



# MMWR<sup>TM</sup>

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### Introduction and Transmission of 2009 Pandemic Influenza A (H1N1) Virus – Kenya, June–July 2009

In April 2009, in the United States, the first cases of 2009 pandemic influenza A (H1N1) virus infection were reported (1). On June 11, the World Health Organization (WHO) declared an influenza pandemic because of widespread transmission worldwide (2). As of September 13, all six WHO regions had reported approximately 296,471 cases of pandemic H1N1, including 3,486 deaths (3). On June 29, the first case of pandemic H1N1 was confirmed in Kenya. At that time, only four other countries in sub-Saharan Africa had reported cases (3), and secondary transmission had not been documented in the region. Surveillance activities in Kenya detected four separate introductions of the virus into the country. The introductions provided an opportunity to study transmission of the virus (including calculation of secondary household attack rates) in a virus-naïve population that had not yet initiated the use of antiviral drugs. This report describes the four introductions and the accompanying analysis. The overall rate of secondary household transmission of laboratory-confirmed pandemic H1N1 was 26% (range: 7%–33%), which is comparable to secondary household attack rates reported for laboratory-confirmed seasonal influenza virus infection (4,5). However, additional and more rigorous studies are needed to better understand the secondary attack rates associated with the current pandemic.

Since 2006, the Kenya Ministry of Public Health and Sanitation (MoPHS) has maintained 26 influenza sentinel surveillance hospitals and clinics that identify patients with severe acute respiratory illness and influenza-like illness (ILI). Nasopharyngeal and oropharyngeal specimens are collected from severe acute respiratory illness and ILI patients and tested for influenza at two laboratories located in Nairobi: the National Influenza Center (NIC) and the CDC-Kenya International Emerging Infections Program. From the

beginning of May through June 28, a total of 28 samples from suspected pandemic H1N1 cases were tested, all of which were negative for pandemic H1N1.

After the first case of pandemic H1N1 was identified in Kenya on June 29, MoPHS conducted contact tracing to identify additional laboratory-confirmed cases. A laboratory-confirmed case was defined by a positive test result for 2009 pandemic influenza A (H1N1) virus by real-time reverse transcription–polymerase chain reaction (rRT-PCR) at the NIC and CDC-Kenya laboratories. A household contact was defined as a person who stayed in the same dwelling (i.e., house or hotel floor) as a patient with a laboratory-confirmed case and had close contact (within 2 meters) beginning 1 day before to 7 days after symptom onset in the patient with laboratory-confirmed infection. As part of contact tracing, all symptomatic close contacts (defined as those having fever or any upper respiratory symptom) had combined nasopharyngeal and oropharyngeal swabs taken, which were tested for pandemic H1N1 using rRT-PCR. Secondary attack rates were computed by dividing the number of contacts who acquired laboratory-confirmed infection and had an epidemiologic link to an index patient by the overall number of household contacts. Prophylactic antivirals were not used in Kenya during the period before and during the investigations described in

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this report, and none of the travelers to Kenya reported having access to antivirals.

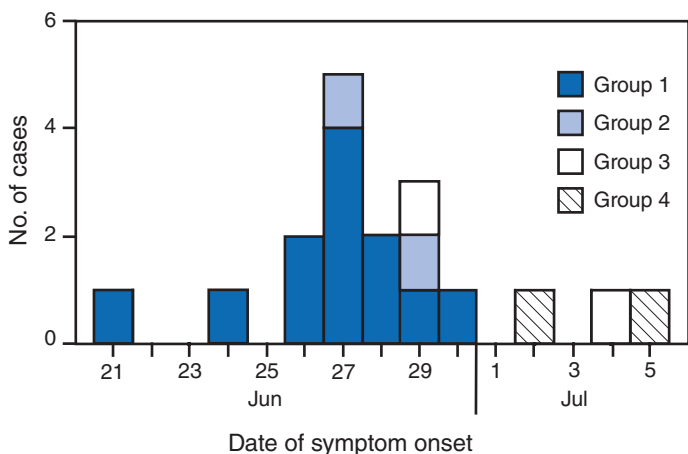
### Transmission Groups

**Group 1.** On June 21, 2009, a group of 34 medical students from Nottingham, United Kingdom (UK), flew from London to Nairobi. During the 9-hour flight, a male student aged 22 years developed headache and chills. The next day, the group took a 5-hour bus trip to Kisumu, a city in western Kenya, where an educational service program had been arranged. The mildly ill student participated in group activities for 3 days, including working at a school and at a center for homeless children. The students from Nottingham, including the ill student, stayed in shared rooms on one floor of a local hotel and had their meals together in the same hotel dining area. On June 24, the index patient developed a cough, sore throat, and subjective fever. On June 25, he heard from a friend in the UK with whom he had close contact before departure that she had become ill with suspected pandemic H1N1. He notified the group leader and voluntarily stayed in isolation in the hotel. Public health authorities were contacted, and nasopharyngeal and oropharyngeal swabs were taken from the index patient on June 27. Infection with pandemic H1N1 was confirmed by rRT-PCR on June 29.

Of the 33 other students and student leaders in the group, 23 (70%) developed subjective fever or upper respiratory symptoms during June 24–30, from 3 to 6 days after symptom onset (June 21) in the index patient (Figure). Specimens were collected from all 23 students; infection with pandemic H1N1 was confirmed by rRT-PCR in 11 (48%) of the symptomatic students (Figure). Influenza B virus was detected by rRT-PCR in one of the 23 students. None of 11 patients with secondary transmission of pandemic H1N1 reported contact with persons having confirmed or suspected pandemic H1N1 cases in the month before their arrival in Kenya, or with any persons in Kenya with ILI. The calculated household secondary attack rate for confirmed pandemic H1N1 in this group was 33% (11 of 33).

**Group 2.** On June 26, a group of four public health students from London flew to Nairobi and then traveled to Kisumu to work on malaria-related projects. The next day, one student, a woman aged 22 years, developed subjective fever and malaise, followed by a cough 2 days later. On June 29, two of the other students, who reported no contact with anyone with ILI during the preceding month in the UK or while in Kenya (other than the ill student), developed sore throat. On June 30, public health officials in Kenya were notified, and all four students agreed to remain in isolation together in a private house. An rRT-PCR test for pandemic H1N1 was positive in specimens

**FIGURE. Number of laboratory-confirmed cases of 2009 pandemic influenza A (H1N1) virus infection,\* by transmission group and date of symptom onset† — Kenya, June–July 2009**



\* N = 18. A laboratory-confirmed case was defined by a positive test result for 2009 pandemic influenza A (H1N1) virus by real-time reverse transcription–polymerase chain reaction at two laboratories located in Nairobi, Kenya: the National Influenza Center and the CDC-Kenya International Emerging Infections Program.

† Onset of fever or any upper respiratory symptom.

taken from the index patient on July 1. One of the other two ill students tested positive on July 3. For group 2, the secondary attack rate for confirmed pandemic H1N1 among household contacts was 33% (one of three).

**Group 3.** On June 28, a boy aged 5 years traveled by plane, accompanied by two members of his family, from London to Nairobi on vacation. On June 29, he developed a subjective fever, cough, and vomiting and sought treatment at a Nairobi clinic. Pandemic H1N1 virus was detected by rRT-PCR in specimens taken on June 30. By the time the results became available, the patient had traveled with two family members by road in a private vehicle to Northeastern Province, nearly 500 km away. Contact tracing was conducted, and nine family members in Nairobi and six family members in Northeastern Province (including the patient and the two family members who had traveled with him from Nairobi) were put under voluntary quarantine. On July 3, all 14 quarantined family members were interviewed; none were symptomatic. On July 4, the index patient's brother aged 8 years, who also had traveled from the UK on June 28, developed a runny nose; a specimen was taken, which tested positive for pandemic H1N1 on July 5. The secondary attack rate for confirmed pandemic H1N1 among household contacts was 7% (one of 14).

**Group 4.** On July 2, a Kenyan man aged 21 years who was studying in the UK traveled by plane to Nairobi on vacation. Upon arrival in Nairobi the same day, he developed sore throat, cough, and headache, but no fever. He reported contact with a person with confirmed pandemic H1N1 while he was in the

UK during the week before his departure. On July 4, he sought care for his illness at a Nairobi hospital and had a respiratory specimen taken, which was positive for pandemic H1N1 by rRT-PCR. He remained in isolation at a house in Nairobi for 7 days. Of his four household contacts, one, a woman aged 51 years with hypothyroidism, tested positive for pandemic H1N1; the others had negative test results. The secondary attack rate for confirmed pandemic H1N1 among household contacts was 25% (one of four).

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**Editorial Note:** This report documents household transmission from the first four laboratory-confirmed cases of pandemic H1N1 in Kenya. The overall 26% secondary attack rate (range: 7%–33%) for laboratory-confirmed pandemic H1N1 is similar to the recently reported 30% secondary attack rate for laboratory-confirmed pandemic H1N1 in a tourist group in China (6). However, among the two student groups (groups 1 and 2), the 33% secondary household attack rate was slightly higher than the 21%–26% usually reported for laboratory-confirmed seasonal influenza (4,5).

The student groups were defined as household contacts because they lived together, ate together, and spent much of their time together, like members of typical households. However, unlike most households, the students were healthy young adults, and the nature of the students' interactions might have differed from typical household interactions. The fact that the students were together throughout the day (unlike usual households, where persons might go to work and to school) might have created an environment to facilitate transmission of the pandemic H1N1.

The findings in this report are subject to at least four limitations. First, extensive contact tracing was conducted only for these four groups at the beginning of the outbreak in Kenya. Therefore, the secondary attack rates reported are based on small numbers and are not generalizable. Second, for contacts who developed infection shortly after the index patient (e.g., the student contact in group 2), whether these patients acquired infection from a common exposure (e.g., an ill contact of the index patient) rather than via secondary transmission cannot be determined. Third, if infected contacts had not been shedding

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

One small, retrospective study reported a 30% secondary attack rate for laboratory-confirmed 2009 pandemic influenza A (H1N1) virus infection among tourists in China.

#### What is added by this report?

Investigations into the initial cases of pandemic H1N1 in Kenya during June–July 2009 showed an overall laboratory-confirmed secondary attack rate of 26% in households, which is similar to laboratory-confirmed secondary attack rates reported for seasonal influenza.

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

Additional studies are needed to better understand the secondary attack rates for laboratory-confirmed pandemic H1N1 in both traditional and nontraditional household settings.

virus at the time of specimen collection, because they were early or very late in the course of their illness, the specimen would have tested negative. Testing of acute and convalescent sera or sampling symptomatic contacts on multiple days might have identified such cases. Therefore, the secondary attack rates in this report might be an underestimation of the actual rates. Finally, because contacts might not have remembered being exposed to persons with ILI, the findings might be subject to recall bias.

Since the introduction of the four cases, pandemic H1N1 has spread throughout all of Kenya's six provinces. As of October 9, Kenya had identified 359 cases of pandemic H1N1; 28 (7.8%) had been in patients who subsequently were hospitalized, and none had died. Despite the mild nature of the initial infections in Kenya, the H1N1 pandemic ultimately might have severe outcomes in Africa. In Africa, relatively high rates of malnutrition and human immunodeficiency virus, malaria, and other infectious diseases, combined with limited health-care infrastructure and reduced health-care utilization, create the possibility that the H1N1 pandemic might cause more severe disease and deaths in Africa (7,8).

The results of this investigation should be interpreted with caution. Although the overall 26% secondary attack rate of laboratory-confirmed 2009 pandemic influenza A (H1N1) virus infection appears comparable to that for laboratory-confirmed seasonal influenza, more studies are needed to better understand the secondary attack rates in both traditional and nontraditional household settings.

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## Reduction in Rotavirus After Vaccine Introduction – United States, 2000–2009

Worldwide, rotavirus is the leading cause of severe acute diarrhea in children aged <5 years (1). In the United States, before introduction of a live, oral pentavalent rotavirus vaccine (RV5) in 2006, rotavirus caused an estimated 20 to 60 deaths, 55,000 to 70,000 hospitalizations, 205,000 to 272,000 emergency department visits, and 410,000 outpatient visits annually (2). Before 2000, rotavirus had a predictable winter-spring seasonality and geographic pattern in the United States, with activity beginning in the West census region during December–January, extending across the country, and ending in the Northeast region during May–June (3,4). A similar but less pronounced trend was observed during 2000–2006 (5). To characterize trends and compare the 2007–08 and 2008–09 rotavirus seasons with the prevaccine period 2000–2006, CDC analyzed data from the National Respiratory and Enteric Viruses Surveillance System (NREVSS). The results indicated that the 2007–08 and 2008–09 seasons were both shorter and later than the median during 2000–2006. The 2008–09 season had 15% more positive rotavirus test results than the 2007–08 season, but the number of positive test results during each season was substantially lower than the median observed during 2000–2006. Continued surveillance is needed to characterize the effect of routine childhood rotavirus vaccination on rotavirus disease in U.S. children.

NREVSS is a national, passive laboratory surveillance network that monitors temporal and geographic trends for

various viral pathogens, including rotavirus. Participating laboratories provide weekly reports to CDC of the number of rotavirus antigen detection tests performed and positive results obtained using commercially available enzyme immunoassays, which have >90% sensitivity and specificity. A median of 67 laboratories (range: 62–72) contributed rotavirus testing data to NREVSS during July 2000–June 2009. Data were aggregated by surveillance week for three periods: the baseline prevaccine period July 2000–June 2006 and the 2007–08 and 2008–09 postvaccine rotavirus seasons. Using data from all NREVSS laboratories contributing testing results, these periods were examined to compare dates of rotavirus season onset and offset and peak incidence. Data from the transitional season (July 2006–June 2007) were excluded because rotavirus vaccine recommendations from the Advisory Committee on Immunization Practices (ACIP) were first published in August 2006. The onset of rotavirus season was defined as the first of 2 consecutive weeks during which the percentage of stool specimens testing positive for rotavirus was  $\geq 10\%$ , and offset was defined as the last of 2 consecutive weeks during which the percentage of stool specimens testing positive for rotavirus was  $\geq 10\%$ . To characterize national and regional changes in rotavirus test results, CDC examined the number of tests performed and the number of positive results obtained from 29 NREVSS laboratories that consistently reported  $\geq 30$  weeks of data per season during 2000–2009.

Compared with the median rotavirus season onset of December (surveillance week 50) during 2000–2006, onset of the 2007–08 rotavirus season in early March (week 9) was approximately 11 weeks later, and onset of the 2008–09 season in late January (week 4) was approximately 6 weeks later (Figure) (5,6). Durations of the 2007–08 and 2008–09 rotavirus seasons were 14 weeks and 17 weeks, respectively, compared with 26 weeks (range: 25–28) during 2000–2006. Peak activity was observed in late April (week 17) during the 2007–08 season and in March (week 11) during the 2008–09 season, compared with a median peak activity in early March (week 9) during 2000–2006. The peak percentage of positive rotavirus test results was 17% during the 2007–08 season and 25% during the 2008–09 season, compared with a median of 43% (range: 37–56%) during 2000–2006.

During the 2008–09 season, rotavirus activity onset in the Northeast, Midwest, and South regions occurred during weeks 48, 3, and 46, respectively, within 8 weeks of the median onsets noted for each region during 2000–2006 (weeks 4, 1, and 52, respectively). In contrast, the West region, which historically has had the earliest onset, had the latest onset during the 2008–09 season, beginning week 10, or 14 weeks later than the median onset for the West region (week 48) during 2000–2006.

Of the 29 laboratories included in the test result analyses, 10 were in the South region, nine in the West, eight in the Midwest, and two in the Northeast (Table). During 2000–2006, an annual median of 14,211 rotavirus tests (range: 11,844–17,060) were performed overall by these laboratories; similar total numbers of tests were performed during the 2007–08 season (14,532) and 2008–09 season (14,201). However, although the number of tests performed was similar, the number with positive results decreased 64%, from a median of 3,551 tests (range: 3,007–3,949) during 2000–2006 to 1,281 during 2007–08, and decreased 59% to 1,468 during 2008–09 (Table). Similarly, when compared with the median of 25% of total tests positive for rotavirus during 2000–2006, the percentage of rotavirus positive tests decreased 64% during the 2007–08 season to 9%, and decreased 60% during the 2008–09 season to 10%.

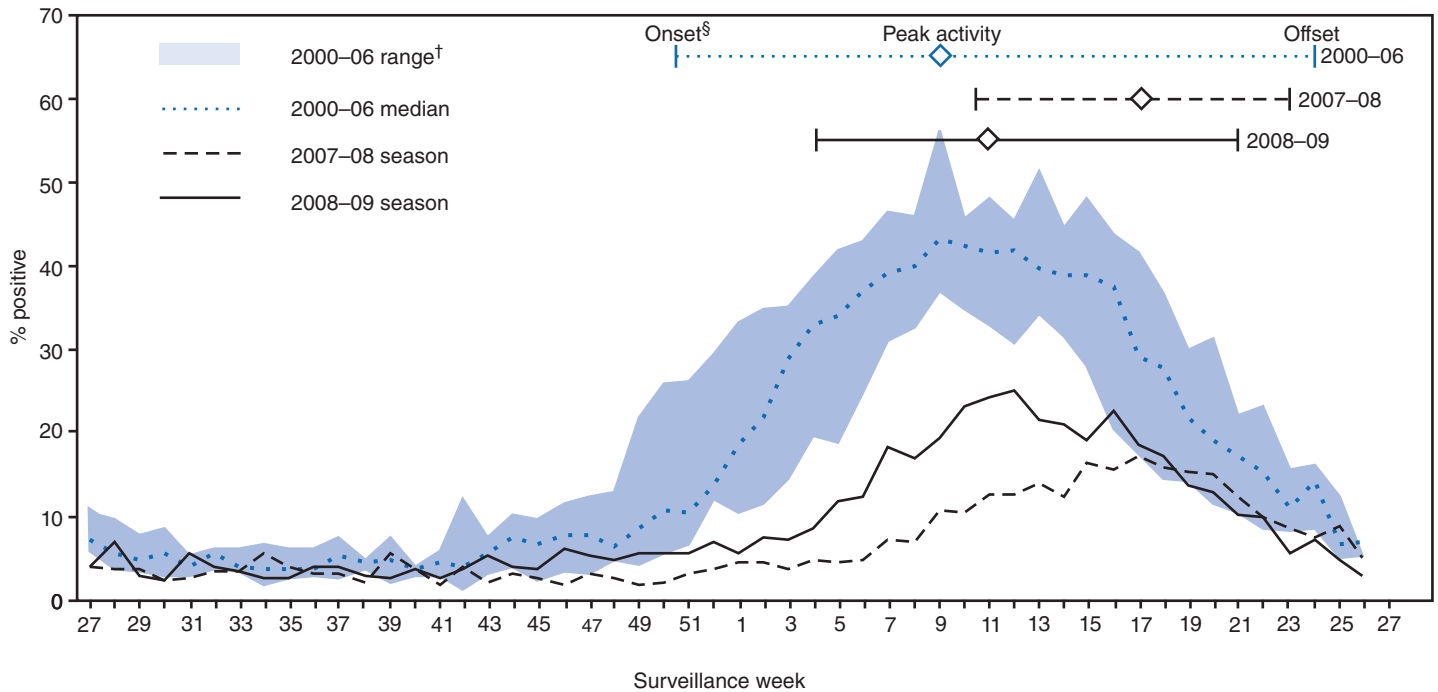
Among regions, laboratories in the South and Midwest had more positive test results during the 2008–09 season than during the 2007–08 season (529 versus 301 and 549 versus 380, respectively) (Table). In contrast, laboratories in the West had fewer positive test results during the 2008–09 season than during the 2007–08 season (356 versus 566) (Table). Laboratories in the Northeast had the same number of positive results (34) for both seasons. In all regions, the number of positive test results reported during the 2007–08 and 2008–09 seasons was lower than the median reported during 2000–2006, and the percentage of positive results was lower than the percentage reported during 2000–2006.

**Reported by:** *National Respiratory and Enteric Virus Surveillance System. CA Panozzo, MPH, JE Tate, PhD, DC Payne, PhD, MM Cortese, MD, M Patel, MD, J Gentsch, PhD, U Parashar, MBBS, Div of Viral Diseases, National Center for Immunization and Respiratory Diseases. JE Cortes, MD, DH Esposito, MD, EIS officers, CDC.*

**Editorial Note:** Sentinel laboratory surveillance demonstrates a decline in U.S. rotavirus activity during the first two seasons after introduction of vaccination against rotavirus in 2006. During the 2007–08 season, onset of rotavirus activity was 11 weeks later than the median onset during 2000–2006, and the number of positive test results was 64% lower than the prevaccine period (5,6). Although the number of positive test results was somewhat greater and the rotavirus season was longer during 2008–09 compared with 2007–08, rotavirus activity during both seasons was substantially lower than that reported during 2000–2006. Regional variations in season onset, duration, and test results also were observed during 2008–09, particularly in the West, underscoring the importance of monitoring to assess trends after introduction of a vaccine.

This analysis suggests that RV5 vaccination might provide benefit to both vaccinated and unvaccinated persons by

**FIGURE. Percentage of rotavirus tests with positive results, by surveillance week — participating laboratories, National Respiratory and Enteric Virus Surveillance System (NREVSS), United States, July 2000–June 2009\***



\* A median of 67 laboratories (range: 62–72) contributed rotavirus testing data to NREVSS during July 2000–June 2009.

† Range created using the maximum or minimum percentage of rotavirus positive tests for each surveillance week during 2000–2006. Maximums and minimums for each week might have occurred during any of the six rotavirus seasons during 2000–2006.

§ The onset of rotavirus season was defined as the first of 2 consecutive weeks during which the percentage of stool specimens testing positive for rotavirus was  $\geq 10\%$ ; offset was defined as the last of 2 consecutive weeks during which the percentage of stool specimens testing positive for rotavirus was  $\geq 10\%$ .

reducing overall rotavirus transmission (i.e., herd immunity). Although nationally representative data regarding rotavirus vaccination coverage are not available, CDC used data through December 2007 from six sentinel immunization sites to estimate 1-dose RV5 coverage at 58% for children aged 3 months and coverage with  $\geq 1$  doses at 31% for children aged  $< 2$  years (5). In contrast, the number of positive rotavirus test results was 64% less during 2007–08 than 2000–2006, more than double the estimated vaccination coverage of 31% for children aged  $< 2$  years (5). Other surveillance studies have described declines in rotavirus activity among older children not eligible for vaccination (7). Similar observations were reported recently from Australia, where rotavirus vaccination was introduced in 2007 (8). Indirect benefits for unvaccinated persons after introduction of vaccine also have been documented with other vaccine preventable diseases. For example, significant reductions of invasive pneumococcal disease in adults occurred after introduction in 2000 of a 7-valent pneumococcal conjugate vaccine for children (9).

Although an additional birth cohort was vaccinated during 2008–09, only laboratories in the West region reported a decrease in the number of positive rotavirus test results from 2007–08. Substantial season-to-season variations in incidence

of rotavirus disease have been documented (10), and these variations should be considered in analyzing the differences in rotavirus activity between the 2007–08 and 2008–09 seasons. Rotavirus activity after vaccine introduction declined substantially during the 2007–08 season, compared with the prevaccine era 2000–2006, and this decline persisted for a second season after vaccine introduction. Further study is needed to characterize the contribution of routine rotavirus childhood vaccination, herd immunity, provider testing patterns, or other factors.

The findings in this report are subject to at least four limitations. First, NREVSS does not collect information on patient demographics or clinical data, precluding examination of trends in rotavirus detection by key factors such as age and vaccination status. Second, because patient-level information is unavailable, NREVSS might receive more than one result for a given patient. However, the likelihood of duplicate results was similar in the prevaccine and postvaccine periods and should not have affected the substantial decline observed in positive test results. Third, because the results come from a small, selected group of laboratories, they might not reflect national and regional trends in rotavirus detection. Finally, testing patterns of health-care providers for rotavirus were not assessed;

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

Before introduction of a vaccine in 2006, rotavirus caused an estimated 20 to 60 deaths, 55,000 to 70,000 hospitalizations, and 205,000 to 272,000 emergency department visits in the United States each year.

**What is added by this report?**

The 2007–08 and 2008–09 rotavirus seasons were shorter, later, and characterized by substantially fewer positive rotavirus test results, compared with median data for 2000–2006 from a national network of sentinel laboratories.

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

Continued monitoring is needed to enhance understanding of the effect of vaccination on rotavirus disease among those who are vaccinated and unvaccinated.

possible changes in testing practices after vaccine introduction might have affected these findings.

The incidence of rotavirus disease has declined since introduction of rotavirus vaccination for children in the United States. Continued monitoring of rotavirus seasons and epidemiologic studies to examine patient age, vaccination status, and other characteristics of rotavirus cases, will enhance understanding of the effect of vaccination on rotavirus disease in U.S. children.

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**TABLE. Number of rotavirus tests performed and number of positive results, by U.S. census region — 29 selected laboratories,\* National Respiratory and Enteric Virus Surveillance System, United States, July 2000–June 2009**

Region/Rotavirus season	No. tests performed†	No. positive test results†	% positive	% change from 2000 to 2006	
				No. positive test results	% positive
<b>All regions (29§)</b>					
2000–06	14,211	3,551	25	Referent	Referent
2007–08	14,532	1,281	9	-64	-64
2008–09	14,201	1,468	10	-59	-60
<b>West (9)</b>					
2000–06	5,001	1,139	23	Referent	Referent
2007–08	6,431	566	9	-50	-61
2008–09	5,771	356	6	-68	-74
<b>South (10)</b>					
2000–06	4,417	1,075	24	Referent	Referent
2007–08	3,705	301	8	-72	-67
2008–09	3,720	529	14	-51	-42
<b>Midwest (8)</b>					
2000–06	3,703	1,050	28	Referent	Referent
2007–08	4,106	380	9	-64	-68
2008–09	4,416	549	12	-48	-57
<b>Northeast (2)</b>					
2000–06	393	85	22	Referent	Referent
2007–08	290	34	12	-60	-45
2008–09	294	34	12	-60	-45

\* The 29 laboratories that reported rotavirus test results for  $\geq 30$  weeks each year during 2000–2009.

† For 2000–2006, the numbers are the medians for the 2000–01, 2001–02, 2002–03, 2003–04, 2004–05, and 2005–06 rotavirus seasons.

§ Number of selected laboratories.

## Progress Toward Poliomyelitis Eradication – Nigeria, January 2008–July 2009

Although wild poliovirus (WPV) cases in Nigeria decreased from 1,129 in 2006 to 285 in 2007 (1,2), Nigeria had the world's highest polio burden in 2008, with 798 (48%) of 1,651 WPV cases reported globally, including 721 (74%) of 976 WPV type 1 (WPV1) cases. This report provides an update on progress toward polio eradication in Nigeria during 2008–2009 and activities planned to interrupt transmission. During 2008–2009, Nigeria was the source for WPV1 transmission to 11 countries and WPV type 3 (WPV3) transmission to four countries (3). In addition, transmission of circulating type 2 vaccine-derived poliovirus (cVDPV2) has been ongoing since 2005 (4). WPV1 cases decreased 87%, from 574 during January–July 2008 to 73 for the same period in 2009. However, WPV3 cases rose approximately six-fold, from 51 during January–July 2008 to 303 during the same period in 2009, partly because of the increased emphasis on controlling WPV1. The decline in the proportion of children who have never received oral poliovirus vaccine (OPV) in the highest-incidence northern states, from 31% in 2006 to 11% in the first half of 2009 indicates progress toward eradication. During 2008–2009, activities to accelerate polio eradication included use of mobile teams to vaccinate children not at home during supplemental immunization activities (SIAs), and efforts to increase political oversight and the engagement of community leaders. Sustained support of traditional, religious, and political leaders and improved implementation of SIAs will be needed to interrupt WPV and cVDPV2 transmission.

### Immunization Activities

Nigeria relies on a combination of routine immunization services using trivalent OPV (tOPV, types 1, 2, and 3) and SIAs\* to immunize children against polio. In 2008, national coverage of children by age 12 months with 3 routine immunization tOPV doses was reported at approximately 50%†; however, population-based surveys conducted during 2007–2008 found coverage with 3 tOPV doses <40% nationally, and <30% in northern states with high WPV incidence (5,6).

WPV1 is more likely to cause paralytic disease and have a wider geographic spread than WPV3. Monovalent vaccines are more effective against a given WPV type than is tOPV.

\* Mass campaigns conducted during a short period (days to weeks) during which a dose of OPV is administered to all children aged <5 years, regardless of previous vaccination history. Campaigns can be conducted nationally or in portions of the country (i.e., subnational SIAs).

† National coverage estimated based on administrative coverage, which uses official census numbers to estimate the number of targeted children.

Two national SIAs were conducted during 2008, one using monovalent OPV type 3 (mOPV3), and one using monovalent OPV type 1 (mOPV1). Three national SIAs were conducted during January–May 2009 using mOPV3, mOPV1, and tOPV consecutively (Figure 1). During January 2008–July 2009, mOPV1 was used in seven subnational SIAs, predominantly conducted in northern states.

Vaccination histories of children with nonpolio acute flaccid paralysis (AFP) are used to estimate OPV coverage among the target population of children aged 6–59 months. The proportion of children with nonpolio AFP reported to have never received an OPV dose (zero-dose children) in seven high-incidence states ( $\geq 0.8$  confirmed WPV cases per 100,000 population during 2008) declined from 31% in 2006 to 11% during the first half of 2009 (Table). However, the proportion of zero-dose children remained high in 2009 in Kano (17%) and Zamfara (19%). By comparison, the proportion of zero-dose children in other northern (range: 3%–6%) and southern (2%) states was stable during 2006–2009 (Table). The proportion of children with nonpolio AFP with  $\geq 4$  reported OPV doses in high-incidence states increased from 13% in 2006 to 35% during January–July 2009.

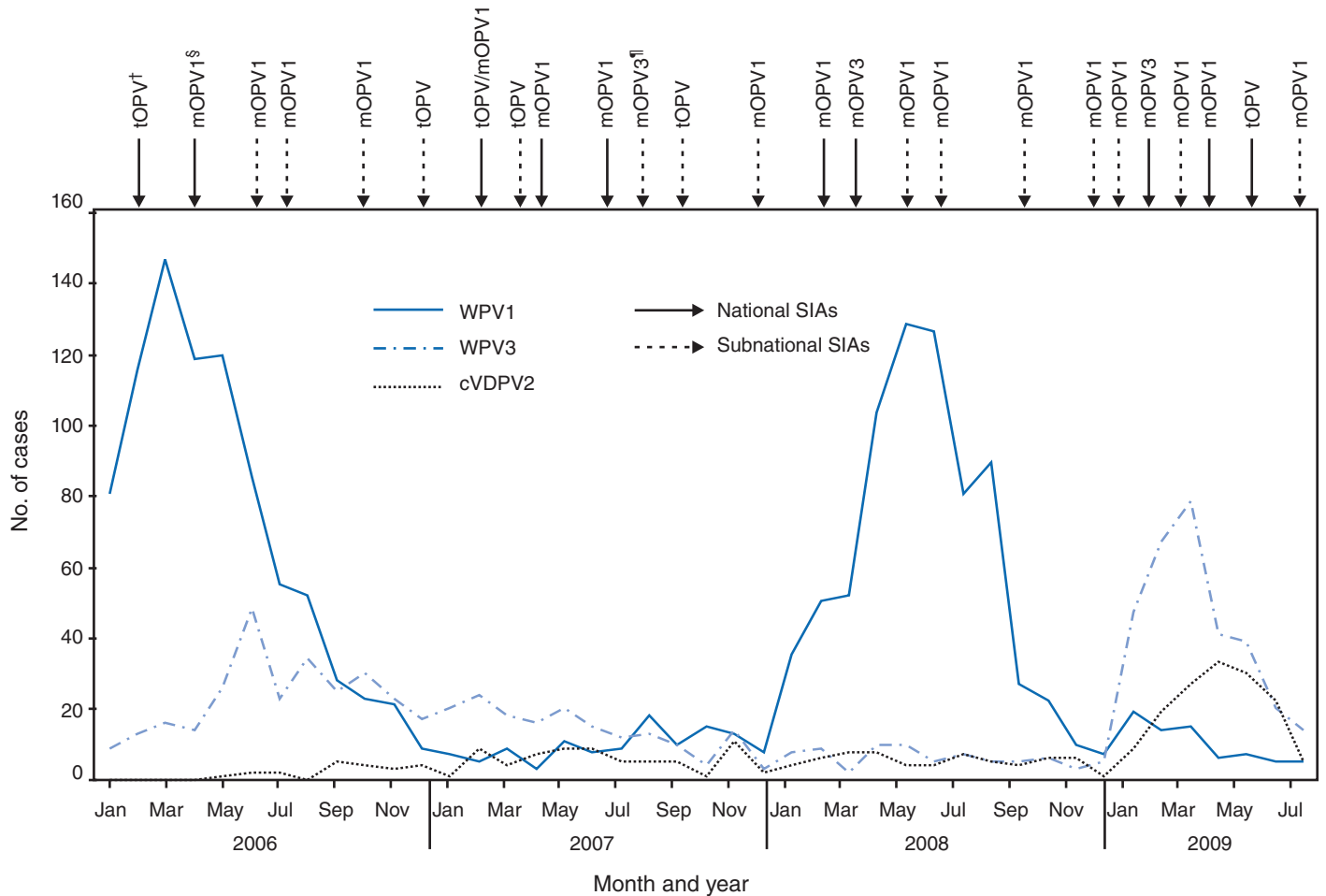
### AFP Surveillance

The polio eradication initiative in Nigeria relies on AFP surveillance to identify and confirm poliomyelitis cases by viral isolation; AFP surveillance is monitored using World Health Organization (WHO) targets for case detection and adequate stool specimen collection.§ The national nonpolio AFP detection rate among children aged <15 years was 5.7, 9.4, and 7.4 cases per 100,000 population in 2007, 2008, and January–July 2009, respectively. Nonpolio AFP detection rates meeting the target of at least two cases per 100,000 were achieved in all 37 states during 2007–2009, with 740 (96%), 752 (97%), and 714 (92%) of 774 local government areas (LGAs) achieving this target during 2007, 2008, and January–July 2009, respectively. Among AFP cases reported nationally, adequate stool specimens were collected for 92% of cases during 2007, and 94% of cases during 2008 and January–July 2009. During 2007–2009, Nigeria's 37 states reached the target of >80% of AFP cases with adequate stool specimens, as did 584 (75%) of 774 LGAs during 2007, 638 (82%) during 2008,

§ AFP cases in children aged <15 years and suspected polio in persons of any age are reported and investigated, with laboratory testing, as possible poliomyelitis. WHO operational targets for countries at high risk for poliovirus transmission are a nonpolio AFP rate of at least two cases per 100,000 population aged <15 years at each subnational level and adequate stool specimen collection for >80% of AFP cases (i.e., two specimens collected at least 24 hours apart, both within 14 days of paralysis onset, and shipped on ice or frozen ice packs to a WHO-accredited laboratory and arriving at the laboratory in good condition).



**FIGURE 1. Number of laboratory-confirmed poliomyelitis cases, by wild poliovirus (WPV) type or circulating vaccine-derived poliovirus type 2 (cVDPV2) and month of onset, type of supplementary immunization activity (SIA),\* and type of vaccine administered — Nigeria, January 2006–July 2009**



\* Mass campaign conducted during a short period (days to weeks) during which a dose of oral poliovirus vaccine (OPV) is administered to all children aged <5 years, regardless of previous vaccination history. Campaigns can be conducted nationally or in portions of the country.

† Trivalent OPV.

§ Monovalent OPV type 1.

¶ Monovalent OPV type 3.

and 651 (84%) during January–July 2009. The proportion of LGAs reaching the target for both surveillance indicators was similar in 2007 (75%) and 2008 (80%).

### WPV and cVDPV Incidence

Among 1,174 WPV cases with onset during 2008 through July 2009, 836 (71%) occurred in children aged <3 years, 298 (25%) in children aged 3–5 years, and 31 (3%) in children aged >5 years. Overall, 1,152 (98%) cases involved children reported to have received <4 OPV doses, including 300 (26%) cases involving zero-dose children.

During 2008, of the 721 WPV1 cases reported, 570 (79%) occurred in the seven high-incidence northern states, 131 (18%) in other northern states, and 20 (3%) in southern states. Of 73 WPV1 cases reported with onset during

January–July 2009, seven (10%) were in the high-incidence northern states and occurred primarily early in the year. The number of WPV1-affected LGAs during January–July 2009 was 52, compared with 188 during the same period in 2008 (Figure 2).

Among 77 WPV3 cases reported with onset during 2008, 42 (55%) occurred in the seven high-incidence states, 25 (32%) in other northern states, and 10 (13%) in southern states. Of 303 WPV3 cases reported with onset during January–July 2009, 232 (77%) occurred in the high-incidence states, 71 (23%) in other northern states, and none in southern states. The number of WPV3-affected LGAs during January–July 2009 increased four-fold to 155, from 38 during the same period in 2008 (Figure 2).

**TABLE. Number and percentage of nonpolio acute flaccid paralysis (NPAFP) reported cases among children aged 6–59 months with zero dose\* of oral poliovirus vaccine (OPV) — Nigeria, January 2006–June 2009†**

Region/State	2006			2007			2008			2009		
	No. of NPAFP cases	Zero dose		No. of NPAFP cases	Zero dose		No. of NPAFP cases	Zero dose		No. of NPAFP cases	Zero dose	
		No.	(%)		No.	(%)		No.	(%)		No.	(%)
<b>High-incidence northern states<sup>§</sup></b>	<b>974</b>	<b>306</b>	<b>(31)</b>	<b>863</b>	<b>181</b>	<b>(21)</b>	<b>1,150</b>	<b>210</b>	<b>(18)</b>	<b>547</b>	<b>60</b>	<b>(11)</b>
Bauchi	77	11	(14)	107	17	(16)	95	13	(14)	48	0	(0)
Jigawa	124	56	(45)	126	31	(25)	99	5	(5)	39	2	(5)
Kaduna	114	29	(25)	125	13	(10)	140	26	(19)	64	5	(8)
Kano	247	95	(38)	214	68	(32)	364	107	(29)	169	29	(17)
Katsina	185	69	(37)	161	33	(21)	195	32	(16)	74	8	(11)
Yobe	84	18	(21)	62	10	(16)	96	2	(2)	76	1	(1)
Zamfara	143	28	(20)	68	9	(13)	161	25	(16)	77	15	(19)
<b>Other northern states<sup>¶</sup></b>	<b>1,032</b>	<b>61</b>	<b>(6)</b>	<b>996</b>	<b>37</b>	<b>(4)</b>	<b>1,222</b>	<b>58</b>	<b>(5)</b>	<b>715</b>	<b>23</b>	<b>(3)</b>
<b>Southern states**</b>	<b>912</b>	<b>15</b>	<b>(2)</b>	<b>1,092</b>	<b>24</b>	<b>(2)</b>	<b>1,287</b>	<b>26</b>	<b>(2)</b>	<b>686</b>	<b>12</b>	<b>(2)</b>
<b>Total</b>	<b>2,918</b>	<b>382</b>	<b>(13)</b>	<b>2,951</b>	<b>242</b>	<b>(8)</b>	<b>3,659</b>	<b>294</b>	<b>(8)</b>	<b>1,948</b>	<b>95</b>	<b>(5)</b>

\* Children who have never received an OPV dose, as reported by caregiver.

† Surveillance data are reported quarterly; complete data available only for January–June 2009.

§ High-incidence states had  $\geq 0.8$  confirmed WPV cases per 100,000 population during 2008.

¶ Adamawa, Benue, Borno, Federal Capital Territory, Gombe, Kebbi, Kogi, Kwara, Nassarawa, Niger, Plateau, Sokoto, and Taraba.

\*\* Abia, Akwa Ibom, Anambra, Bayelsa, Cross River, Delta, Ebonyi, Edo, Ekiti, Enugu, Imo, Lagos, Ogun, Ondo, Osun, Oyo, and Rivers.

An outbreak of cVDPV2 in Nigeria began in 2005 (4). During 2008, 63 cVDPV2 cases were reported, increasing to 145 cVDPV2 cases reported with onset during January–July 2009. Despite the increase in cVDPV2 in early 2009, the monthly incidence declined after the tOPV SIA in late May, from 30 in May, to five in July (Figure 1).

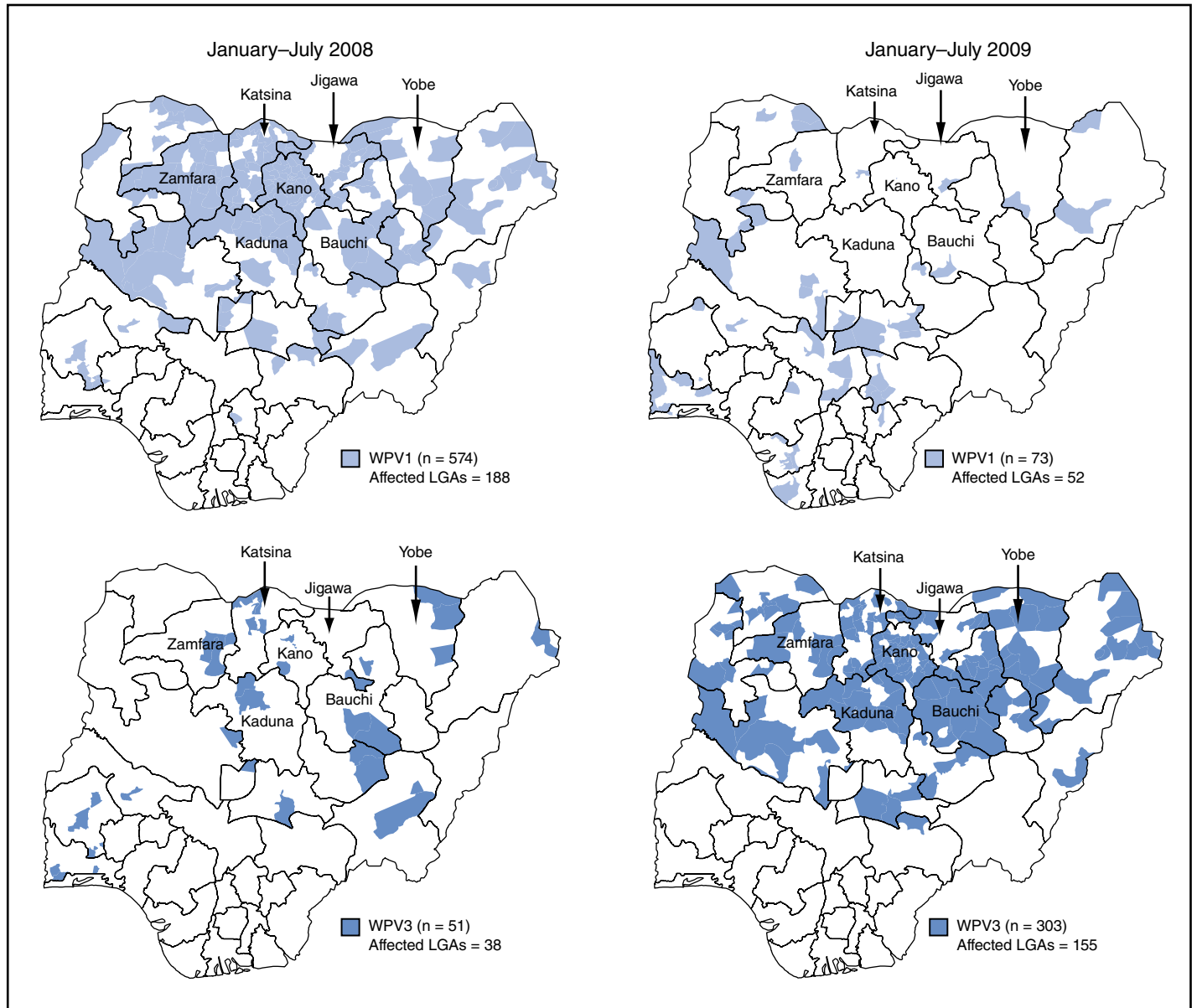
**Reported by:** National Primary Health Care Development Agency and Federal Ministry of Health; Country Office of the World Health Organization, Abuja; Poliovirus Laboratory, Univ of Ibadan, Ibadan; Poliovirus Laboratory, Univ of Maiduguri Teaching Hospital, Maiduguri, Nigeria. African Regional Polio Reference Laboratory, National Institute for Communicable Diseases, Johannesburg, South Africa. Vaccine Preventable Diseases, World Health Organization Regional Office for Africa, Brazzaville, Congo. Polio Eradication Dept, World Health Organization, Geneva, Switzerland. Div of Viral Diseases and Global Immunization Div, National Center for Immunization and Respiratory Diseases, CDC.

**Editorial Note:** A loss of public confidence in OPV and suspension of SIAs in several northern states during 2003–2004 (7), along with long-standing insufficiencies in the health infrastructure and poor implementation of SIAs in many northern states has resulted in persistently high proportions of under- and unimmunized children in north Nigeria. A high incidence of WPV1 has occurred every 2 years in Nigeria (Figure 1). Although the lower WPV1 incidence observed in 2009 might be partly a result of natural immunity after high WPV1 incidence in 2008, the decline of WPV1 transmission in northern states to current historically low levels, the overall decrease in zero-dose children, and the low number of LGAs with WPV1 infections in northern states in 2009 suggest real improvements in the quality of SIAs.

The decrease in WPV1 case counts from 2008 through July 2009 followed the near-exclusive use of mOPV1 for SIAs. However, with this focus on controlling WPV1, the number of WPV3 cases rose. In addition, increased numbers of cVDPV2 in 2009 reflect the long-standing insufficient delivery of routine immunization services and the long interval (September 2007–May 2009) between tOPV SIAs; high coverage with tOPV (the only formulation to include type 2) is necessary to prevent emergence and transmission of cVDPV2. Recent decreases in monthly incidence of cVDPV2 suggest that the quality of the recent tOPV SIA improved, but further surveillance is needed to monitor trends. Recently developed bivalent OPV (bOPV, types 1 and 3) has been found to be superior to tOPV and as effective as mOPV in rates of seroconversion to WPV1 and WPV3 (8; WHO, unpublished data, 2009) and might be a better tool to interrupt transmission of both WPV serotypes. Strategic use of tOPV and bOPV (when available) during SIAs should optimize population immunity against all poliovirus serotypes. A subnational SIA in northern states using tOPV was conducted in August; additional SIAs are planned for October and November of 2009, and at least six national and subnational SIA rounds are planned for 2010.

The estimated percentage of zero-dose children has decreased substantially from 2006 to 2009 in most of the seven high-incidence states. If decreases experienced in the first half of 2009 continue, this will further indicate that progress is being made toward improving SIA implementation. However, 65% of target children in these high-incidence states remain under-vaccinated (<4 doses). Based on experience in southern Nigeria and elsewhere, until the proportion of zero-dose children is below 10% in each state, and the proportion vaccinated with

**FIGURE 2. Local government areas (LGAs) with laboratory-confirmed cases of wild poliovirus type 1 (WPV1) and type 3 (WPV3) — Nigeria, January–July 2008 and January–July 2009**



$\geq 4$  doses is  $>80\%$ , the risk remains that WPV transmission will persist or reemerge (9).

Nigeria often has been a source of virus introduction into polio-free countries (3). During 2008–2009 to date (as of October 13, 2009), 146 WPV1 cases resulted from virus genetically linked to northern Nigeria that spread to 11 previously polio-free neighboring countries (Benin, Burkina Faso, Chad, Ghana, Guinea, Ivory Coast, Liberia, Mali, Niger, Sierra Leone, and Togo) (3) and one linked cVDPV2 case occurred in Guinea (4). During this same period, 35 WPV3 cases resulted from virus genetically linked to northern Nigeria that spread to Benin, Cameroon, Central Africa Republic, and

Niger. In addition, spread of virus in 2007 from Nigeria into Chad resulted in 59 WPV3 cases in Chad during 2008–2009 to date (3).

The 2008 World Health Assembly called for increased commitment and leadership within the Nigerian government to increase vaccination coverage (2,10). International partners<sup>4</sup> and the government have obtained greater commitment to polio eradication activities from political, religious, and traditional

<sup>4</sup> Include the Bill & Melinda Gates Foundation, Rotary International, KfW, World Bank, United Nations Children's Fund (UNICEF), WHO, Canadian International Development Agency, CDC, U.S. Agency for International Development, government of Japan, and European Union.

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

Nigeria is one of four remaining countries that have never eliminated wild poliovirus (WPV) transmission, and has been the source of spread to multiple neighboring countries.

#### What is added by this report?

Although Nigeria had the world's highest polio burden during 2008 (798 [48%] of 1,651 cases), greater efforts to improve vaccination coverage among children appear to have reduced WPV type 1 substantially, from 574 cases during January–July 2008 to 73 during the same period in 2009.

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

Sustained support of traditional, religious, and political leaders and improved implementation of polio vaccination activities will be needed to interrupt poliovirus transmission in Nigeria.

leaders at federal, state, and local levels. In February 2009, governors of all states convened an urgent meeting on child health, assisted by the Bill & Melinda Gates Foundation, and signed the Abuja Commitment to Polio Eradication in Nigeria, which defines specific goals and measurements of support by state and local government officials.\*\* Recently, the government has prioritized activities to improve SIAs in the LGAs at highest risk for polio transmission; the results of those efforts will be monitored closely at state and national levels. If the support of traditional, religious, and political leaders can be sustained and expanded to further improve implementation of polio vaccination activities in these states and LGAs, more rapid progress can be made toward interrupting poliovirus transmission in Nigeria.

\*\* Available at [http://www.polioeradication.org/content/publications/abujacommitments\\_04feb2009.pdf](http://www.polioeradication.org/content/publications/abujacommitments_04feb2009.pdf).

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#### Announcement

### World Stroke Day – October 29, 2009

Stroke is the third leading cause of death in the United States (1). Approximately 795,000 strokes occur each year in the United States, at an estimated cost of \$68 billion (1). World Stroke Day is October 29. The theme of this year's observance is What Can I Do?

Public health practitioners and other health professionals can encourage their patients to lower the risk for stroke by preventing or controlling high blood pressure and diabetes, lowering cholesterol, avoiding tobacco use, limiting alcohol use, engaging in regular physical activity, and eating a healthy diet with more fresh fruits and vegetables and less salt and saturated fat. Public health agencies also should educate members of the public to recognize the signs and symptoms of stroke and the importance of dialing 911 immediately for prompt medical attention.

CDC addresses stroke prevention by working with state-based programs, the Paul Coverdell National Acute Stroke Registry, and other organizations to develop strategies to prevent heart disease and stroke. Additional information regarding stroke is available at <http://www.cdc.gov/stroke>. More information regarding World Stroke Day 2009 is available at [http://www.world-stroke.org/world\\_day.asp](http://www.world-stroke.org/world_day.asp).

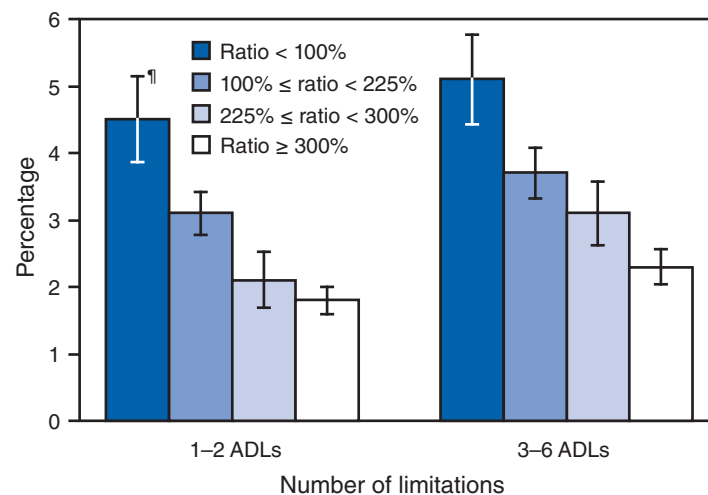
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## QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

### Percentage of Adults Aged $\geq 65$ Years Limited\* in Activities of Daily Living (ADLs), by Poverty Ratio<sup>†</sup> and Number of Limitations — National Health Interview Survey, United States, 2003–2007<sup>§</sup>



\* The number of limitations in activities of daily living (ADLs) is based on responses to survey questions that ask whether a person needs the help of others with 1) bathing or showering, 2) dressing, 3) eating, 4) getting in or out of bed or chairs, 5) using the toilet or getting to the toilet, and 6) getting around inside the home.

<sup>†</sup> The poverty ratio is a ratio of the family's income to that of the federal poverty threshold. Poverty thresholds, which are published by the U.S. Census Bureau, vary by family size and also the number of children in the family. Because of the high level of missing family income data, the poverty ratio was calculated using the 2003–2007 National Health Interview Survey multiple imputed family income and personal earnings data files.

<sup>§</sup> Estimates are based on household interviews of a sample of the civilian, noninstitutionalized U.S. population. Persons with unknown ADL status were excluded from the denominators.

<sup>¶</sup> 95% confidence interval.

During 2003–2007, among adults aged  $\geq 65$  years, the poorest (<100% of the poverty threshold) were approximately twice as likely to need help with ADLs as the least poor ( $\geq 300\%$  of the poverty threshold). Older adults were more likely to have 3–6 ADLs than 1–2 ADLs, except for the poorest group where the difference was not statistically significant.

**SOURCE:** Unpublished estimates from the 2003–2007 National Health Interview Survey. 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 October 17, 2009 (41st week)\***

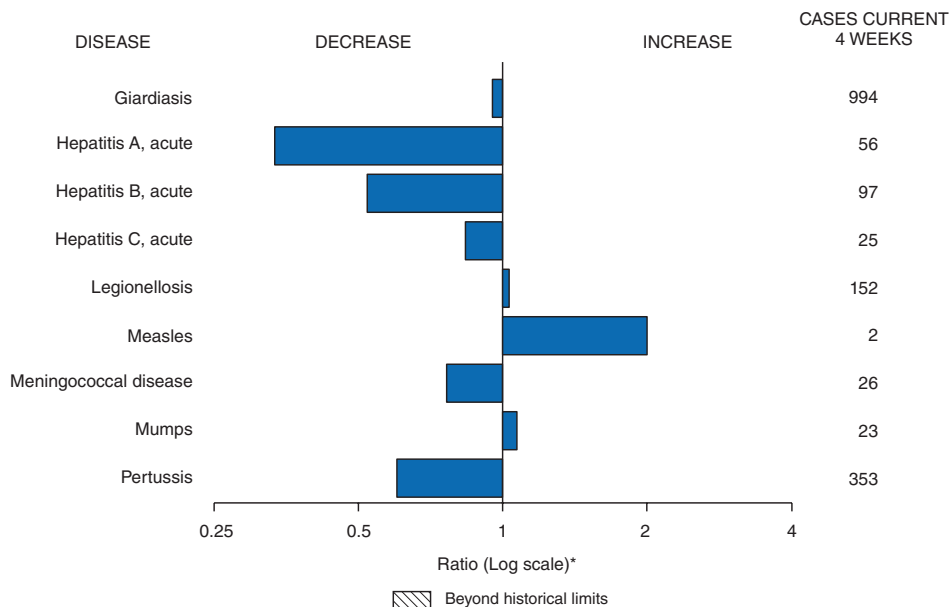
Disease	Current week	Cum 2009	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2008	2007	2006	2005	2004	
Anthrax	—	—	—	—	1	1	—	—	
Botulism:									
foodborne	—	12	0	17	32	20	19	16	
infant	—	41	2	109	85	97	85	87	
other (wound and unspecified)	—	17	1	19	27	48	31	30	
Brucellosis	—	76	2	80	131	121	120	114	
Chancroid	—	20	0	25	23	33	17	30	
Cholera	—	8	0	5	7	9	8	6	
Cyclosporiasis§	1	112	1	139	93	137	543	160	TX (1)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup	—	29	2	62	55	67	80	112	
eastern equine	—	4	0	4	4	8	21	6	
Powassan	—	1	—	2	7	1	1	1	
St. Louis	—	8	0	13	9	10	13	12	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§,**:									
<i>Ehrlichia chaffeensis</i>	1	631	14	1,137	828	578	506	338	NY (1)
<i>Ehrlichia ewingii</i>	—	6	0	9	—	—	—	—	
<i>Anaplasma phagocytophilum</i>	3	494	15	1,026	834	646	786	537	NY (3)
undetermined	—	101	3	180	337	231	112	59	
<i>Haemophilus influenzae</i> ,††									
invasive disease (age <5 yrs):									
serotype b	—	22	1	30	22	29	9	19	
nonserotype b	—	153	3	244	199	175	135	135	
unknown serotype	2	181	2	163	180	179	217	177	OH (1), GA (1)
Hansen disease§	1	49	2	80	101	66	87	105	AR (1)
Hantavirus pulmonary syndrome§	—	10	0	18	32	40	26	24	
Hemolytic uremic syndrome, postdiarrheal§	4	159	6	330	292	288	221	200	MN (1), NE (1), CA (2)
Hepatitis C viral, acute	6	1,540	16	878	845	766	652	720	FL (2), AR (1), ID (2), CA (1)
HIV infection, pediatric (age <13 years)§§	—	—	4	—	—	—	380	436	
Influenza-associated pediatric mortality§,¶¶	11	170	0	90	77	43	45	—	OH (1), VA (1), NC (1), GA (2), LA (1), OK (2), TX (1), OR (1), HI (1)
Listeriosis	15	584	22	759	808	884	896	753	MA (3), NY (3), PA (2), MO (1), MD (1), SC (1), AR (1), TX (1), ID (1), CA (1)
Measles***	1	59	0	140	43	55	66	37	OH (1)
Meningococcal disease, invasive†††:									
A, C, Y, and W-135	2	203	4	330	325	318	297	—	OK (2)
serogroup B	1	108	2	188	167	193	156	—	OH (1)
other serogroup	—	23	0	38	35	32	27	—	
unknown serogroup	2	349	10	616	550	651	765	—	GA (1), FL (1)
Mumps	10	343	14	454	800	6,584	314	258	NY (1), NYC (7), FL (1), CA (1)
Novel influenza A virus infections	—	§§§	—	2	4	N	N	N	
Plague	—	7	0	3	7	17	8	3	
Poliomyelitis, paralytic	—	—	0	—	—	—	1	—	
Polio virus infection, nonparalytic§	—	—	—	—	—	N	N	N	
Psittacosis§	—	7	0	8	12	21	16	12	
Q fever total§,¶¶¶:	1	65	2	124	171	169	136	70	
acute	—	54	1	110	—	—	—	—	
chronic	1	11	0	14	—	—	—	—	CO (1)
Rabies, human	—	1	0	2	1	3	2	7	
Rubella****	—	4	0	16	12	11	11	10	
Rubella, congenital syndrome	—	1	—	—	—	1	1	—	
SARS-CoV§,††††	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	—	110	1	157	132	125	129	132	
Syphilis, congenital (age <1 yr)	—	167	7	434	430	349	329	353	
Tetanus	—	8	1	19	28	41	27	34	
Toxic-shock syndrome (staphylococcal)§	—	64	2	71	92	101	90	95	
Trichinellosis	—	13	0	39	5	15	16	5	
Tularemia	3	65	2	123	137	95	154	134	MO (1), OK (2)
Typhoid fever	1	284	9	449	434	353	324	322	VA (1)
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	1	60	1	63	37	6	2	—	NY (1)
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	0	—	2	1	3	1	
Vibriosis (noncholera <i>Vibrio</i> species infections)§	9	459	8	492	549	N	N	N	OH (1), MD (2), VA (1), FL (2), CA (3)
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 October 17, 2009 (41st week)\***

—: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts.  
 \* Incidence data for reporting year 2009 is provisional, whereas data for 2004 through 2008 are finalized.  
 † Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years. The total sum of incident cases is then divided by 25 weeks. Additional information is available at <http://www.cdc.gov/epo/dphsi/phs/files/5yearweeklyaverage.pdf>.  
 § Not reportable in all states. Data from states where the condition is not reportable are excluded from this table, except starting in 2007 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at <http://www.cdc.gov/epo/dphsi/phs/infdis.htm>.  
 ¶ Includes both neuroinvasive and nonneuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for West Nile virus are available in Table II.  
 \*\* The names of the reporting categories changed in 2008 as a result of revisions to the case definitions. Cases reported prior to 2008 were reported in the categories: Ehrlichiosis, human monocytic (analogous to *E. chaffeensis*); Ehrlichiosis, human granulocytic (analogous to *Anaplasma phagocytophilum*), and Ehrlichiosis, unspecified, or other agent (which included cases unable to be clearly placed in other categories, as well as possible cases of *E. ewingii*).  
 †† Data for *H. influenzae* (all ages, all serotypes) are available in Table II.  
 §§ Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Implementation of HIV reporting influences the number of cases reported. Updates of pediatric HIV data have been temporarily suspended until upgrading of the national HIV/AIDS surveillance data management system is completed. Data for HIV/AIDS, when available, are displayed in Table IV, which appears quarterly.  
 ¶¶ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Fifty-three influenza-associated pediatric deaths occurring during the 2009–10 influenza season beginning August 30, 2009 have been reported. One hundred and sixteen influenza-associated pediatric death occurring during the 2008–09 influenza season have been reported.  
 \*\*\* The one measles case reported for the current week was imported.  
 ††† Data for meningococcal disease (all serogroups) are available in Table II.  
 §§§ CDC discontinued reporting of individual confirmed and probable cases of novel influenza A (H1N1) viruses infections on July 24, 2009. CDC will report the total number of novel influenza A (H1N1) hospitalizations and deaths weekly on the CDC H1N1 influenza website (<http://www.cdc.gov/h1n1flu>).  
 ¶¶¶ In 2008, Q fever acute and chronic reporting categories were recognized as a result of revisions to the Q fever case definition. Prior to that time, case counts were not differentiated with respect to acute and chronic Q fever cases.  
 \*\*\*\* No rubella cases were reported for the current week.  
 †††† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases.

**FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals October 17, 2009, with historical data**



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

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**TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending October 17, 2009, and October 11, 2008 (41st week)\***

Reporting area	Chlamydia†					Coccidioidomycosis					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	9,302	22,111	25,700	880,535	933,957	53	180	472	8,851	5,079	68	127	369	5,348	6,972
<b>New England</b>	508	760	1,655	31,385	29,182	—	0	1	1	1	2	6	36	349	348
Connecticut	188	224	1,306	9,194	8,806	N	0	0	N	N	—	0	29	29	41
Maine§	63	48	75	1,915	2,013	N	0	0	N	N	—	0	4	39	40
Massachusetts	163	352	945	15,136	13,540	N	0	0	N	N	1	2	15	150	153
New Hampshire	—	38	61	1,265	1,650	—	0	1	1	1	—	1	5	60	52
Rhode Island§	64	69	244	2,935	2,259	—	0	0	—	—	—	0	8	15	7
Vermont§	30	22	64	940	914	N	0	0	N	N	1	1	5	56	55
<b>Mid. Atlantic</b>	2,386	2,952	6,734	121,474	116,126	—	0	0	—	—	4	13	34	618	620
New Jersey	279	387	838	16,170	17,738	N	0	0	N	N	—	0	2	8	38
New York (Upstate)	548	580	4,563	24,707	21,710	N	0	0	N	N	3	4	12	184	220
New York City	1,092	1,135	3,130	47,074	44,400	N	0	0	N	N	—	1	8	62	94
Pennsylvania	467	831	1,072	33,523	32,278	N	0	0	N	N	1	7	19	364	268
<b>E.N. Central</b>	819	3,439	4,071	133,458	152,365	—	0	4	26	38	4	26	51	1,100	1,822
Illinois	—	1,091	1,371	40,635	46,563	N	0	0	N	N	—	2	11	106	176
Indiana	200	418	713	18,130	17,099	N	0	0	N	N	—	3	17	134	161
Michigan	561	867	1,332	36,075	35,762	—	0	3	14	29	—	5	11	216	230
Ohio	58	792	1,231	25,540	36,103	—	0	2	12	9	4	8	22	315	589
Wisconsin	—	334	494	13,078	16,838	N	0	0	N	N	—	7	22	329	666
<b>W.N. Central</b>	173	1,306	1,655	51,263	52,775	—	0	1	8	2	12	17	62	861	825
Iowa	90	190	256	7,658	7,071	N	0	0	N	N	2	4	13	177	248
Kansas	19	134	527	6,030	7,194	N	0	0	N	N	—	1	6	61	72
Minnesota	—	255	342	9,797	11,325	—	0	0	—	—	8	4	34	274	187
Missouri	—	511	646	20,113	19,312	—	0	1	8	2	—	3	12	150	148
Nebraska§	60	103	219	4,205	4,180	N	0	0	N	N	2	2	9	100	96
North Dakota	4	32	75	1,323	1,411	N	0	0	N	N	—	0	10	7	6
South Dakota	—	56	80	2,137	2,282	N	0	0	N	N	—	2	10	92	68
<b>S. Atlantic</b>	2,236	3,915	5,453	154,865	191,725	—	0	1	5	4	24	21	44	878	809
Delaware	145	87	180	3,768	2,823	—	0	1	1	1	—	0	2	8	11
District of Columbia	—	125	226	5,216	5,461	—	0	0	—	—	—	0	1	2	12
Florida	553	1,420	1,656	57,634	56,316	N	0	0	N	N	22	8	24	369	376
Georgia	—	695	1,909	24,091	33,022	N	0	0	N	N	1	6	23	293	201
Maryland§	284	425	772	16,566	18,382	—	0	1	4	3	1	1	5	34	32
North Carolina	—	0	1,193	—	27,579	N	0	0	N	N	—	0	11	58	44
South Carolina§	628	538	1,421	19,853	20,837	N	0	0	N	N	—	1	7	42	44
Virginia§	573	598	926	24,844	24,786	N	0	0	N	N	—	1	7	59	67
West Virginia	53	70	101	2,893	2,519	N	0	0	N	N	—	0	2	13	22
<b>E.S. Central</b>	696	1,739	2,208	70,798	67,250	—	0	0	—	—	1	3	10	169	141
Alabama§	—	467	625	18,237	19,826	N	0	0	N	N	—	1	5	51	62
Kentucky	—	243	458	9,638	9,554	N	0	0	N	N	—	1	4	46	29
Mississippi	—	468	840	18,798	15,852	N	0	0	N	N	—	0	3	12	16
Tennessee§	696	576	809	24,125	22,018	N	0	0	N	N	1	1	5	60	34
<b>W.S. Central</b>	852	2,867	5,455	118,211	117,367	—	0	1	1	3	14	11	271	413	1,574
Arkansas§	373	272	417	11,532	11,305	N	0	0	N	N	2	1	7	42	70
Louisiana	272	406	1,134	15,829	17,216	—	0	1	1	3	—	0	6	29	50
Oklahoma	157	175	2,729	10,996	10,501	N	0	0	N	N	4	2	11	106	113
Texas§	50	1,981	2,522	79,854	78,345	N	0	0	N	N	8	7	258	236	1,341
<b>Mountain</b>	462	1,466	2,145	55,990	58,472	30	133	369	6,958	3,421	2	9	25	419	498
Arizona	42	462	736	18,305	19,591	28	131	365	6,873	3,338	—	1	3	27	78
Colorado	—	365	727	12,882	14,029	N	0	0	N	N	2	2	10	117	94
Idaho§	—	65	313	2,655	2,979	N	0	0	N	N	—	1	7	71	54
Montana§	8	56	88	2,327	2,429	N	0	0	N	N	—	1	4	48	41
Nevada§	192	170	477	7,921	7,606	2	1	4	50	45	—	0	2	17	16
New Mexico§	160	176	540	6,922	6,012	—	0	2	9	26	—	2	7	97	160
Utah	1	93	251	3,427	4,613	—	0	2	25	10	—	0	3	23	36
Wyoming§	59	34	97	1,551	1,213	—	0	1	1	2	—	0	2	19	19
<b>Pacific</b>	1,170	3,588	4,683	143,091	148,695	23	41	172	1,852	1,610	5	12	24	541	335
Alaska	—	95	199	3,197	3,678	N	0	0	N	N	—	0	1	6	3
California	894	2,742	3,593	111,308	115,593	23	41	172	1,852	1,610	5	7	20	328	200
Hawaii	—	118	147	4,504	4,680	N	0	0	N	N	—	0	1	1	2
Oregon§	—	198	631	7,376	7,858	N	0	0	N	N	—	3	8	143	55
Washington	276	402	571	16,706	16,886	N	0	0	N	N	—	1	6	63	75
American Samoa	—	0	0	—	73	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	3	8	—	112	—	0	0	—	—	—	0	0	—	—
Puerto Rico	172	134	332	5,785	5,498	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	9	17	290	525	—	0	0	—	—	—	0	0	—	—

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



**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 17, 2009, and October 11, 2008 (41st week)\***

Reporting area	Giardiasis				Gonorrhea				<i>Haemophilus influenzae</i> , 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		
<b>United States</b>	188	330	491	13,662	14,469	2,240	5,301	6,918	209,757	263,766	20	60	124	2,357	2,201
<b>New England</b>	15	29	61	1,264	1,325	84	94	301	3,892	4,165	1	3	16	157	132
Connecticut	—	5	14	171	268	45	46	275	1,847	2,048	—	0	12	43	32
Maine§	1	4	13	176	144	5	2	9	111	78	—	0	2	16	14
Massachusetts	9	12	36	580	547	28	39	112	1,546	1,666	—	2	5	78	62
New Hampshire	—	2	11	136	132	1	2	6	83	83	1	0	2	10	9
Rhode Island§	—	1	6	44	76	3	6	19	268	262	—	0	7	6	7
Vermont§	5	3	14	157	158	2	1	4	37	28	—	0	1	4	8
<b>Mid. Atlantic</b>	33	63	104	2,557	2,685	493	587	1,138	24,695	25,872	6	11	25	473	409
New Jersey	—	7	17	215	413	59	87	122	3,403	4,201	—	2	7	93	71
New York (Upstate)	24	25	81	1,062	916	125	108	664	4,632	4,857	2	3	20	113	122
New York City	3	15	23	635	690	217	210	577	8,882	8,200	—	2	11	85	68
Pennsylvania	6	15	30	645	666	92	190	267	7,778	8,614	4	4	10	182	148
<b>E.N. Central</b>	27	45	70	1,813	2,171	227	1,067	1,436	41,395	54,609	3	12	28	500	364
Illinois	—	9	18	345	588	—	335	448	12,428	16,232	—	3	9	124	119
Indiana	N	0	11	N	N	48	142	252	5,881	6,957	—	1	22	57	62
Michigan	4	12	20	493	472	162	276	493	11,730	13,507	—	0	3	18	19
Ohio	23	16	28	666	694	17	251	431	8,043	12,948	3	1	6	82	112
Wisconsin	—	8	19	309	417	—	88	140	3,313	4,965	—	3	20	219	52
<b>W.N. Central</b>	14	24	141	1,210	1,587	37	282	393	11,151	13,299	1	3	15	132	162
Iowa	2	6	15	248	263	9	33	53	1,272	1,245	—	0	0	—	2
Kansas	—	2	11	96	137	4	42	83	1,764	1,746	—	0	2	13	17
Minnesota	—	0	104	250	509	—	43	65	1,628	2,440	1	0	10	47	50
Missouri	11	8	30	402	388	—	128	173	5,065	6,374	—	1	4	44	59
Nebraska§	1	3	9	138	165	24	23	55	1,083	1,135	—	0	4	23	23
North Dakota	—	0	16	14	14	—	2	14	82	94	—	0	4	5	11
South Dakota	—	1	7	62	111	—	6	20	257	265	—	0	0	—	—
<b>S. Atlantic</b>	42	70	109	2,913	2,298	697	1,149	2,042	44,785	67,150	4	14	31	581	563
Delaware	—	0	3	21	32	32	18	37	772	829	—	0	1	3	6
District of Columbia	—	0	5	19	54	—	50	88	2,067	2,042	—	0	1	1	7
Florida	28	37	59	1,527	980	184	413	486	16,702	18,746	—	4	10	188	146
Georgia	—	11	67	680	541	—	243	876	8,173	12,291	1	3	9	127	114
Maryland§	5	5	10	217	221	72	121	212	4,494	4,914	3	1	6	74	82
North Carolina	N	0	0	N	N	—	0	470	—	12,002	—	0	17	61	61
South Carolina§	—	2	8	81	97	202	168	412	6,292	7,609	—	1	5	53	51
Virginia§	9	8	31	329	313	198	147	308	5,882	8,120	—	1	6	48	75
West Virginia	—	1	5	39	60	9	10	23	403	597	—	0	3	26	21
<b>E.S. Central</b>	1	8	18	306	399	159	510	714	20,400	24,262	1	3	9	131	115
Alabama§	—	3	11	142	226	—	138	202	5,202	7,804	—	1	4	32	19
Kentucky	N	0	0	N	N	—	72	135	2,809	3,682	—	0	5	19	6
Mississippi	N	0	0	N	N	—	145	252	5,867	5,715	—	0	1	4	13
Tennessee§	1	4	13	164	173	159	160	230	6,522	7,061	1	2	6	76	77
<b>W.S. Central</b>	6	8	22	342	347	254	847	1,423	34,411	40,375	1	2	22	89	96
Arkansas§	1	2	9	113	114	109	82	134	3,543	3,723	—	0	2	13	12
Louisiana	—	2	8	96	112	90	138	420	5,080	7,424	—	0	1	12	9
Oklahoma	5	3	18	133	121	52	66	612	3,747	3,876	1	1	20	62	66
Texas§	N	0	0	N	N	3	557	696	22,041	25,352	—	0	1	2	9
<b>Mountain</b>	13	26	59	1,194	1,290	54	172	265	6,557	9,234	2	5	11	198	238
Arizona	1	3	9	156	113	7	54	88	2,139	2,740	—	1	7	68	91
Colorado	9	8	26	386	449	—	52	122	1,765	2,905	2	1	6	60	45
Idaho§	2	3	10	140	155	—	2	13	75	135	—	0	1	4	12
Montana§	—	2	11	110	77	—	1	5	60	100	—	0	1	1	3
Nevada§	—	2	11	91	95	29	30	93	1,414	1,771	—	0	2	16	15
New Mexico§	—	2	8	89	94	17	24	52	885	1,077	—	0	3	19	36
Utah	—	5	12	176	274	—	4	15	157	402	—	1	2	27	33
Wyoming§	1	1	4	46	33	1	1	5	62	104	—	0	1	3	3
<b>Pacific</b>	37	51	130	2,063	2,367	235	546	764	22,471	24,800	1	2	8	96	122
Alaska	—	2	7	92	84	—	15	24	548	424	—	0	3	14	18
California	30	34	56	1,359	1,560	200	465	657	18,950	20,351	—	0	3	22	39
Hawaii	—	0	2	13	38	—	10	22	475	498	—	0	3	23	16
Oregon§	7	7	18	305	377	—	20	42	738	960	1	1	3	34	47
Washington	—	7	74	294	308	35	43	71	1,760	2,567	—	0	2	3	2
American Samoa	—	0	0	—	—	—	0	0	—	3	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	1	1	—	71	—	0	0	—	—
Puerto Rico	1	2	10	93	187	4	4	24	187	221	—	0	1	3	1
U.S. Virgin Islands	—	0	0	—	—	—	2	7	80	101	N	0	0	N	N

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

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

\* Incidence data for reporting year 2009 is provisional.

† Data for *H. influenzae* (age <5 yrs for serotype b, nonserotype b, and unknown serotype) are available in Table I.

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 17, 2009, and October 11, 2008 (41st week)\*

Reporting area	Hepatitis (viral, acute), by type†										Legionellosis				
	A					B									
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	10	36	89	1,457	2,109	22	64	197	2,434	3,000	35	49	147	2,376	2,494
<b>New England</b>	—	2	5	81	115	—	1	4	32	64	—	3	16	139	174
Connecticut	—	0	2	18	26	—	0	3	11	23	—	1	5	46	33
Maine§	—	0	2	1	11	—	0	2	10	10	—	0	3	7	8
Massachusetts	—	1	4	47	53	—	0	2	8	19	—	1	9	59	73
New Hampshire	—	0	1	6	11	—	0	2	3	6	—	0	2	9	24
Rhode Island§	—	0	1	7	12	—	0	0	—	4	—	0	12	11	31
Vermont§	—	0	1	2	2	—	0	1	—	2	—	0	1	7	5
<b>Mid. Atlantic</b>	1	5	11	204	259	2	6	17	247	349	10	15	68	911	837
New Jersey	—	1	5	44	65	—	1	6	61	95	—	3	13	140	115
New York (Upstate)	1	1	3	40	53	1	1	11	46	54	7	5	29	292	266
New York City	—	2	5	63	90	—	1	4	50	80	—	2	20	175	116
Pennsylvania	—	1	6	57	51	1	2	8	90	120	3	6	25	304	340
<b>E.N. Central</b>	—	4	18	197	283	—	7	21	298	416	10	9	33	452	555
Illinois	—	1	12	85	98	—	1	6	54	158	—	1	8	63	96
Indiana	—	0	4	13	19	—	1	18	49	33	—	1	5	29	43
Michigan	—	1	5	54	102	—	2	8	99	116	1	2	12	118	148
Ohio	—	1	4	34	35	—	1	13	70	95	9	4	17	237	236
Wisconsin	—	0	4	11	29	—	0	4	26	14	—	0	2	5	32
<b>W.N. Central</b>	—	2	16	100	219	—	3	16	135	64	—	2	7	77	117
Iowa	—	0	3	29	105	—	0	3	26	18	—	0	2	18	16
Kansas	—	0	1	7	14	—	0	2	5	6	—	0	1	3	2
Minnesota	—	0	12	15	28	—	0	11	23	7	—	0	3	8	15
Missouri	—	0	3	27	28	—	1	5	61	27	—	1	4	35	63
Nebraska§	—	0	3	19	40	—	0	2	18	5	—	0	2	11	19
North Dakota	—	0	2	—	—	—	0	1	—	1	—	0	3	1	—
South Dakota	—	0	1	3	4	—	0	1	2	—	—	0	1	1	2
<b>S. Atlantic</b>	6	7	14	330	331	8	17	32	713	743	11	9	18	399	393
Delaware	—	0	1	3	6	U	0	1	U	U	—	0	5	15	11
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	8	15
Florida	3	4	9	151	122	7	6	11	234	260	1	3	10	138	114
Georgia	1	1	3	47	48	—	3	9	116	142	—	1	5	38	33
Maryland§	2	0	4	33	38	—	1	5	58	65	7	2	10	103	111
North Carolina	—	0	3	25	56	—	1	19	144	71	—	0	6	39	28
South Carolina§	—	1	4	42	15	—	1	4	38	57	—	0	1	7	10
Virginia§	—	1	2	27	41	1	2	10	69	82	3	1	5	45	46
West Virginia	—	0	1	2	5	—	0	19	54	66	—	0	2	6	25
<b>E.S. Central</b>	—	1	4	36	68	3	7	11	254	312	3	2	12	104	98
Alabama§	—	0	2	9	11	—	2	7	72	88	—	0	2	11	14
Kentucky	—	0	1	8	25	1	2	7	66	75	1	1	3	42	46
Mississippi	—	0	2	11	4	1	1	2	23	37	—	0	1	3	1
Tennessee§	—	0	2	8	28	1	2	6	93	112	2	1	9	48	37
<b>W.S. Central</b>	—	3	43	104	197	4	10	99	385	578	—	1	21	46	72
Arkansas§	—	0	1	5	6	—	1	5	43	53	—	0	1	5	13
Louisiana	—	0	1	3	11	—	1	4	33	75	—	0	2	4	9
Oklahoma	—	0	6	3	7	—	2	17	78	86	—	0	6	3	3
Texas§	—	3	37	93	173	4	6	76	231	364	—	1	19	34	47
<b>Mountain</b>	2	3	8	132	182	1	3	7	108	165	—	2	8	99	72
Arizona	—	2	6	62	90	—	1	4	38	62	—	1	4	38	15
Colorado	1	0	5	40	34	—	0	2	20	28	—	0	2	11	11
Idaho§	—	0	1	3	17	1	0	2	9	7	—	0	1	4	3
Montana§	—	0	1	6	1	—	0	0	—	2	—	0	2	5	4
Nevada§	1	0	2	9	11	—	0	3	27	40	—	0	2	11	9
New Mexico§	—	0	1	6	15	—	0	2	5	9	—	0	2	7	9
Utah	—	0	1	4	11	—	0	1	5	12	—	0	4	19	21
Wyoming§	—	0	1	2	3	—	0	2	4	5	—	0	2	4	—
<b>Pacific</b>	1	7	17	273	455	4	6	36	262	309	1	3	12	149	176
Alaska	—	0	1	3	4	—	0	1	2	10	—	0	1	1	1
California	1	5	17	217	369	3	4	28	193	217	1	3	9	116	136
Hawaii	—	0	1	5	16	—	0	1	4	7	—	0	1	1	8
Oregon§	—	0	2	15	24	1	0	4	31	37	—	0	2	12	16
Washington	—	1	4	33	42	—	1	8	32	38	—	0	4	19	15
American Samoa	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	2	18	22	—	0	5	17	46	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

\* Incidence data for reporting year 2009 is provisional.

† Data for 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 October 17, 2009, and October 11, 2008 (41st week)\*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All groups				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	181	461	1,800	24,227	27,564	5	23	44	937	986	5	16	48	683	953
<b>New England</b>	22	75	416	4,903	10,130	—	1	5	37	47	—	1	4	26	25
Connecticut	—	0	82	—	3,456	—	0	4	5	10	—	0	1	2	1
Maine§	21	10	76	735	624	—	0	1	1	1	—	0	1	4	4
Massachusetts	1	28	282	2,789	4,157	—	0	3	22	27	—	0	3	12	16
New Hampshire	—	11	81	871	1,440	—	0	1	3	3	—	0	1	3	3
Rhode Island§	—	1	78	187	120	—	0	1	4	2	—	0	1	4	1
Vermont§	—	5	38	321	333	—	0	1	2	4	—	0	1	1	—
<b>Mid. Atlantic</b>	128	245	1,401	14,013	11,003	1	6	13	235	272	—	2	6	73	104
New Jersey	—	35	318	3,410	3,081	—	0	1	—	62	—	0	2	8	14
New York (Upstate)	49	86	1,368	3,495	3,888	—	1	10	40	28	—	0	2	18	25
New York City	—	3	23	168	693	1	3	11	151	149	—	0	2	13	23
Pennsylvania	79	53	627	6,940	3,341	—	1	4	44	33	—	1	4	34	42
<b>E.N. Central</b>	—	17	197	1,844	2,113	—	3	10	124	130	1	3	9	115	169
Illinois	—	1	11	109	101	—	1	4	50	67	—	1	6	28	64
Indiana	—	1	6	52	38	—	0	3	15	5	—	0	3	28	23
Michigan	—	1	10	94	75	—	0	3	22	14	—	0	5	18	30
Ohio	—	1	4	44	40	—	1	6	31	26	1	0	3	34	33
Wisconsin	—	14	182	1,545	1,859	—	0	1	6	18	—	0	2	7	19
<b>W.N. Central</b>	5	4	336	190	718	1	1	8	54	60	—	1	9	55	82
Iowa	—	1	14	80	100	—	0	1	10	10	—	0	1	6	18
Kansas	—	0	2	14	14	—	0	1	4	8	—	0	2	8	4
Minnesota	5	0	326	72	586	1	0	8	23	22	—	0	4	11	22
Missouri	—	0	2	7	5	—	0	2	10	12	—	0	3	20	23
Nebraska§	—	0	3	16	10	—	0	1	6	8	—	0	1	7	11
North Dakota	—	0	10	—	—	—	0	0	—	—	—	0	3	1	2
South Dakota	—	0	1	1	3	—	0	1	1	—	—	0	1	2	2
<b>S. Atlantic</b>	24	65	220	3,014	3,322	2	6	17	277	244	2	2	9	126	137
Delaware	5	12	64	818	663	—	0	1	4	2	—	0	1	3	2
District of Columbia	—	0	5	19	61	—	0	2	5	3	—	0	0	—	—
Florida	7	1	9	83	62	1	2	7	80	48	1	1	4	46	46
Georgia	—	0	6	45	34	1	1	5	60	50	1	0	2	25	16
Maryland§	5	29	122	1,410	1,703	—	1	5	57	66	—	0	1	8	16
North Carolina	—	1	14	56	28	—	0	5	21	24	—	0	5	18	12
South Carolina§	—	0	3	26	23	—	0	1	3	9	—	0	1	11	20
Virginia§	7	11	61	424	634	—	1	5	45	40	—	0	1	10	20
West Virginia	—	0	33	133	114	—	0	1	2	2	—	0	2	5	5
<b>E.S. Central</b>	—	0	2	25	41	—	0	3	25	16	—	0	3	24	43
Alabama§	—	0	1	2	9	—	0	3	7	4	—	0	1	7	7
Kentucky	—	0	1	1	5	—	0	2	8	4	—	0	1	4	7
Mississippi	—	0	0	—	1	—	0	1	1	1	—	0	1	2	10
Tennessee§	—	0	2	22	26	—	0	3	9	7	—	0	1	11	19
<b>W.S. Central</b>	—	1	21	40	92	1	1	10	42	67	2	1	12	64	99
Arkansas§	—	0	0	—	—	—	0	1	4	—	—	0	2	6	13
Louisiana	—	0	0	—	3	—	0	1	3	3	—	0	3	11	21
Oklahoma	—	0	2	—	—	—	0	2	2	2	2	0	3	10	12
Texas§	—	1	21	40	89	1	1	9	33	62	—	1	9	37	53
<b>Mountain</b>	1	1	13	46	47	—	0	5	25	29	—	1	4	53	53
Arizona	—	0	2	4	8	—	0	2	7	13	—	0	2	13	8
Colorado	—	0	1	6	3	—	0	3	8	4	—	0	2	18	11
Idaho§	1	0	2	11	9	—	0	1	1	1	—	0	1	6	5
Montana§	—	0	13	3	4	—	0	3	5	—	—	0	2	4	4
Nevada§	—	0	2	12	11	—	0	1	—	4	—	0	2	4	7
New Mexico§	—	0	1	4	8	—	0	0	—	3	—	0	1	3	8
Utah	—	0	1	4	2	—	0	2	4	4	—	0	1	1	8
Wyoming§	—	0	1	2	2	—	0	0	—	—	—	0	2	4	2
<b>Pacific</b>	1	3	13	152	98	—	3	10	118	121	—	3	14	147	241
Alaska	—	0	1	2	6	—	0	1	2	4	—	0	2	6	6
California	1	2	10	124	54	—	2	8	87	88	—	2	8	98	176
Hawaii	N	0	0	N	N	—	0	1	1	3	—	0	1	4	5
Oregon§	—	0	3	15	29	—	0	2	11	4	—	0	6	26	30
Washington	—	0	12	11	9	—	0	3	17	22	—	0	6	13	24
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	3	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	2	2	—	0	0	—	3
U.S. Virgin Islands	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—

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

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

\* Incidence data for reporting year 2009 is provisional.

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

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 17, 2009, and October 11, 2008 (41st week)\*

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	75	279	1,697	10,851	7,623	21	63	139	2,935	3,503	5	28	179	1,200	1,939
<b>New England</b>	—	13	27	507	810	3	7	24	280	337	—	0	2	9	4
Connecticut	—	0	4	31	45	—	2	22	123	165	—	0	0	—	—
Maine†	—	1	10	69	30	2	1	4	45	45	—	0	2	4	1
Massachusetts	—	8	19	307	631	—	0	0	—	—	—	0	1	4	1
New Hampshire	—	1	7	64	25	—	0	7	25	36	—	0	0	—	1
Rhode Island†	—	0	7	26	68	—	1	6	42	31	—	0	2	—	1
Vermont†	—	0	1	10	11	1	1	4	45	60	—	0	1	1	—
<b>Mid. Atlantic</b>	17	24	64	904	874	7	13	23	496	763	—	1	29	61	112
New Jersey	—	4	12	149	177	—	0	0	—	—	—	0	2	—	77
New York (Upstate)	7	5	41	182	337	7	8	22	376	414	—	0	29	12	12
New York City	2	0	21	73	58	—	0	2	2	16	—	0	4	27	11
Pennsylvania	8	13	33	500	302	—	3	17	118	333	—	0	2	22	12
<b>E.N. Central</b>	13	61	238	2,390	1,254	—	2	19	212	238	—	1	6	75	139
Illinois	—	14	45	490	283	—	1	9	84	98	—	0	6	43	103
Indiana	—	5	158	238	64	—	0	6	21	9	—	0	3	12	6
Michigan	3	11	36	636	212	—	1	6	62	73	—	0	2	5	3
Ohio	10	22	57	911	570	—	0	5	45	58	—	0	4	15	27
Wisconsin	—	3	12	115	125	N	0	0	N	N	—	0	0	—	—
<b>W.N. Central</b>	4	36	872	1,406	696	3	5	17	230	265	—	4	26	289	409
Iowa	—	5	21	152	122	—	0	5	24	20	—	0	2	5	8
Kansas	—	4	9	142	56	—	1	6	60	56	—	0	1	2	—
Minnesota	—	0	808	165	189	2	0	11	52	53	—	0	1	2	—
Missouri	4	20	51	778	211	1	1	5	63	59	—	4	25	268	380
Nebraska†	—	3	32	125	80	—	0	1	—	32	—	0	2	12	18
North Dakota	—	0	24	17	1	—	0	9	4	24	—	0	1	—	—
South Dakota	—	0	10	27	37	—	0	4	27	21	—	0	0	—	3
<b>S. Atlantic</b>	15	30	71	1,325	745	6	24	111	1,293	1,398	3	11	40	402	704
Delaware	—	0	2	12	15	—	0	0	—	—	—	0	3	16	30
District of Columbia	—	0	2	2	4	—	0	0	—	—	—	0	0	—	6
Florida	12	9	32	471	227	—	0	95	137	138	—	0	2	6	12
Georgia	—	3	11	148	75	—	0	72	334	319	—	0	7	40	76
Maryland†	1	2	8	92	116	4	7	15	328	360	—	1	3	29	72
North Carolina	—	0	65	220	79	N	2	4	N	N	2	5	36	240	331
South Carolina†	—	4	17	203	97	—	0	0	—	—	—	0	5	18	49
Virginia†	2	3	24	152	123	—	10	23	399	511	1	1	9	49	120
West Virginia	—	0	5	25	9	2	2	6	95	70	—	0	1	4	8
<b>E.S. Central</b>	—	15	33	628	260	1	1	7	77	158	2	4	15	226	298
Alabama†	—	4	19	245	36	—	0	0	—	—	—	1	7	56	78
Kentucky	—	6	15	190	72	1	1	4	43	39	—	0	1	1	1
Mississippi	—	1	4	46	83	—	0	1	—	6	—	0	1	7	10
Tennessee†	—	3	14	147	69	—	0	4	34	113	2	3	14	162	209
<b>W.S. Central</b>	21	60	389	2,318	1,228	—	0	13	64	78	—	1	161	117	232
Arkansas†	—	4	38	203	81	—	0	10	33	44	—	0	61	53	44
Louisiana	—	2	8	90	70	—	0	0	—	—	—	0	1	2	6
Oklahoma	2	0	45	42	32	—	0	13	30	32	—	0	98	49	142
Texas†	19	49	304	1,983	1,045	—	0	1	1	2	—	0	6	13	40
<b>Mountain</b>	5	18	32	727	677	—	2	6	80	93	—	0	3	20	38
Arizona	—	3	10	170	193	N	0	0	N	N	—	0	2	4	11
Colorado	5	4	12	207	125	—	0	0	—	—	—	0	1	1	1
Idaho†	—	1	5	65	26	—	0	0	—	11	—	0	1	1	1
Montana†	—	0	6	40	77	—	0	4	25	11	—	0	2	8	3
Nevada†	—	0	6	23	26	—	0	1	6	11	—	0	1	1	3
New Mexico†	—	1	10	48	43	—	0	2	19	26	—	0	1	1	4
Utah	—	4	19	154	170	—	0	1	9	13	—	0	1	1	5
Wyoming†	—	0	5	20	17	—	0	4	21	21	—	0	1	3	10
<b>Pacific</b>	—	17	67	646	1,079	1	5	12	203	173	—	0	1	1	3
Alaska	—	1	21	34	172	—	0	2	11	13	N	0	0	N	N
California	—	3	19	143	432	1	4	12	177	148	—	0	1	1	—
Hawaii	—	0	3	24	11	—	0	0	—	—	N	0	0	N	N
Oregon†	—	3	17	212	150	—	0	3	15	12	—	0	0	—	3
Washington	—	6	58	233	314	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	1	—	—	1	3	33	51	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N

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

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

\* Incidence data for reporting year 2009 is provisional.

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

**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 17, 2009, and October 11, 2008 (41st week)\***

Reporting area	Salmonellosis					Shiga toxin-producing <i>E. coli</i> (STEC)†					Shigellosis				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	653	916	2,323	34,851	38,068	56	91	255	3,411	4,108	150	315	1,268	11,799	15,817
<b>New England</b>	8	32	363	1,771	1,921	—	3	56	199	216	2	4	38	290	196
Connecticut	—	0	338	338	491	—	0	56	56	47	—	0	33	33	40
Maine <sup>§</sup>	1	2	7	107	126	—	0	3	16	19	—	0	2	5	18
Massachusetts	7	21	48	942	1,007	—	2	6	75	97	2	3	26	210	120
New Hampshire	—	3	42	222	123	—	1	3	30	21	—	0	4	16	5
Rhode Island <sup>§</sup>	—	2	11	108	92	—	0	1	1	8	—	0	7	21	10
Vermont <sup>§</sup>	—	1	5	54	82	—	0	3	21	24	—	0	2	5	3
<b>Mid. Atlantic</b>	36	95	160	3,863	4,728	3	7	20	291	391	9	57	83	2,235	1,988
New Jersey	—	12	30	452	1,074	—	1	4	31	113	—	13	27	460	718
New York (Upstate)	23	24	66	1,082	1,104	3	3	9	122	142	2	4	23	181	500
New York City	2	18	42	945	1,086	—	1	5	50	45	2	9	17	354	620
Pennsylvania	11	29	62	1,384	1,464	—	1	7	88	91	5	24	63	1,240	150
<b>E.N. Central</b>	27	90	144	3,678	4,199	2	13	24	527	731	18	54	132	1,991	3,146
Illinois	—	24	48	966	1,237	—	2	10	111	113	—	11	25	405	811
Indiana	—	5	50	246	502	—	1	6	39	77	—	1	21	38	534
Michigan	5	18	33	782	781	1	3	8	129	188	—	5	24	184	117
Ohio	22	28	52	1,206	1,046	1	3	11	112	159	18	30	80	987	1,250
Wisconsin	—	11	29	478	633	—	3	10	136	194	—	9	25	377	434
<b>W.N. Central</b>	29	48	109	2,149	2,332	23	12	37	624	689	22	17	48	783	733
Iowa	4	8	16	335	348	2	2	14	141	180	—	1	12	48	131
Kansas	—	6	18	269	394	—	0	4	33	44	—	3	11	159	42
Minnesota	13	11	51	498	590	18	2	19	197	157	6	2	10	72	257
Missouri	7	12	34	548	628	3	2	10	111	134	14	6	40	470	185
Nebraska <sup>§</sup>	5	5	41	299	202	—	2	6	80	131	2	0	3	26	9
North Dakota	—	0	30	44	40	—	0	28	3	2	—	0	9	4	33
South Dakota	—	2	22	156	130	—	0	12	59	41	—	0	1	4	76
<b>S. Atlantic</b>	309	262	433	9,985	9,554	8	13	30	517	674	31	46	85	1,833	2,496
Delaware	—	2	7	100	132	—	0	2	12	11	—	1	8	101	7
District of Columbia	—	0	5	22	52	—	0	1	1	6	—	0	2	6	17
Florida	223	115	279	4,842	3,888	1	3	7	134	114	10	9	24	374	671
Georgia	42	39	96	1,863	1,854	—	1	4	58	75	13	13	30	520	908
Maryland <sup>§</sup>	10	16	29	619	687	4	1	6	75	115	3	6	19	300	82
North Carolina	18	19	92	866	1,035	2	2	21	80	82	2	6	27	269	151
South Carolina <sup>§</sup>	4	16	42	687	913	—	0	3	25	39	—	3	12	92	472
Virginia <sup>§</sup>	12	21	88	810	827	1	3	16	108	200	3	5	59	165	159
West Virginia	—	4	23	176	166	—	0	5	24	32	—	0	3	6	29
<b>E.S. Central</b>	17	54	121	2,264	2,823	2	4	12	173	232	7	16	58	650	1,546
Alabama <sup>§</sup>	8	15	38	577	778	—	1	4	37	55	—	3	11	107	347
Kentucky	—	9	18	372	372	—	1	4	58	80	6	2	25	175	230
Mississippi	—	13	45	677	955	—	0	1	6	4	—	1	4	37	290
Tennessee <sup>§</sup>	9	14	62	638	718	2	2	10	72	93	1	10	48	331	679
<b>W.S. Central</b>	103	102	1,333	3,769	5,522	10	5	139	198	294	39	53	967	2,086	3,470
Arkansas <sup>§</sup>	21	12	25	519	642	1	1	4	33	48	8	7	16	261	459
Louisiana	—	11	43	599	939	—	0	1	—	8	—	3	13	108	554
Oklahoma	19	14	102	526	651	6	0	82	27	25	5	5	61	234	131
Texas <sup>§</sup>	63	56	1,204	2,125	3,290	3	3	55	138	213	26	39	889	1,483	2,326
<b>Mountain</b>	42	57	131	2,380	2,716	6	11	26	462	510	4	23	49	949	876
Arizona	7	20	49	822	891	—	1	4	60	56	1	16	42	689	431
Colorado	21	12	33	518	580	4	3	13	142	169	2	2	11	81	98
Idaho <sup>§</sup>	—	4	10	148	144	2	2	7	82	111	—	0	2	8	11
Montana <sup>§</sup>	—	2	7	90	99	—	0	7	31	31	—	0	5	13	6
Nevada <sup>§</sup>	7	4	13	211	187	—	0	3	27	15	1	1	7	65	194
New Mexico <sup>§</sup>	—	5	28	273	466	—	1	2	28	46	—	2	12	76	103
Utah	3	6	15	249	283	—	2	8	80	71	—	0	3	15	29
Wyoming <sup>§</sup>	4	1	8	69	66	—	0	2	12	11	—	0	1	2	4
<b>Pacific</b>	82	129	537	4,992	4,273	2	10	31	420	371	18	26	66	982	1,366
Alaska	—	1	6	59	45	—	0	1	—	5	—	0	1	2	1
California	79	95	516	3,804	3,135	2	5	15	200	176	18	20	65	799	1,168
Hawaii	—	5	13	194	212	—	0	1	3	12	—	0	4	30	37
Oregon <sup>§</sup>	3	8	17	328	351	—	1	11	64	59	—	1	5	31	78
Washington	—	12	85	607	530	—	3	18	153	119	—	2	11	120	82
American Samoa	—	0	1	—	2	—	0	0	—	—	—	1	2	3	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	13	—	0	0	—	—	—	0	1	—	14
Puerto Rico	1	8	40	317	588	—	0	0	—	—	—	0	2	7	26
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

\* Incidence data for reporting year 2009 is provisional.

† Includes *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 October 17, 2009, and October 11, 2008 (41st week)\*

Reporting area	Streptococcal diseases, invasive, group A					<i>Streptococcus pneumoniae</i> , 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		
<b>United States</b>	27	102	239	4,179	4,447	22	36	122	1,329	1,402
<b>New England</b>	2	5	28	247	317	1	1	12	49	70
Connecticut	—	0	21	63	90	—	0	11	—	—
Maine§	1	0	2	15	23	1	0	1	5	1
Massachusetts	1	3	10	107	147	—	1	4	30	49
New Hampshire	—	1	4	34	21	—	0	2	9	10
Rhode Island§	—	0	2	11	23	—	0	1	1	10
Vermont§	—	0	3	17	13	—	0	1	4	—
<b>Mid. Atlantic</b>	4	20	43	849	888	—	4	33	193	175
New Jersey	—	3	7	118	158	—	1	4	37	52
New York (Upstate)	2	7	25	277	279	—	2	17	90	80
New York City	—	4	12	162	163	—	0	31	66	43
Pennsylvania	2	6	18	292	288	N	0	2	N	N
<b>E.N. Central</b>	1	17	42	765	834	—	6	18	203	261
Illinois	—	5	12	212	220	—	0	5	23	76
Indiana	—	2	23	123	111	—	0	13	31	29
Michigan	—	3	11	123	152	—	1	5	51	62
Ohio	1	4	13	190	227	—	1	6	59	49
Wisconsin	—	2	11	117	124	—	1	3	39	45
<b>W.N. Central</b>	—	6	37	333	326	1	2	11	120	77
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	5	37	35	N	0	1	N	N
Minnesota	—	0	34	152	154	1	0	10	70	23
Missouri	—	2	8	73	76	—	0	4	30	32
Nebraska§	—	1	3	39	33	—	0	1	10	7
North Dakota	—	0	4	11	8	—	0	3	4	8
South Dakota	—	0	3	21	20	—	0	2	6	7
<b>S. Atlantic</b>	6	22	49	958	920	—	6	18	246	274
Delaware	—	0	1	10	6	—	0	0	—	—
District of Columbia	—	0	3	12	12	N	0	0	N	N
Florida	1	6	12	232	209	—	1	6	55	53
Georgia	5	5	13	232	208	—	2	6	62	76
Maryland§	—	3	12	160	157	—	1	7	63	47
North Carolina	—	2	12	84	120	N	0	0	N	N
South Carolina§	—	1	5	59	59	—	1	6	36	51
Virginia§	—	3	9	135	115	—	0	4	18	38
West Virginia	—	1	4	34	34	—	0	3	12	9
<b>E.S. Central</b>	1	3	10	159	158	5	2	7	75	70
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	5	32	33	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	2	14	9
Tennessee§	1	3	9	127	125	5	1	6	61	61
<b>W.S. Central</b>	8	9	79	369	404	11	5	46	232	222
Arkansas§	—	0	2	15	9	—	0	4	22	11
Louisiana	—	0	3	11	16	—	0	3	13	11
Oklahoma	1	3	20	118	90	—	1	7	50	57
Texas§	7	5	59	225	289	11	3	34	147	143
<b>Mountain</b>	5	10	22	364	470	4	4	16	182	212
Arizona	1	3	7	125	166	—	2	10	95	94
Colorado	3	3	7	114	119	4	1	4	36	49
Idaho§	—	0	2	8	14	—	0	2	7	4
Montana§	N	0	0	N	N	N	0	0	N	N
Nevada§	—	0	1	5	10	—	0	1	—	3
New Mexico§	1	2	7	64	110	—	0	4	16	30
Utah	—	1	6	47	45	—	0	5	28	30
Wyoming§	—	0	1	1	6	—	0	0	—	2
<b>Pacific</b>	—	3	9	135	130	—	0	4	29	41
Alaska	—	1	4	28	31	—	0	3	22	25
California	N	0	0	N	N	N	0	0	N	N
Hawaii	—	3	8	107	99	—	0	2	7	16
Oregon§	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	—	0	0	—	30	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N

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

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

\* Incidence data for reporting year 2009 is provisional.

† Includes cases of invasive pneumococcal disease, in children aged <5 years, caused by *S. pneumoniae*, which is susceptible or for which susceptibility testing is not available (NNDSS event code 11717).

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 17, 2009, and October 11, 2008 (41st week)\*

Reporting area	<i>Streptococcus pneumoniae</i> , invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages				Aged <5 years										
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	25	60	276	2,182	2,424	5	8	21	339	386	95	261	452	10,212	10,160
<b>New England</b>	—	1	48	45	57	—	0	5	3	9	3	5	15	248	256
Connecticut	—	0	48	—	7	—	0	5	—	—	1	1	5	45	25
Maine§	—	0	2	13	15	—	0	1	1	1	—	0	1	2	10
Massachusetts	—	0	1	3	—	—	0	1	2	—	2	4	10	176	182
New Hampshire	—	0	3	5	—	—	0	0	—	—	—	0	2	13	16
Rhode Island§	—	0	6	13	21	—	0	1	—	6	—	0	5	12	15
Vermont§	—	0	2	11	14	—	0	0	—	2	—	0	2	—	8
<b>Mid. Atlantic</b>	2	3	14	138	253	—	0	3	20	21	32	35	51	1,456	1,326
New Jersey	—	0	0	—	—	—	0	0	—	—	1	3	13	171	175
New York (Upstate)	1	1	10	62	55	—	0	2	10	6	2	2	8	95	108
New York City	—	0	4	4	103	—	0	2	—	1	24	22	40	906	837
Pennsylvania	1	1	8	72	95	—	0	2	10	14	5	7	12	284	206
<b>E.N. Central</b>	7	11	41	493	502	2	1	7	70	68	4	23	43	820	982
Illinois	N	0	0	N	N	N	0	0	N	N	—	7	19	238	402
Indiana	—	3	32	173	170	—	0	6	25	22	—	2	10	126	111
Michigan	—	0	2	21	18	—	0	1	2	2	3	4	18	196	152
Ohio	7	7	18	299	314	2	1	4	43	44	1	6	18	231	271
Wisconsin	—	0	0	—	—	—	0	0	—	—	—	1	4	29	46
<b>W.N. Central</b>	—	2	161	98	167	—	0	3	20	34	—	6	11	235	335
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	18	15
Kansas	—	1	5	38	62	—	0	2	13	4	—	0	3	26	25
Minnesota	—	0	156	—	25	—	0	3	—	25	—	1	6	40	87
Missouri	—	1	5	46	72	—	0	1	5	2	—	3	7	131	195
Nebraska§	—	0	1	2	—	—	0	0	—	—	—	0	3	16	13
North Dakota	—	0	3	10	2	—	0	0	—	—	—	0	1	3	—
South Dakota	—	0	2	2	6	—	0	2	2	3	—	0	1	1	—
<b>S. Atlantic</b>	13	26	53	1,039	1,000	3	4	14	163	178	29	64	262	2,561	2,209
Delaware	—	0	2	18	3	—	0	2	3	—	1	0	3	25	11
District of Columbia	N	0	0	N	N	N	0	0	N	N	—	3	8	136	110
Florida	11	15	36	613	563	3	2	13	101	111	4	19	32	771	821
Georgia	2	8	25	316	344	—	1	5	52	58	—	14	227	609	511
Maryland§	—	0	1	4	4	—	0	0	—	1	5	6	16	244	263
North Carolina	N	0	0	N	N	N	0	0	N	N	7	9	21	425	220
South Carolina§	—	0	0	—	—	—	0	0	—	—	—	2	6	92	66
Virginia§	N	0	0	N	N	N	0	0	N	N	12	7	15	255	198
West Virginia	—	2	13	88	86	—	0	3	7	8	—	0	2	4	9
<b>E.S. Central</b>	1	4	25	203	262	—	0	3	29	50	9	23	36	903	865
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	18	341	351
Kentucky	—	1	5	58	64	—	0	2	7	11	—	1	10	49	68
Mississippi	—	0	3	3	32	—	0	1	2	10	—	5	18	173	120
Tennessee§	1	2	23	142	166	—	0	3	20	29	9	8	15	340	326
<b>W.S. Central</b>	2	1	6	77	79	—	0	3	15	12	10	47	80	1,886	1,762
Arkansas§	2	1	5	45	13	—	0	3	10	3	8	4	35	201	133
Louisiana	—	1	5	32	66	—	0	1	5	9	1	8	40	304	521
Oklahoma	N	0	0	N	N	N	0	0	N	N	1	1	7	53	57
Texas§	—	0	0	—	—	—	0	0	—	—	—	32	51	1,328	1,051
<b>Mountain</b>	—	2	7	86	102	—	0	3	17	12	1	8	18	337	499
Arizona	—	0	0	—	—	—	0	0	—	—	1	4	9	145	257
Colorado	—	0	0	—	—	—	0	0	—	—	—	1	4	64	119
Idaho§	N	0	1	N	N	N	0	1	N	N	—	0	2	3	4
Montana§	—	0	1	—	—	—	0	0	—	—	—	0	7	—	—
Nevada§	—	1	4	34	49	—	0	2	7	5	—	1	10	83	66
New Mexico§	—	0	0	—	—	—	0	0	—	—	—	1	5	39	32
Utah	—	1	6	43	52	—	0	3	9	7	—	0	2	—	18
Wyoming§	—	0	2	9	1	—	0	1	1	—	—	0	1	3	3
<b>Pacific</b>	—	0	1	3	2	—	0	1	2	2	7	44	68	1,766	1,926
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	1
California	N	0	0	N	N	N	0	0	N	N	5	39	61	1,597	1,741
Hawaii	—	0	1	3	2	—	0	1	2	2	—	0	3	23	17
Oregon§	N	0	0	N	N	N	0	0	N	N	—	0	4	32	16
Washington	N	0	0	N	N	N	0	0	N	N	2	2	7	114	151
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	3	17	174	123
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

\* Incidence data for reporting year 2009 is provisional.

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

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 17, 2009, and October 11, 2008 (41st week)\*

Reporting area	West Nile virus disease†														
	Varicella (chickenpox)				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		
<b>United States</b>	94	444	1,035	14,040	23,324	—	1	37	283	663	—	0	35	231	655
<b>New England</b>	2	8	46	260	1,334	—	0	0	—	7	—	0	0	—	3
Connecticut	—	0	21	—	684	—	0	0	—	5	—	0	0	—	3
Maine¶	—	0	12	46	206	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	2	2	—	—	0	0	—	1	—	0	0	—	—
New Hampshire	2	4	11	165	210	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	1	4	—	—	0	0	—	1	—	0	0	—	—
Vermont¶	—	1	17	43	234	—	0	0	—	—	—	0	0	—	—
<b>Mid. Atlantic</b>	18	37	58	1,239	1,875	—	0	2	6	48	—	0	1	2	20
New Jersey	N	0	0	N	N	—	0	1	2	4	—	0	0	—	4
New York (Upstate)	N	0	0	N	N	—	0	1	2	24	—	0	1	1	7
New York City	—	0	0	—	—	—	0	1	1	8	—	0	0	—	7
Pennsylvania	18	37	58	1,239	1,875	—	0	1	1	12	—	0	1	1	2
<b>E.N. Central</b>	39	155	254	5,003	5,805	—	0	3	6	43	—	0	3	3	20
Illinois	—	34	73	1,219	986	—	0	2	4	12	—	0	0	—	8
Indiana	—	4	29	317	—	—	0	1	2	2	—	0	1	1	1
Michigan	14	46	90	1,457	2,355	—	0	0	—	11	—	0	0	—	6
Ohio	25	40	91	1,593	1,800	—	0	0	—	14	—	0	2	2	1
Wisconsin	—	10	55	417	664	—	0	0	—	4	—	0	0	—	4
<b>W.N. Central</b>	5	16	114	740	998	—	0	4	22	51	—	0	8	58	131
Iowa	N	0	0	N	N	—	0	0	—	3	—	0	1	5	3
Kansas	—	4	22	183	363	—	0	1	3	14	—	0	2	6	15
Minnesota	—	0	0	—	—	—	0	1	1	2	—	0	1	2	8
Missouri	5	10	51	500	593	—	0	1	2	12	—	0	0	—	3
Nebraska¶	N	0	0	N	N	—	0	2	10	7	—	0	6	31	39
North Dakota	—	0	108	57	—	—	0	0	—	2	—	0	1	1	35
South Dakota	—	0	4	—	42	—	0	3	6	11	—	0	2	13	28
<b>S. Atlantic</b>	27	48	146	1,619	3,868	—	0	3	9	20	—	0	1	2	20
Delaware	—	0	4	8	39	—	0	0	—	—	—	0	0	—	1
District of Columbia	—	0	3	9	21	—	0	0	—	4	—	0	0	—	4
Florida	13	27	67	1,015	1,312	—	0	1	2	3	—	0	1	1	—
Georgia	N	0	0	N	N	—	0	1	4	4	—	0	0	—	4
Maryland¶	N	0	0	N	N	—	0	0	—	6	—	0	1	1	8
North Carolina	N	0	0	N	N	—	0	0	—	2	—	0	0	—	1
South Carolina¶	—	0	54	154	724	—	0	2	3	—	—	0	0	—	1
Virginia¶	—	0	119	28	1,211	—	0	0	—	—	—	0	0	—	1
West Virginia	14	9	32	405	561	—	0	0	—	1	—	0	0	—	—
<b>E.S. Central</b>	—	10	28	375	965	—	0	5	36	47	—	0	4	22	57
Alabama¶	—	10	28	372	953	—	0	0	—	11	—	0	0	—	7
Kentucky	N	0	0	N	N	—	0	1	3	2	—	0	0	—	—
Mississippi	—	0	1	3	12	—	0	5	30	22	—	0	4	19	43
Tennessee¶	N	0	0	N	N	—	0	1	3	12	—	0	1	3	7
<b>W.S. Central</b>	—	95	747	3,655	6,692	—	0	15	92	65	—	0	5	24	60
Arkansas¶	—	3	30	115	619	—	0	1	4	7	—	0	0	—	2
Louisiana	—	1	7	76	65	—	0	2	7	16	—	0	4	6	31
Oklahoma	N	0	0	N	N	—	0	2	6	3	—	0	2	2	5
Texas¶	—	88	721	3,464	6,008	—	0	12	75	39	—	0	3	16	22
<b>Mountain</b>	3	31	83	1,066	1,678	—	0	5	44	97	—	0	12	64	182
Arizona	—	0	0	—	—	—	0	4	12	57	—	0	2	4	50
Colorado	3	12	44	430	687	—	0	4	13	17	—	0	11	38	54
Idaho¶	N	0	0	N	N	—	0	1	2	4	—	0	2	6	35
Montana¶	—	2	20	105	243	—	0	1	2	—	—	0	1	2	5
Nevada¶	N	0	0	N	N	—	0	2	7	8	—	0	1	5	7
New Mexico¶	—	2	20	134	178	—	0	2	5	5	—	0	1	2	3
Utah	—	12	32	397	560	—	0	0	—	6	—	0	0	—	20
Wyoming¶	—	0	1	—	10	—	0	1	3	—	—	0	2	7	8
<b>Pacific</b>	—	2	7	83	109	—	0	10	68	285	—	0	11	56	162
Alaska	—	1	6	52	53	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	6	45	280	—	0	6	39	148
Hawaii	—	1	4	31	56	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	1	1	3	—	0	3	6	13
Washington	N	0	0	N	N	—	0	4	22	2	—	0	3	11	1
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	0	—	—	—	—	—	—	—	—
Guam	—	1	2	—	60	—	0	0	—	—	—	0	0	—	—
Puerto Rico	13	8	26	381	474	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

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

† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for California serogroup, eastern equine, Powassan, St. Louis, and western equine diseases are available in Table I.

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

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



TABLE III. Deaths in 122 U.S. cities,\* week ending October 17, 2009 (41st week)

Reporting area	All causes, by age (years)							Reporting area	All causes, by age (years)						
	All Ages	≥65	45–64	25–44	1–24	<1	P&I† Total		All Ages	≥65	45–64	25–44	1–24	<1	P&I† Total
<b>New England</b>	415	292	89	21	5	8	41	<b>S. Atlantic</b>	1,211	747	309	93	44	18	78
Boston, MA	143	89	37	10	3	4	20	Atlanta, GA	120	57	38	17	6	2	2
Bridgeport, CT	28	21	7	—	—	—	—	Baltimore, MD	140	80	42	9	4	5	12
Cambridge, MA	14	13	1	—	—	—	1	Charlotte, NC	127	62	45	11	7	2	18
Fall River, MA	20	11	6	2	—	1	1	Jacksonville, FL	213	134	45	15	15	4	10
Hartford, CT	U	U	U	U	U	U	U	Miami, FL	122	80	34	4	2	2	11
Lowell, MA	22	16	4	1	1	—	6	Norfolk, VA	50	36	10	3	1	—	1
Lynn, MA	7	4	2	1	—	—	1	Richmond, VA	62	37	19	4	1	1	5
New Bedford, MA	15	12	3	—	—	—	—	Savannah, GA	47	32	8	6	1	—	4
New Haven, CT	U	U	U	U	U	U	U	St. Petersburg, FL	49	36	8	4	1	—	2
Providence, RI	46	34	8	1	1	2	5	Tampa, FL	157	118	26	7	5	1	12
Somerville, MA	5	4	1	—	—	—	—	Washington, D.C.	112	68	30	13	—	1	—
Springfield, MA	42	29	10	2	—	1	4	Wilmington, DE	12	7	4	—	1	—	1
Waterbury, CT	27	21	3	3	—	—	2	<b>E.S. Central</b>	779	511	194	51	13	10	54
Worcester, MA	46	38	7	1	—	—	1	Birmingham, AL	151	105	37	4	4	1	9
<b>Mid. Atlantic</b>	1,715	1,233	333	85	34	30	89	Chattanooga, TN	85	63	16	4	—	2	4
Albany, NY	52	38	8	1	3	2	1	Knoxville, TN	98	57	34	4	2	1	3
Allentown, PA	29	22	4	3	—	—	—	Lexington, KY	52	34	10	5	2	1	3
Buffalo, NY	79	52	17	4	3	3	6	Memphis, TN	131	77	40	10	—	4	7
Camden, NJ	33	24	3	1	2	3	—	Mobile, AL	96	66	20	8	2	—	10
Elizabeth, NJ	7	3	3	—	1	—	—	Montgomery, AL	33	26	4	1	2	—	4
Erie, PA	41	29	5	7	—	—	3	Nashville, TN	133	83	33	15	1	1	14
Jersey City, NJ	U	U	U	U	U	U	U	<b>W.S. Central</b>	1,040	667	249	71	23	30	92
New York City, NY	946	682	197	40	17	10	43	Austin, TX	79	45	25	3	5	1	14
Newark, NJ	19	13	2	2	1	1	1	Baton Rouge, LA	53	36	10	6	—	1	—
Paterson, NJ	4	4	—	—	—	—	1	Corpus Christi, TX	57	39	14	2	1	1	9
Philadelphia, PA	151	97	31	14	4	5	4	Dallas, TX	203	122	53	17	4	7	16
Pittsburgh, PA§	43	30	13	—	—	—	4	El Paso, TX	U	U	U	U	U	U	U
Reading, PA	25	19	2	1	2	1	1	Fort Worth, TX	U	U	U	U	U	U	U
Rochester, NY	135	109	21	3	1	1	17	Houston, TX	186	123	39	12	3	9	13
Schenectady, NY	24	19	3	1	—	1	—	Little Rock, AR	86	51	20	10	1	4	3
Scranton, PA	30	25	3	1	—	1	—	New Orleans, LA	U	U	U	U	U	U	U
Syracuse, NY	48	33	10	4	—	1	6	San Antonio, TX	215	145	45	13	6	6	21
Trenton, NJ	20	16	2	1	—	1	1	Shreveport, LA	49	33	12	3	1	—	4
Utica, NY	12	5	6	1	—	—	1	Tulsa, OK	112	73	31	5	2	1	12
Yonkers, NY	17	13	3	1	—	—	—	<b>Mountain</b>	1,079	706	254	78	27	14	66
<b>E.N. Central</b>	1,723	1,141	412	92	38	40	116	Albuquerque, NM	103	73	21	4	3	2	7
Akron, OH	48	31	12	4	—	1	2	Boise, ID	47	41	5	—	1	—	4
Canton, OH	42	32	7	1	1	1	4	Colorado Springs, CO	99	69	18	8	4	—	3
Chicago, IL	U	U	U	U	U	U	U	Denver, CO	77	51	18	3	2	3	9
Cincinnati, OH	83	52	19	6	3	3	4	Las Vegas, NV	262	168	67	19	6	2	17
Cleveland, OH	230	167	49	9	3	2	15	Ogden, UT	29	18	10	—	—	1	4
Columbus, OH	261	160	57	26	10	8	22	Phoenix, AZ	153	87	41	18	4	3	5
Dayton, OH	117	89	19	4	3	2	10	Pueblo, CO	28	21	6	1	—	—	1
Detroit, MI	172	77	76	10	5	4	7	Salt Lake City, UT	148	92	34	15	4	3	12
Evansville, IN	48	33	10	4	—	1	2	Tucson, AZ	133	86	34	10	3	—	4
Fort Wayne, IN	67	48	11	4	1	3	5	<b>Pacific</b>	1,492	1,014	328	86	32	31	116
Gary, IN	8	4	3	1	—	—	—	Berkeley, CA	15	11	4	—	—	—	—
Grand Rapids, MI	49	36	12	—	1	—	3	Fresno, CA	114	74	28	4	3	4	9
Indianapolis, IN	206	127	54	7	7	11	23	Glendale, CA	21	19	2	—	—	—	4
Lansing, MI	43	34	7	2	—	—	—	Honolulu, HI	57	40	11	4	—	2	5
Milwaukee, WI	86	63	17	5	—	1	6	Long Beach, CA	U	U	U	U	U	U	U
Peoria, IL	54	40	11	3	—	—	7	Los Angeles, CA	222	141	53	16	6	6	19
Rockford, IL	38	28	6	2	—	2	2	Pasadena, CA	24	17	5	2	—	—	5
South Bend, IN	34	22	9	1	2	—	1	Portland, OR	105	70	26	7	2	—	5
Toledo, OH	86	60	20	3	2	1	2	Sacramento, CA	171	120	37	6	4	4	19
Youngstown, OH	51	38	13	—	—	—	1	San Diego, CA	144	94	30	12	3	5	11
<b>W.N. Central</b>	510	332	121	27	16	13	32	San Francisco, CA	112	80	25	4	1	2	7
Des Moines, IA	41	27	6	4	2	2	3	San Jose, CA	166	114	34	9	5	4	13
Duluth, MN	24	12	11	1	—	—	—	Santa Cruz, CA	31	20	9	2	—	—	2
Kansas City, KS	14	9	5	—	—	—	—	Seattle, WA	115	79	23	7	4	2	8
Kansas City, MO	96	63	26	2	2	3	5	Spokane, WA	65	45	12	4	2	2	5
Lincoln, NE	44	36	4	2	1	1	2	Tacoma, WA	130	90	29	9	2	—	4
Minneapolis, MN	65	41	15	4	2	3	5	<b>Total¶</b>	<b>9,964</b>	<b>6,643</b>	<b>2,289</b>	<b>604</b>	<b>232</b>	<b>194</b>	<b>684</b>
Omaha, NE	80	48	22	5	4	1	8								
St. Louis, MO	47	23	11	6	5	1	2								
St. Paul, MN	40	33	7	—	—	—	2								
Wichita, KS	59	40	14	3	—	2	5								

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 &gt;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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