	1	1	—
Grand Rapids, MI	49	33	10	1	2	3	3
Indianapolis, IN	199	127	50	13	4	5	14
Lansing, MI	32	17	13	2	—	—	2
Milwaukee, WI	86	56	19	6	2	3	6
Peoria, IL	48	35	10	2	—	1	5
Rockford, IL	47	35	7	4	—	1	3
South Bend, IN	U	U	U	U	U	U	U
Toledo, OH	91	61	20	8	2	—	4
Youngstown, OH	48	40	8	—	—	—	2
W.N. Central	512	317	131	33	17	14	37
Des Moines, IA	U	U	U	U	U	U	U
Duluth, MN	27	19	8	—	—	—	4
Kansas City, KS	17	12	5	—	—	—	1
Kansas City, MO	79	53	20	2	3	1	8
Lincoln, NE	39	28	7	1	—	3	2
Minneapolis, MN	58	35	12	5	3	3	3
Omaha, NE	76	54	18	3	1	—	7
St. Louis, MO	112	48	35	18	7	4	5
St. Paul, MN	50	30	14	1	3	2	3
Wichita, KS	54	38	12	3	—	1	4
S. Atlantic	1,174	726	308	86	29	25	55
Atlanta, GA	179	109	49	11	7	3	6
Baltimore, MD	171	104	52	10	2	3	7
Charlotte, NC	98	51	36	7	2	2	7
Jacksonville, FL	181	119	39	15	4	4	6
Miami, FL	U	U	U	U	U	U	U
Norfolk, VA	67	42	13	6	4	2	1
Richmond, VA	60	33	23	3	1	—	2
Savannah, GA	48	37	2	5	2	2	4
St. Petersburg, FL	47	32	7	2	3	3	2
Tampa, FL	201	131	49	14	2	5	18
Washington, D.C.	106	58	34	11	2	1	1
Wilmington, DE	16	10	4	2	—	—	1
E.S. Central	748	464	205	47	11	21	59
Birmingham, AL	160	105	36	9	5	5	18
Chattanooga, TN	73	49	19	4	1	—	3
Knoxville, TN	103	65	32	4	2	—	—
Lexington, KY	48	33	8	4	1	2	7
Memphis, TN	130	67	41	13	2	7	16
Mobile, AL	54	41	8	4	—	1	3
Montgomery, AL	38	22	8	6	—	2	5
Nashville, TN	142	82	53	3	—	4	7
W.S. Central	1,227	753	316	89	36	33	73
Austin, TX	U	U	U	U	U	U	U
Baton Rouge, LA	54	45	6	2	1	—	—
Corpus Christi, TX	42	30	9	3	—	—	2
Dallas, TX	196	107	53	13	11	12	11
El Paso, TX	98	60	27	9	2	—	4
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	331	183	90	39	5	14	19
Little Rock, AR	94	62	20	5	4	3	6
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	236	139	69	14	12	2	19
Shreveport, LA	74	56	17	1	—	—	7
Tulsa, OK	102	71	25	3	1	2	5
Mountain	1,033	686	234	60	31	22	70
Albuquerque, NM	123	87	21	10	2	3	7
Boise, ID	48	34	10	1	1	2	7
Colorado Springs, CO	68	44	15	5	2	2	1
Denver, CO	87	60	13	6	4	4	6
Las Vegas, NV	260	174	66	11	7	2	18
Ogden, UT	30	20	7	2	—	1	1
Phoenix, AZ	147	82	43	9	9	4	7
Pueblo, CO	25	17	5	2	1	—	2
Salt Lake City, UT	132	90	28	6	5	3	13
Tucson, AZ	113	78	26	8	—	1	8
Pacific	1,579	1,077	347	90	36	29	121
Berkeley, CA	12	11	1	—	—	—	2
Fresno, CA	119	78	24	11	3	3	7
Glendale, CA	30	26	4	—	—	—	3
Honolulu, HI	87	62	17	5	2	1	4
Long Beach, CA	48	31	13	1	3	—	8
Los Angeles, CA	229	148	58	17	5	1	25
Pasadena, CA	24	21	3	—	—	—	1
Portland, OR	133	80	39	8	1	5	8
Sacramento, CA	170	109	43	9	4	5	14
San Diego, CA	136	93	28	8	3	4	9
San Francisco, CA	106	72	24	7	1	2	6
San Jose, CA	166	120	28	10	6	2	9
Santa Cruz, CA	30	26	4	—	—	—	7
Seattle, WA	118	77	25	7	3	6	8
Spokane, WA	85	60	21	3	1	—	7
Tacoma, WA	86	63	15	4	4	—	3
Total¶	**10,163**	**6,645**	**2,393**	**665**	**237**	**220**	**663**

U: Unavailable. —:No reported cases.

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

† Pneumonia and influenza.

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

¶ Total includes unknown ages.

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