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Prevalence of Diagnosed Tourette Syndrome in Persons Aged 6–17 Years – United States, 2007

Tourette syndrome (TS) is an inheritable, childhood-onset neurologic disorder marked by persistent multiple motor tics and at least one vocal tic (*1*).^{*} Tics are involuntary, repetitive, stereotypic movements or vocalizations that are usually sudden and rapid and often can be suppressed for short periods (*1*). The prevalence of TS is uncertain; the broad range of worldwide estimates, from 1–30 per 1,000 population (*2,3*), likely is the result of differences in study methodology. This report presents the first estimate of national prevalence of diagnosed TS among a national sample of U.S. children and adolescents aged 6–17 years. Based on data from the 2007 National Survey of Children's Health (NSCH) (*4*), the estimated prevalence of a lifetime diagnosis of TS by parent report was 3.0 per 1,000. A diagnosis of TS was almost three times as likely for boys as girls, twice as likely for persons aged 12–17 years than for those aged 6–11 years, and twice as likely for non-Hispanic white persons than for Hispanic and non-Hispanic black persons. Among persons ever diagnosed with TS, 79% also had been diagnosed with at least one co-occurring mental health or neurodevelopmental condition. CDC sponsors efforts by the Tourette Syndrome Association to educate health-care providers and school personnel about TS to ensure earlier identification and promote appropriate medical, educational, and comprehensive behavioral interventions for children with TS and co-occurring mental health or neurodevelopmental conditions.

The 2007 NSCH was the first national, population-based survey of persons aged <18 years that included questions on

TS (*4*). NSCH is a random-digit-dialed telephone (landline only) survey used to estimate the prevalence of a variety of child health and well-being indicators for every state and to examine these indicators together with information on family characteristics and neighborhood environment.[†]

Telephone interviews (N = 91,642) were completed with parents (or guardians) from April 2007 through July 2008. One child was randomly selected from each household to be the focus of the interview. Complete data on TS were available for 64,034 persons aged 6–17 years. The overall response rate was 46.7%; the cooperation rate was 66.0%.[§] Data were weighted to account for unequal probability of selection of each household and child, for nonresponse, and for households without landline telephones. Weights were adjusted further so that estimates reflected the demographic distribution of

[†] Additional information about NSCH is available at <http://www.cdc.gov/nchs/about/major/slaits/nsch07.htm>. National and state-based estimates for more than 100 indicators from the NSCH are available at <http://nschdata.org>.

[§] The response rate is the percentage of households that completed interviews among all eligible households, including those that were not successfully contacted. The cooperation rate is the percentage of households that completed interviews among all eligible households that were contacted. NSCH attempts to minimize nonresponse bias by incorporating nonresponse adjustments in the development of the sampling weights.

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^{*} Diagnostic criteria for Tourette syndrome include 1) the presence of multiple motor and one or more vocal tics at some time during the illness, although not necessarily concurrently; 2) occurrence of tics many times a day, nearly every day, or intermittently throughout a period of more than 1 year, with no tic-free period of more than 3 consecutive months; 3) onset before age 18 years; and 4) symptoms not caused by direct physiologic effects of a substance or a general medical condition (*1*).

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noninstitutionalized U.S. children and adolescents from the 2007 American Community Survey of the U.S. Census Bureau.

Parents were asked, "Has a doctor or other health-care provider ever told you that [your child] had Tourette syndrome?" Affirmative responses were followed by asking whether the child currently has TS, and if so, whether the parent would describe the child's TS as mild, moderate, or severe (severity was only assessed for current TS). The same series of questions (e.g., current or ever doctor diagnosis) were asked about other co-occurring conditions, including attention-deficit/hyperactivity disorder (ADHD), depression, anxiety problems, behavioral or conduct problems such as oppositional defiant disorder or conduct disorder, and developmental delays affecting a child's ability to learn. Prevalence of parent-reported TS diagnosis (ever and current) among U.S. children, presence of co-occurring conditions, and severity of symptoms among children with current TS were calculated using statistical analysis software to account for the complex sampling design of NSCH.

All estimates in this report reflect persons aged 6–17 years. Estimates for children aged <6 years had high relative standard errors (>0.3) and are not reported. The estimated prevalence for ever receiving a TS diagnosis, by parent report, was 3.0 per 1,000, representing approximately 148,000 children (95% confidence interval [CI] = 111,000–197,000) (Table) in the United States. A diagnosis of TS was approximately three times as likely for boys compared with girls, and approximately twice as common in persons aged 12–17 years compared with those aged 6–11 years. Non-Hispanic white children were twice as likely as non-Hispanic black children and Hispanic children to have a parent-reported TS diagnosis. No differences were noted by parental education or household income. Among children ever diagnosed with TS, 79% also had been diagnosed with at least one co-occurring mental health or neurodevelopmental condition (Figure): 64% had been diagnosed with ADHD, 43% with behavioral or conduct problems, 40% with anxiety problems, 36% with depression, and 28% with a developmental delay affecting the child's ability to learn.

Among children with a TS diagnosis, 62% (weighted N = approximately 92,000, CI = 65,000–131,000) were described as currently having TS. Most current cases were described as mild, and 27.1% (CI = 15.0–43.8) were rated as moderate or severe. Persons aged 6–13 years were more likely than those aged 14–17 years to currently have TS (82.6% versus 42.1%, $p < 0.01$). Differences between the 6–11 years and 12–17 years age groups were not statistically significant.

Reported by: L. Scabill, PhD, Yale Univ Child Study Center and School of Nursing. RH Bitsko, PhD, SN Visser, MS, Div of Human Development and Disability, National Center on Birth Defects and

TABLE. Prevalence of ever receiving a diagnosis of Tourette syndrome among persons aged 6–17 years, by selected characteristics* — National Survey of Children's Health, United States, 2007

Characteristic	No. in sample (unweighted) [†]	No. with reported diagnosis (unweighted)	Weighted prevalence per 1,000	(95% CI) [§]	Prevalence ratio	(95% CI)
Total surveyed	64,034	225	3.0	(2.3–4.0)	—	—
Age (yrs)						
6–11	27,776	61	1.9	(1.2–2.9)	Referent	Referent
12–17	36,258	164	4.0	(2.8–5.9)	2.1	(1.2–3.8)
Sex						
Male	33,264	179	4.4	(3.2–6.1)	2.9	(1.4–6.0)
Female	30,680	46	1.5	(0.8–2.9)	Referent	Referent
Ethnicity/Race						
Hispanic	7,347	26	1.6	(0.9–2.8)	0.4	(0.2–0.8)
Non-Hispanic white	43,766	164	3.9	(2.7–5.6)	Referent	Referent
Non-Hispanic black	6,445	18	1.5	(0.9–2.7)	0.4	(0.2–0.8)
Highest level of education achieved by parent in household						
High school diploma or less	14,902	58	3.5	(2.0–6.0)	1.3	(0.7–2.4)
At least some college or technical school	48,376	165	2.7	(2.0–3.8)	Referent	Referent
Household income						
≤200% of federal poverty level (FPL) [¶]	17,646	65	3.1	(1.8–5.2)	1.1	(0.4–3.2)
>200% to ≤400% above FPL	21,875	80	3.0	(1.8–5.1)	1.0	(0.3–3.2)
>400% above FPL	24,512	80	2.9	(1.9–4.4)	Referent	Referent

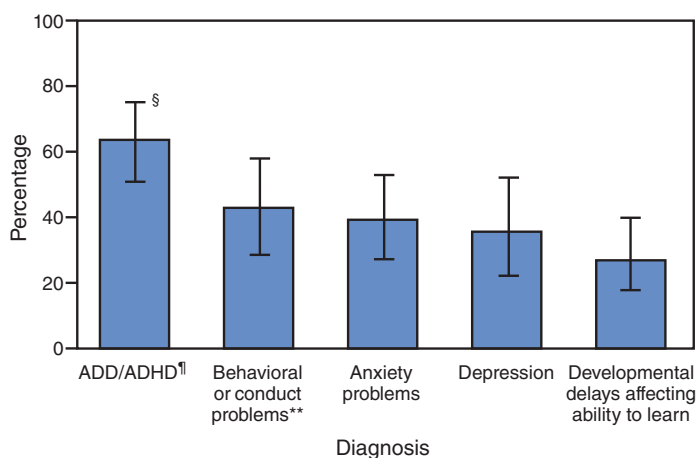
* As reported by parents.

[†] The sum of the sample sizes might not equal the total surveyed because some parents did not know or refused to provide an answer to the question about the characteristic. Missing data for family income were derived using multiple imputation techniques (4). Missing data for other characteristics were not imputed.[§] Confidence interval.[¶] Poverty guidelines for 2007 available at <http://aspe.hhs.gov/poverty/07fedreg.pdf>.

Developmental Disabilities; SJ Blumberg, PhD, Div of Health Interview Statistics, National Center for Health Statistics, CDC.

Editorial Note: Worldwide estimates of TS from population-based studies have ranged from 1 to 30 per 1,000 persons (2,3,5). This wide variation likely results from differences in sample size, population source, sample age, diagnostic criteria, and study methods (e.g., parent report, teacher report, and direct observation). TS prevalence described in recent community-based studies ranges from 3.0–8.0 per 1,000 persons (3,5–7).

This report provides the first prevalence estimate of diagnosed TS based on parent report from a nationally representative sample of U.S. children and adolescents. TS is a neurologic condition with genetic predisposition and childhood onset. Tic severity often peaks in adolescence and often declines by early adulthood (8). TS is more common in boys than girls (1–3,9). Children with TS experience associated problems related to academic and work performance and family and peer relationships (3). A TS diagnosis might be delayed or missed if symptoms are atypical, mild, attributed to alternate etiology (e.g., blinking mistaken for visual problem or sniffles mistaken for seasonal allergies), or in children with limited access to specialty health care (e.g. pediatric neurologist or child psychiatrist).

FIGURE. Prevalence of selected diagnoses* among persons aged 6–17 years who have ever received a diagnosis of Tourette syndrome (TS),[†] by parent report — National Survey of Children's Health, United States, 2007

* Selected diagnoses included mental health and neurodevelopmental conditions asked about on the survey, including attention-deficit/hyperactivity disorder (ADHD), behavioral or conduct problems, anxiety problems, depression, and developmental delays.

[†] Among children ever diagnosed with TS, 79% also had been diagnosed with at least one other selected diagnosis. Among children who currently have TS, 73% currently have at least one additional selected diagnosis.[§] 95% confidence interval.[¶] Attention-deficit disorder or attention-deficit/hyperactivity disorder, by parent report.^{**} Such as oppositional defiant disorder or conduct disorder, by parent report.

Many studies have reported male-to-female TS prevalence ratios of at least 4:1 (3,9,10). This is consistent with the higher prevalence of TS diagnosis among boys observed in the NSCH data. The reason boys are more likely than girls to express symptoms of TS is unclear and is likely the result of a combination of genetic, hormonal, and environmental factors (1,8).

The higher lifetime prevalence among older children is consistent with the known age distribution. Although average age of tic onset is 5–7 years, the course is often insidious (8). Severity often peaks between ages 10 and 12 years (8). Thus, the onset of TS symptoms might not be recognized immediately by parents or diagnosed by a clinician. After tic severity peaks, it might decline sufficiently that parents will no longer report that their child has TS. Among all children ever receiving a TS diagnosis, current TS was less likely to be reported for persons aged 14–17 years. However, impairment can endure into adulthood (8), and early identification and intervention might improve social, educational, and employment outcomes for persons with TS.

Consistent with community-based studies (2,9), approximately three fourths of children in this study with a current TS diagnosis had mild TS, according to their parents. Even when TS is mild, however, commonly associated co-occurring conditions such as ADHD and obsessive compulsive disorder might contribute to overall impairment (2,10).

The survey-based prevalence estimate described in this report is based on parent report of a TS diagnosis. The detection and diagnosis of TS is less likely for children with limited access to specialty health-care services (2). Thus, the observed survey-based prevalence of 3.0 per 1,000 likely is an underestimate of TS prevalence in children. Results from community-based studies that independently evaluate children for TS and do not rely on parent-reported diagnosis invariably identify cases that were previously not diagnosed (3,6,9). In addition, many children identified as having TS in community-based studies were not receiving mental health services (2,6,9). This suggests that primary-care practices and schools might be important settings to improve recognition and referral.

The survey-based prevalence estimates revealed that non-Hispanic black children and Hispanic children had a lower probability of TS diagnosis compared with non-Hispanic white children. Community-based studies of TS have lacked adequate sample size to determine prevalence for racial or ethnic groups. Differences in the prevalence of TS among racial and ethnic groups might result from biologic risk or disparities in access to specialty health care. The gap between prevalence reported in community-based studies and survey-based prevalence described in this report among non-Hispanic

blacks and Hispanics is greater than the gap between reports from community-based studies and the survey-based prevalence among non-Hispanic whites. These gaps support the view that differences in reported prevalence are at least partially attributable to differences in access to care. The lack of association between income and parent education with TS diagnosis suggests that other factors might affect the racial and ethnic differences. Research in communities with adequate representation of minority and underserved populations is needed to clarify the reasons for the differences in prevalence.

The findings in this report are subject to at least four limitations. First, symptoms consistent with TS must be recognized to establish a diagnosis. Some cases might remain undetected because of lack of awareness or access to medical care. Second, families who did not speak English, Spanish, or one of four Asian languages (Cantonese, Korean, Mandarin, or Vietnamese) were excluded from the survey (4). Third, the presence of co-occurring conditions and reported severity might be subject to recall error. Finally, the results are subject to biases associated with telephone surveys, including the exclusion of households without landlines and low response rates relative to population-based, face-to-face surveys.

Impairment in learning, school performance, and social competence can result from tics or co-occurring conditions (2). Clinical assessment and treatment of children with TS warrants attention to tics and co-occurring conditions to reduce overall impairment. The degree of impairment and spectrum of co-occurring conditions varies and therefore the treatment should be tailored to address the individual's type and severity of symptoms. Assessment by a specialist (e.g. pediatric neurologist or child psychiatrist), might provide the best available treatment options (e.g., behavioral or pharmacologic interventions). If academic or behavioral performance is of concern, referrals for educational interventions designed to reduce the effect of tics and co-occurring disruptive behavioral problems on learning should be considered.

Defining lifetime prevalence is an important step in defining the public health impact of TS. Although symptoms of TS might disappear in some cases by early adulthood, symptoms of co-occurring conditions can persist. CDC is conducting surveillance, research, and outreach activities to document the impact of TS and improve its recognition. CDC sponsors the Tourette Syndrome Association to provide authoritative education for physicians and allied health care workers, including school personnel, about TS treatment and the effects of the disorder. The programs increase access to accurate and scientifically valid information on the recognition, diagnosis, and treatment of TS, with a view toward improved health and developmental outcomes.

Acknowledgments

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References

1. American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-IV-TR. 4th ed. Washington, DC: American Psychiatric Association; 2000.
2. Scahill L, Sukhodolsky DG, Williams SK, Leckman JF. Public health significance of tic disorders in children and adolescents. *Adv Neurol* 2005;96:240–8.
3. Khalifa N, von Knorring AL. Prevalence of tic disorders and Tourette syndrome in a Swedish school population. *Dev Med Child Neurol* 2003;45:315–9.
4. Blumberg SJ, Foster EB, Frasier AM, et al. Design and operation of the National Survey of Children's Health, 2007. *Vital Health Stat 1* (in press).
5. Stefanoff P, Wolanczyk T, Gawrys A, et al. Prevalence of tic disorders among schoolchildren in Warsaw, Poland. *Eur Child Adolesc Psychiatry* 2008;17:171–8.
6. Hornsey H, Banerjee S, Zeitlin H, Robertson M. The prevalence of Tourette syndrome in 13–14-year-olds in mainstream schools. *J Child Psychol Psychiatry* 2001;42:1035–9.
7. Scahill L, Williams S, Schwab-Stone M, Applegate JO, Leckman JF. Tic disorders and disruptive behavior in a community sample. *Adv Neurol* 2006;99:184–90.
8. Leckman JF, Zhang H, Vitale A, et al. Course of tic severity in Tourette syndrome: the first two decades. *Pediatrics* 1998;102:14–9.
9. Kadesjo B, Gillberg C. Tourette's disorder: epidemiology and comorbidity in primary school children. *J Am Acad Child Adolesc Psychiatry* 2000;39:548–55.
10. Sukhodolsky DG, Scahill L, Zhang H, et al. Disruptive behavior in children with Tourette's syndrome: association with ADHD comorbidity, tic severity, and functional impairment. *J Am Acad Child Adolesc Psychiatry* 2003;42:98–105.

Update: Novel Influenza A (H1N1) Virus Infection – Mexico, March–May, 2009

On April 12, 2009, Mexico responded to a request for verification by the World Health Organization (WHO) of an outbreak of acute respiratory illness in the small community of La Gloria, Veracruz. During April 15–17, the Mexico Ministry of Health received informal notification of clusters of rapidly progressive severe pneumonia occurring mostly in Distrito Federal (metropolitan Mexico City) and San Luis Potosi. In response, on April 17, Mexico intensified national surveillance for acute respiratory illness and pneumonia. During April 22–24, novel influenza A (H1N1) virus infection, previously identified in two children in the United States (1), was confirmed in several patients. This report updates a previous report (2) on the outbreak in Mexico and summarizes public health actions taken to date by Mexico to monitor and control the outbreak. During March 1–May 29, national surveillance

identified 41,998 persons with acute respiratory illness; specimens from 25,127 (59.8%) patients were tested, of which 5,337 (21.2%) were positive for novel influenza A (H1N1) virus infection by real-time reverse transcription–polymerase chain reaction (rRT-PCR). As of May 29, 97 patients with laboratory-confirmed infection had died. Epidemiologic evidence to date suggests that the outbreak likely peaked nationally in late April, although localized cases continue to be identified.

Enhanced Surveillance

The outbreak of acute respiratory illness in La Gloria, Veracruz (population 2,155), was characterized by a large number of cases (616 or 28.5% of the population) reported during March 5–April 10. This outbreak was likely of mixed cause; later testing of respiratory specimens collected during this period identified two patients as positive for seasonal influenza A (H3N2), one for seasonal influenza B, and one patient for novel influenza A (H1N1) virus with an adenovirus coinfection. Most of the respiratory illnesses from this outbreak remain undiagnosed; no severe cases or deaths were observed.

During March and April, 47 cases of rapidly progressive severe pneumonia were identified from clusters in Mexico City, San Luis Potosi, and other cities. Twelve deaths were reported; in four of the deaths, specimens were positive for novel influenza A (H1N1) infection. In response to the La Gloria outbreak and the pneumonia clusters, the National Committees for Epidemiological Surveillance and Emerging Infectious Disease released an epidemiologic alert on April 17 to enhance national surveillance for acute respiratory illness and severe pneumonia. This enhanced surveillance was implemented through active case finding in hospitals throughout the country, including daily zero-reporting (requiring facilities and jurisdictions to report even if no suspected cases had been identified) and monitoring of news media and other sources. The Mexico Ministry of Health also initiated investigations of outbreaks throughout the country, with the assistance of the WHO Global Outbreak and Alert Response Network, coordinated by the Pan American Health Organization.

During April 18–19, a survey conducted in 23 hospitals in Mexico City indicated increased pneumonia-related hospital admissions since April 10, particularly among young adults. On April 21, respiratory specimens collected as a result of these enhanced surveillance activities were sent to the National Microbiology Laboratory of the Public Health Agency of Canada and to the Influenza Division at CDC. During April 22–24, both laboratories identified novel influenza A (H1N1) virus in specimens from Mexican patients. The Directorate General of Epidemiology (DGE) established an Internet-based

reporting platform to collect case-based epidemiologic information and a daily epidemiologic bulletin to disseminate results of ongoing investigations and recommendations from DGE. The first release of this bulletin occurred on April 26.

After identification of novel influenza A (H1N1) virus infection in Mexico, a case definition was developed. The initial definition of suspected novel influenza A (H1N1) virus infection included any hospitalized patient with severe acute respiratory illness. On May 1, this definition was expanded to include any person with acute respiratory illness defined as fever and either sore throat or cough. On May 11, the definition of suspected case was changed again to include any person with fever, cough, and headache, plus at least one of the following: rhinorrhea, coryza, arthralgia, myalgia, prostration, sore throat, chest pain, abdominal pain, or nasal congestion. In children aged <5 years, irritability replaced headache. A laboratory-confirmed case of novel influenza A (H1N1) virus infection was defined as illness in any person who had a respiratory specimen that tested positive for novel influenza A (H1N1) by rRT-PCR.

During 2008, to comply with new international health regulations, Mexico increased its number of influenza sentinel sites from 380 to 520 and expanded influenza testing capacity to four additional states. Enhanced surveillance for novel influenza A (H1N1) cases in mid-April 2009 generated an increase in the number of clinical specimens collected from patients with acute respiratory illness and a surge in testing at the National Laboratory from approximately 30 specimens to 900 daily. Enhancement of surveillance also included expansion of influenza testing capacity with rRT-PCR to eight states and with immunofluorescence to 30 of 31 Mexico states. As of May 29, a total of 25,127 specimens had been tested using rRT-PCR and, of those tested, 5,337 (21.2%) had been confirmed as positive for novel influenza A (H1N1) virus.

Of the 5,337 laboratory-confirmed cases of novel influenza A (H1N1) virus infection, 41.9% of patients were aged <15 years, 32.3% were aged 15–29 years, 23.7% were aged 30–59 years, and 2.1% were aged ≥60 years. Among patients with novel influenza A (H1N1) virus infection, 55.7% of deaths occurred among those aged 30–59 years (Table). Forty-nine percent of patients with confirmed infection were female.

As of May 29, Distrito Federal (Mexico City) had the highest number of laboratory-confirmed novel influenza A (H1N1) cases (1,804) and deaths (38); Mexico State reported 21 deaths (Figure 1). The peak number of confirmed cases (375) had onset of April 27 (Figure 2). As of May 29, all states in Mexico had reported laboratory-confirmed cases of novel influenza A (H1N1) virus.

Control Measures

On April 24, the federal government of Mexico activated the National Pandemic Preparedness and Response Plan and announced closure of schools in metropolitan Mexico City. Concurrently, the Ministry of Health launched a mass media campaign to promote respiratory hygiene and to alert the public about transmission of influenza. Additional social distancing measures included closure of restaurants and entertainment venues and cancellation of large public gatherings nationwide. To date, Mexico continues enhanced national surveillance and early antiviral treatment to decrease transmission of novel influenza A (H1N1) virus. Respiratory hygiene and hand washing are promoted through television and print media. On May 11, as schools reopened, parents were reminded to keep their children home if they had symptoms of influenza. In addition, a team of teachers and parents screened children at school entrances to determine whether they had fever or respiratory symptoms. The Ministries of

TABLE. Number of suspected,* tested, and laboratory-confirmed novel influenza A (H1N1) cases and deaths — Mexico, March–May 2009

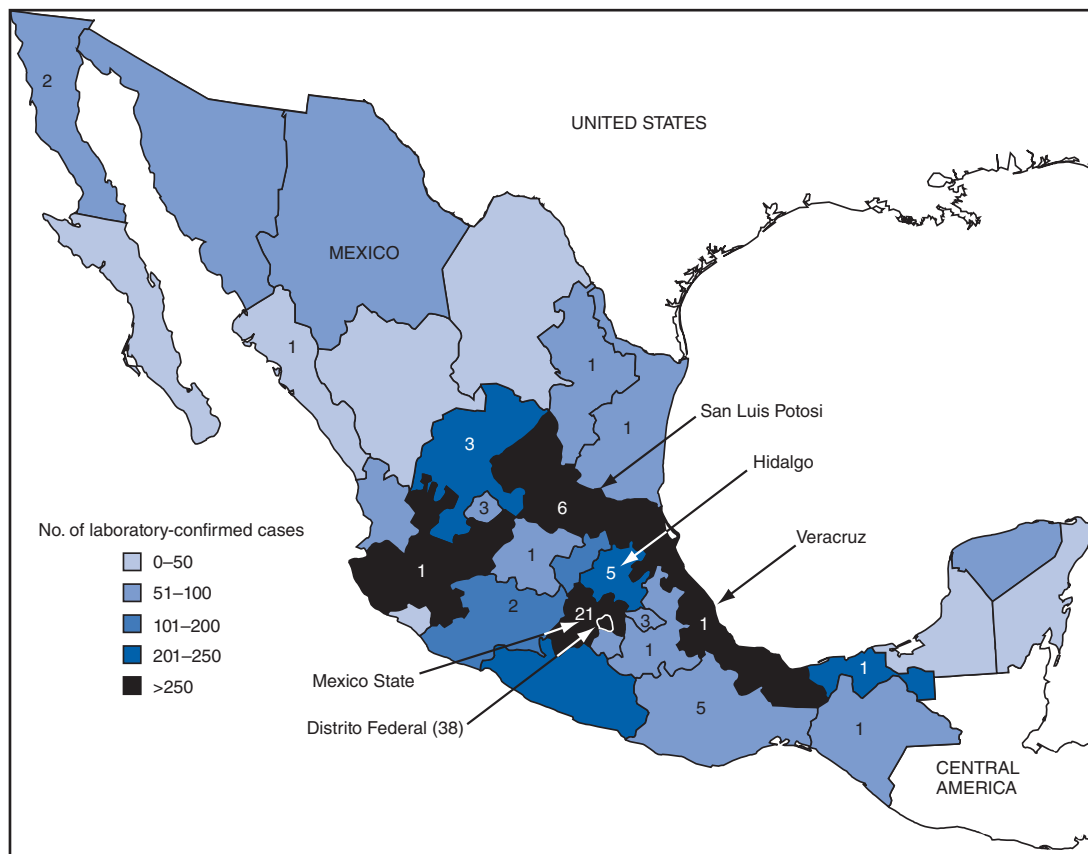
Age group (yrs)	No. suspected cases	No. tested	No. laboratory-confirmed positive†		Rate per 100,000 population	Deaths among laboratory-confirmed cases (% of confirmed deaths)		2009 population§
				(%)			(%)	
0–4	6,428	3,520	695	(13.2)	7.26	5	(5.2)	9,578,579
5–14	7,742	4,229	1,517	(28.7)	7.11	7	(7.2)	21,327,734
15–29	11,568	7,591	1,704	(32.3)	5.83	26	(26.8)	29,221,168
30–59	12,687	8,507	1,251	(23.7)	3.26	54	(55.7)	38,330,279
≥60	2,249	1,016	112	(2.1)	1.23	5	(5.2)	9,092,937
Age missing	1,324	264	58	—	—	—	—	—
Total	41,998	25,127	5,337	(100.0)	4.96	97	(100.0)	107,550,697

* The initial definition of suspected novel influenza A (H1N1) virus infection included any hospitalized patient with severe acute respiratory illness. On May 1, this definition was expanded to include any person with acute respiratory illness defined as fever and either sore throat or cough. On May 11, the definition of suspected case was changed again to include any person with fever, cough, and headache, plus at least one of the following: rhinorrhea, coryza, arthralgia, myalgia, prostration, sore throat, chest pain, abdominal pain, or nasal congestion. In children aged <5 years, irritability replaced headache.

† Reported as of May 29, 2009.

§ From Consejo Nacional de Población. Available at http://www.conapo.gob.mx/index.php?option=com_content&view=article&id=36&Itemid=234.

FIGURE 1. Number of laboratory-confirmed cases of novel influenza A (H1N1) virus infection (N = 5,337)* and deaths (N = 97),† by state and Distrito Federal — Mexico, March–May 2009



* Reported as of May 29, 2009.

† Indicated by numerals.

Education and Health recommended closure of classrooms where two or more children had respiratory symptoms and closure of schools with ill children in two or more classrooms. On the first day of using this strategy, 91,357 children were determined symptomatic. This screening at schools was suspended on May 23. Screening for respiratory illness is ongoing at airports, where passengers complete a brief questionnaire about respiratory symptoms. Symptomatic travelers are asked to delay their journeys and referred for medical evaluation. At Mexico City's International Airport, thermal scanners of body temperatures also are in use.*

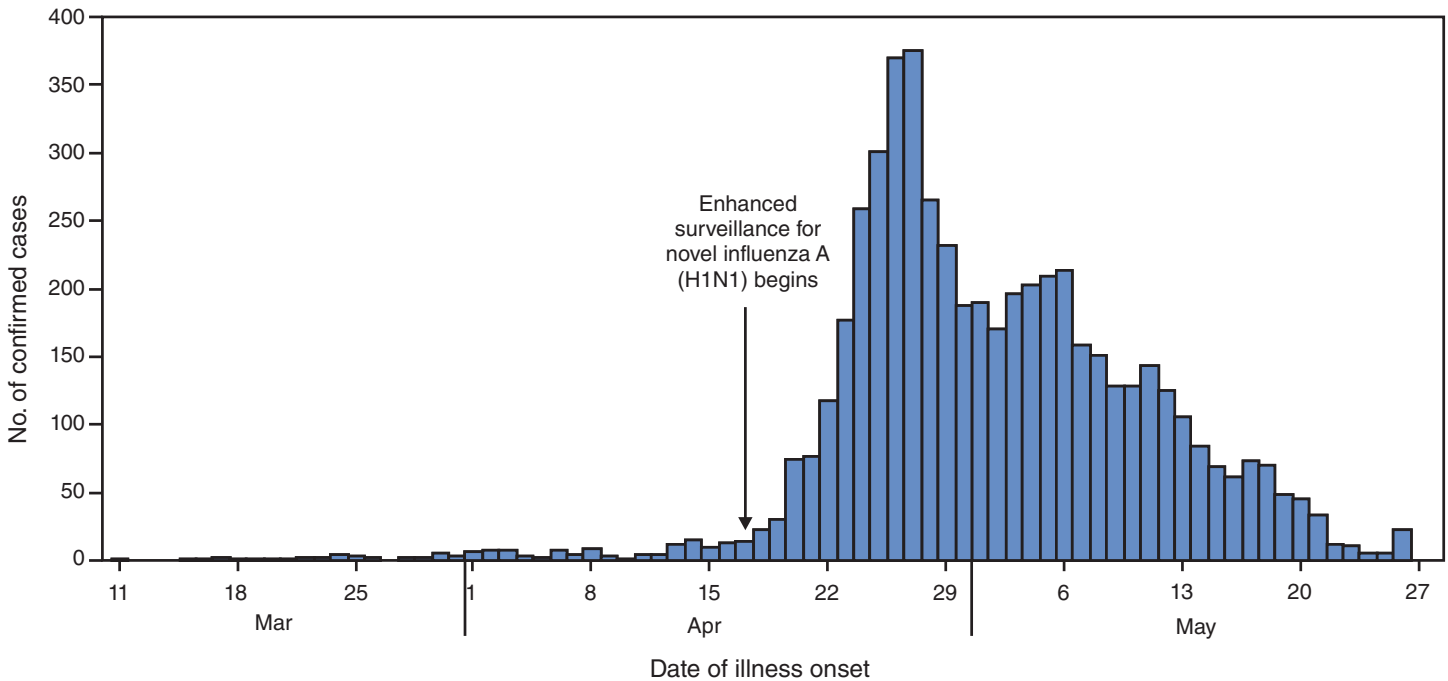
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* Guidance from the Mexico government regarding screening, prevention, and control of novel influenza A (H1N1) virus infection is available at <http://portal.salud.gob.mx/contenidos/noticias/influenza/lineamientos.html>.

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Editorial Note: Trends in case counts in Mexico suggest that novel influenza A (H1N1) activity is now decreasing, although localized transmission continues to occur. The epidemic curve of laboratory-confirmed cases remains incomplete because of a backlog of untested specimens. However, data regarding suspected cases (3) also indicate a peak in late April, and delays from case identification to reporting have decreased to a median of <2 days (Mexico Office of the Secretary of Health, unpublished data, 2009). Taken together, these data suggest that the outbreak likely has moved beyond its peak nationally,

FIGURE 2. Number (N = 5,305) of laboratory-confirmed cases of novel influenza A (H1N1) virus infection,* by date of illness onset — Mexico, March–May 2009



* Includes all confirmed cases with onset data reported as of May 29, 2009. Does not reflect all cases because of a backlog of untested specimens.

although a pattern of heterogeneous transmission and focal outbreak activity remains.

Several features of the outbreak in Mexico are consistent with outbreaks of the same novel influenza virus strain circulating in the United States and other countries. These features include person-to-person transmission during a period that is typically the low season for circulation of influenza viruses (4) and an age distribution of laboratory-confirmed cases that includes severe disease and deaths among children and adults in Mexico aged <60 years (4). Some deaths have occurred among previously healthy persons (4), and several patients have experienced an aggressive clinical course with severe pneumonia requiring ventilator support and progression to acute respiratory distress syndrome (2,5,6).

A recently reported serologic study suggested that children and younger adults have no or low levels of serum antibody, respectively, that are cross-reactive for the novel influenza A (H1N1) virus. Approximately one third of U.S. adults aged >60 years who were tested had cross-reactive neutralizing antibodies; however, the extent to which such antibody might be protective remains unknown (7). The serologic data, along with the age distribution of illness and clinical severity from the outbreak in Mexico, suggest age <60 years as a risk for infection and serious illness from novel A (H1N1) infection.

The current pattern of novel influenza A (H1N1) transmission in the northern hemisphere includes many localized outbreaks, including several among school children (8). This pattern is consistent with influenza outbreaks occasionally reported outside of the usual influenza season (9). However an unprecedented number of such off-season outbreaks are occurring currently. These outbreaks also involve extension into the community, as demonstrated by confirmed illness among travelers with no known epidemiologic link to focal outbreaks. Similar patterns of off-season outbreaks have been observed previously with the emergence and sustained transmission of other novel influenza A virus strains among humans (10).

The recent introduction of novel influenza A (H1N1) into several countries in the southern hemisphere at the beginning of its influenza season and the presumed susceptibility among much of the population to this new virus suggest that this strain might become a dominant circulating virus in the southern hemisphere during the coming months. The government of Mexico continues to coordinate a national response, engage partners, increase surge capacity, and implement mitigation measures to slow the spread of novel influenza A (H1N1). Investigations are ongoing to monitor virus circulation and evaluate mitigation strategies that might help guide prevention and control strategies in Mexico and worldwide.

References

1. CDC. Update: swine influenza A (H1N1) infections—California and Texas, April 2009. *MMWR* 2009;58:435–7.
2. CDC. Outbreak of swine-origin influenza A (H1N1) virus infection—Mexico, March–April 2009. *MMWR* 2009;58:467–70.
3. Dirección General Adjunta de Epidemiología. Brote de influenza A H1N1 México. *Boletín Diario* 22 (May 18, 2009).
4. Viboud C, Alonso WJ, Simonsen L. Influenza in tropical regions. *PLoS Med* 2006;3:e89.
5. World Health Organization. Human infection with new influenza A (H1N1) virus: clinical observations from Mexico and other affected countries, May 2009. *Wkly Epidemiol Rec* 2009;84:185–9.
6. CDC. Hospitalized patients with novel influenza A (H1N1) virus infection—California, April–May, 2009. *MMWR* 2009;58:536–41.
7. CDC. Serum cross-reactive antibody response to a novel influenza A (H1N1) virus after vaccination with seasonal influenza vaccine. *MMWR* 2009;58:521–4.
8. CDC. Swine-origin influenza A (H1N1) virus infections in a school—New York City, April 2009. *MMWR* 2009;58:470–2.
9. Kohn MA, Farley TA, Sundin D, Tapia R, McFarland LM, Arden NH. Three summertime outbreaks of influenza type A. *J Infect Dis* 1995;172:246–9.
10. Taubenberger JK, Morens DM. 1918 influenza: the mother of all pandemics. *Emerg Infect Dis* 2006;12:15–22.

Incidence and Diagnoses of HIV Infection — Puerto Rico, 2006

In 2006, 33 U.S. states and five territories had confidential, name-based, human immunodeficiency virus (HIV) infection reporting; among territories, Puerto Rico had the second highest rate of HIV infection (1). To characterize the HIV epidemic in Puerto Rico in 2006 (the year with the most recent available data), the Puerto Rico Department of Health and CDC analyzed data on diagnoses of HIV infection (including infections that occurred in 2006 and in previous years) and used a stratified extrapolation approach developed by CDC (2) to generate HIV incidence estimates (the number of persons newly infected with HIV in 2006). The results indicated that, in 2006, an estimated 1,440 persons aged ≥ 13 years were newly infected with HIV in Puerto Rico, resulting in an estimated incidence rate of 45.0 cases per 100,000 population, twice the rate for the 50 U.S. states and District of Columbia (DC). Males accounted for 65% of new HIV infections in Puerto Rico, and 38% of new HIV infections occurred among persons aged 30–39 years; 39% of new infections were associated with injection-drug use, and 37% with high-risk heterosexual contact. The results provide insight into HIV transmission patterns in Puerto Rico that can help guide allocation of resources and the planning, implementation, and evaluation of HIV prevention programs and other services.

Calculation of diagnoses of HIV infection (i.e., HIV diagnosed with or without a concurrent or later acquired

immunodeficiency syndrome [AIDS] diagnosis) was based on the 1,021 diagnoses in 2006 among persons aged ≥ 13 years reported to CDC by the Puerto Rico Department of Health through June 2007. Data were categorized by sex, age group, and mode of HIV transmission. The following hierarchy was used for HIV transmission categories: 1) male-to-male sexual contact, 2) injection-drug use, 3) male-to-male sexual contact and injection-drug use, and 4) high-risk heterosexual contact (i.e., with a sex partner known to have or to be at high risk for HIV infection). The number of reported diagnoses was adjusted for reporting delay using a previously reported procedure (3). In addition, for diagnosed cases missing transmission category (32%), a multiple imputation procedure was used (4). Percentages were calculated for sex, age group, and transmission categories. HIV diagnosis rates per 100,000 population were calculated for sex and age group using postcensus estimates for 2006 (5).

HIV incidence for Puerto Rico was calculated using the stratified extrapolation approach (2,6). Remnant diagnostic serum specimens from persons aged ≥ 13 years and diagnosed with HIV infection in 2006 in Puerto Rico were tested with the BED HIV-1 capture enzyme immunoassay (BED) to classify infections as recent or long-standing. In addition to the BED result, the estimation method requires HIV testing history, demographic data, and behavioral information for persons with HIV infection diagnosed in 2006. HIV incidence was calculated from cases based on the 1,021 diagnoses of HIV infection, adjusted to 1,460 for reporting delays in 2006. Percentages were calculated for sex, age group, and transmission categories. HIV incidence rates per 100,000 population were calculated for sex and age group using official postcensus estimates for 2006 (5).

In 2006, after adjustment for reporting delays, 1,460 persons aged ≥ 13 years were diagnosed with HIV infection in Puerto Rico (Table 1). Of these, 1,036 (71%) were males and 424 (29%) were females. By age group, the greatest number of diagnoses of HIV infection occurred among those aged 30–39 years, followed by those aged 40–49 years. Among males, the most common mode of HIV transmission was injection-drug use (40%), followed by male-to-male sexual contact (30%). Among females, the most common mode of HIV transmission was high-risk heterosexual contact (73%), followed by injection-drug use (27%). The rate of diagnosis of HIV infection in Puerto Rico in 2006 was 45.5 per 100,000 population.

An estimated 1,440 persons (45.0 per 100,000 population) were newly infected with HIV in 2006. The HIV incidence rate among males (62.0) was twice that among females (29.8). The highest rate of incident HIV infections, among persons aged 30–39 years (103.6), was 1.7 times that of the age group

TABLE 1. Adjusted number,* percentage, and rate† of diagnosis of human immunodeficiency virus (HIV) infection§ among persons aged ≥13 years, by selected characteristics — Puerto Rico, 2006

Characteristic	No.	(%)	Rate	(95% CI¶)
Sex				
Male	1,036	(71)	68.2	(58.0–78.5)
Female	424	(29)	25.1	(19.4–30.8)
Age group at diagnosis (yrs)				
13–29	298	(20)	30.1	(22.3–37.8)
30–39	438	(30)	83.1	(65.1–101.1)
40–49	400	(27)	76.6	(57.0–96.1)
≥50	325	(22)	27.8	(20.1–35.3)
Male transmission category				
Male-to-male sexual contact**	310	(30)	—	—
Injection-drug use	419	(40)	—	—
Male-to-male sexual contact and injection-drug use	39	(4)	—	—
High-risk heterosexual contact††	267	(26)	—	—
Female transmission category				
Injection-drug use	114	(27)	—	—
High-risk heterosexual contact	310	(73)	—	—
Total	1,460^{§§}	(100)^{***}	45.5	(39.8–51.2)

* Numbers result from adjustments of reported case counts for reporting delay. Missing information on transmission category was imputed.
 † Per 100,000 population; postcensus estimates from the U.S. Census. Rates for transmission category subgroups were not calculated because population denominators were unavailable.
 § Includes 1) persons with a diagnosis of HIV infection but not acquired immunodeficiency syndrome (AIDS), 2) persons with a diagnosis of HIV infection and a later diagnosis of AIDS in 2006, or 3) persons with concurrent diagnoses of HIV infection and AIDS.
 ¶ Confidence interval.
 ** Because of small numbers, persons with both male-to-male sexual contact and injection-drug use were included in this category.
 †† Heterosexual contact with a person known to have, or to be at high risk for HIV infection.
 §§ Because column totals were calculated independently of subpopulation values, the subpopulation values might not sum to the total.
 *** Percentages might not sum to 100% because of rounding.

with the next highest rate (40–49 years [59.3]). The mode of transmission with the greatest number of new HIV infections was injection-drug use (39%), followed by high-risk heterosexual contact (37%) and male-to-male sexual contact (24%) (Table 2).

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Editorial Note: These estimates of HIV incidence in Puerto Rico in 2006 reveal important differences between HIV epidemiology in Puerto Rico and the 50 U.S. states and DC. The overall HIV incidence rate in Puerto Rico in 2006 (45.0 per 100,000 population) was twice the estimated U.S. rate (22.8) and 1.5 times the estimated rate for Hispanics in the United

TABLE 2. Estimated number,* percentage, and rate† of new human immunodeficiency virus (HIV) infections among persons aged ≥13 years, by selected characteristics — Puerto Rico, 2006

Characteristic	No. [§]	(95% CI¶)	%	Rate	(95% CI)
Sex					
Male	940	(650–1,240)	65	62.0	(42.5–81.4)
Female	500	(320–700)	35	29.8	(18.8–40.8)
Age group (yrs)					
13–29	390	(230–540)	27	39.0	(23–54.8)
30–39	540	(340–750)	38	103.6	(64.2–143.1)
40–49	310	(140–480)	21	59.3	(26.1–92.5)
≥50	200	(70–340)	14	17.4	(6.1–28.8)
Transmission category					
Male-to-male sexual contact**	350	(190–520)	24	—	—
Injection-drug use	560	(340–790)	39	—	—
High-risk heterosexual contact††	530	(300–770)	37	—	—
Total	1,440	(1,060–1,830)	100	45.0	(33.1–57.0)

* Numbers are estimates, resulting from adjustments of reported case counts for reporting delay. Missing information on transmission category was imputed.
 † Per 100,000 population; postcensus estimates from the U.S. Census. Rates for transmission category subgroups were not calculated because population denominators were unavailable.
 § Rounded to tens.
 ¶ Confidence interval.
 ** Because of small numbers, persons with both male-to-male sexual contact and injection-drug use were included in this category.
 †† Heterosexual contact with a person known to have, or to be at high risk for HIV infection.

States (29.4). The incidence rate among males in Puerto Rico (62.0) was 1.8 times the rate among U.S. males (34.3) and 1.4 times the rate among U.S. Hispanic males (43.1). The incidence rate among females in Puerto Rico (29.8) was 2.5 times the rate among U.S. females (11.9) and 2.0 times the rate in U.S. Hispanic females (14.4) (6,7). However, comparisons between the rates for Puerto Rico and the rates for Hispanics in the United States should consider differences in the two populations. Hispanics in the United States include persons who are U.S. born and those of diverse national origin whose behavioral characteristics might differ from Hispanics in Puerto Rico (8). In addition, the number of diagnoses of HIV infection generally is higher in metropolitan areas, and population density in Puerto Rico (1,112 persons per square mile) is 14 times that of the United States (79.6 persons) (1,6,7,9).

Injection-drug use continues to be the most common mode of HIV transmission in Puerto Rico, whereas most new HIV infections in the 50 U.S. states and DC are attributed to male-to-male sexual contact (1,6–8). Previous reports have indicated greater prevalence of injection-drug use and high-risk health behaviors related to injection-drug use (e.g., frequency of injecting and sharing syringes and other drug paraphernalia) in Puerto Rico than in the United States (8).

In 2006, most new HIV infections in the United States, including among Hispanics, occurred in persons aged 13–29 years (7). In contrast, most new HIV infections in Puerto Rico occurred among persons aged 30–39 years. This age group had the highest rates of new HIV infection in both Puerto Rico and the United States; however, the incidence rate in Puerto Rico (103.6 per 100,000 population) was 2.4 times the rate in the United States (42.6) (6). One possible explanation for the higher rates in this age group in Puerto Rico might be related to injection-drug use. Persons commonly begin using non-injection drugs and progress to injection-drug use. However, further investigation is needed to test that hypothesis and fully understand the reasons for difference in the rates.

The findings in this report are subject to at least two limitations. The classification of cases reported without a risk factor for transmission was based on a model incorporating random variations to impute missing values (4). Although multiple imputation procedures are designed to maintain associations within the data, the degree of uncertainty introduced by this imputation procedure is unknown. Second, the stratified extrapolation approach to HIV incidence estimation is based on several key assumptions, including that information on previous tests and BED results were missing at random, that testing behavior has not changed substantially over several years, that testing and infection are independent, and that information on previous testing is accurate (2). Concerns have been raised about the accuracy of the BED test, which appeared to result in overestimation of recent HIV infections in Africa and Thailand (10). The implications of these assumptions on incidence estimation have been discussed extensively (2,6)

The HIV epidemic in Puerto Rico is notably different from the epidemic in the United States overall and among Hispanics in the United States (1,6–8). CDC supports prevention efforts that target populations at greatest risk in Puerto Rico, including injection-drug users, women who have high-risk heterosexual contact, men who engage in male-to-male sexual contact, and youths. To address transmission of HIV infection among injection-drug users, the Puerto Rico Department of Health provides syringe exchange programs and rapid HIV testing, has implemented policies to allow pharmacies to sell syringes without medical prescription, and provides drug rehabilitation services throughout the country. The findings in this report help describe the HIV epidemic in Puerto Rico and can help guide future allocation of resources and planning, implementation, and evaluation of HIV prevention programs and services.

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MR Irizarry, Puerto Rico Dept of Health; J Prejean, Div of HIV/AIDS Prevention Surveillance and Epidemiology, M Ayala-Perales, and J Andia, Div of HIV/AIDS Prevention Intervention Research and Support, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, CDC.

References

1. CDC. HIV/AIDS surveillance report, 2006. Atlanta, GA: US Department of Health and Human Services, CDC; 2008. Report no. 18. Available at <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2006report/default.htm>.
2. Karon JM, Song R, Kaplan E, Brookmeyer R, Kaplan EH, Hall HI. Estimating HIV incidence in the United States from HIV/AIDS surveillance data and biomarker HIV test results. *Stat Med* 2008;27:4617–33.
3. Green TA. Using surveillance data to monitor trends in the AIDS epidemic. *Stat Med* 1998;17:143–54.
4. Harrison KM, Kajese T, Hall HI, Song R. Risk factor redistribution of the national HIV/AIDS surveillance data: an alternative approach. *Public Health Rep* 2008;123:618–26.
5. CDC. Bridged-race Vintage 2006 postcensal population estimates for July 1, 2000–July 1, 2006, by year, county, single-year of age, bridged-race, Hispanic origin, and sex. Available at <http://www.cdc.gov/nchs/about/major/dvs/popbridge/datadoc.htm#vintage2006>.
6. Hall HI, Song R, Rhodes P, et al; HIV Incidence Surveillance Group. Estimation of HIV incidence in the United States. *JAMA* 2008;300:520–9.
7. CDC. Subpopulation estimates from the HIV incidence surveillance system—United States, 2006. *MMWR* 2008;57:985–9.
8. Espinoza L, Hall HI, Selik RM, Hu X. Characteristics of HIV infection among Hispanics, United States 2003–2006. *J Acquir Immune Defic Syndr* 2008;49:94–101.
9. US Census Bureau. United States—States; and Puerto Rico. GCT-PH1. Population, housing units, area, and density: 2000 data set. Census 2000 summary file 1 (SF 1) 100-percent data. Available at <http://factfinder.census.gov>.
10. UNAIDS. Statement on the use of the BED assay for the estimation of HIV-1 incidence for surveillance or epidemic monitoring: report of a meeting of the UNAIDS Reference Group for Estimates, Modeling and Projections. Athens, Greece: UNAIDS; 2005. Available at <http://www.epidem.org/publications/bed%20statement.pdf>.

Impact of New WHO Growth Standards on the Prevalence of Acute Malnutrition and Operations of Feeding Programs – Darfur, Sudan, 2005–2007

Acute malnutrition among children aged 6–59 months is a key indicator routinely used for describing the presence and magnitude of humanitarian emergencies. In the past, the prevalence of acute malnutrition and admissions to feeding programs has been determined using the growth reference developed by the World Health Organization (WHO), CDC, and the National Center for Health Statistics (NCHS). In 2006, WHO released new international growth standards and

recommended their use in all nutrition programs. To evaluate the impact of transitioning to the new standards, CDC analyzed anthropometric data for children aged 6–59 months from Darfur, Sudan, collected during 2005–2007. This report describes the results of that analysis, which indicated that use of the new standards would have increased the prevalence of global acute malnutrition on average by 14% and would have increased the prevalence of severe acute malnutrition on average by 100%. Admissions to feeding programs would have increased by 56% for moderately malnourished children and by 260% for severely malnourished children. For programs in Darfur, this would have resulted in approximately 23,200 more children eligible for therapeutic feeding programs. For the immediate future, the prevalence of acute malnutrition in children should be reported using both the old WHO/CDC/NCHS reference and the new WHO standards. More research is needed to better ascertain the validity of the admission criteria based on the new WHO standards in predicting malnutrition-related morbidity and mortality.

Historically, measures of acute malnutrition have been based on the WHO/CDC/NCHS growth reference (1). This reference is a normalized version of the 1977 NCHS reference (2). The NCHS reference is based on data from predominantly formula-fed children collected in the United States during the 1960s and 1970s. However, at least one report has indicated a need for more internationally representative, up-to-date growth standards based on predominantly breastfed children (3). Therefore, in 2006, WHO developed new growth standards using data collected during 1997–2003 from predominantly breastfed children living in favorable conditions from sites in six regions of the world (4,5). The WHO growth standards are considered preferable because they represent how healthy children should grow, whereas the WHO/CDC/NCHS reference only represents how children grew in a specific place and time (4).

To describe acute malnutrition at the population level, two prevalence indicators are normally reported: global acute malnutrition (GAM) and severe acute malnutrition (SAM) (6). GAM and SAM are the principal indicators reported in nutrition surveys and are used to compare population prevalence of acute malnutrition across time and geographic areas. Prevalences of GAM and SAM are based on the proportion of children aged 6–59 months whose weight and height categorize them below a certain Z-score (Table 1). A Z-score is the number of standard deviations from the weight of an individual child to the reference mean weight, for a given height and sex.

To determine the need for admission to a selective feeding program, children are classified as being moderately malnourished (eligible for supplementary feeding programs) or severely malnourished (eligible for therapeutic feeding programs). In

contrast to population prevalence measures (GAM and SAM), this classification has been based previously on the percentage of the median of the WHO/CDC/NCHS growth reference, as opposed to Z-scores (Table 1). Percentage median is the ratio of the weight of an individual child to the reference mean weight, for a given height and sex. The new WHO guidelines recommend that Z-scores be used not only for measures of population prevalence but also as admission criteria for feeding programs, eliminating use of the percentage median (7), because Z-scores more accurately take into account the distribution of the anthropometric measures within the population. These standards have been endorsed by other United Nations agencies and international health and nutrition bodies (e.g., the United Nations Standing Committee on Nutrition and the International Pediatric Association) and has been adopted in approximately 90 countries (7).

CDC analyzed data obtained from three annual cross-sectional nutritional surveys conducted during 2005–2007 in Darfur, Sudan, by the United Nations Children's Fund (UNICEF), the World Food Programme, and CDC. All three surveys obtained anthropometric data from children aged 6–59 months from each of Darfur's three states. Anthropometry scores for each child, including the WHO/CDC/NCHS percentage median, WHO/CDC/NCHS Z-score, and WHO Z-score, were generated.* Records with missing critical data and extreme outliers (e.g., those with Z-scores greater than ± 4 from the observed mean Z-score) were excluded from analysis.

GAM, SAM, and admission eligibility for moderate and severe acute malnutrition based on the WHO/CDC/NCHS and WHO standards were defined (Table 1) (8). The prevalences of GAM and SAM were calculated for each annual survey using WHO/CDC/NCHS Z-scores versus WHO Z-scores, and compared by calculating the relative percentage change for years 2005, 2006, and 2007. To estimate the effects on admissions into feeding programs, the proportions of moderate and severe malnutrition cases were calculated for each annual survey using WHO/CDC/NCHS percentage median versus WHO Z-scores, and compared by calculating the relative percentage change for each year of data. The relative percentage change for combined data from all three years for all measures was calculated. Finally, based on projections of the percentage and numbers of children with SAM, the effects on costs for operating therapeutic feeding programs in Darfur were estimated. A full treatment course for the severely malnourished was assumed to cost \$203 (95% confidence interval [CI] = \$139–\$274) (9).

* Scores generated using emergency nutrition assessment software (ENA for SMART), available at <http://www.nutrisurvey.de/ena/ena.html>.

TABLE 1. World Health Organization/CDC/National Center for Health Statistics (WHO/CDC/NCHS) and WHO definitions of acute malnutrition using weight-for-height and/or edema in children aged 6–59 months

Categories	WHO/CDC/NCHS	WHO
Prevalence		
Global acute malnutrition	Z-score* <-2 or bilateral edema	Z-score <-2 or bilateral edema
Severe acute malnutrition	Z-score <-3 or bilateral edema	Z-score <-3 or bilateral edema
Feeding program enrollment		
Moderate acute malnutrition	<80% to ≥70% percentage median† without edema	Z-score ≥-3 and <-2
Severe acute malnutrition	<70% percentage median or bilateral edema	Z-score <-3 or bilateral edema

* A Z-score is the number of standard deviations from the weight of an individual child to the reference mean weight, for a given height and sex.

† Percentage median is the ratio of the weight of an individual child to the reference mean weight, for a given height and sex.

When comparing the prevalence of GAM using WHO Z-scores versus WHO/CDC/NCHS Z-scores, an overall relative increase of 14% was observed (Table 2). For SAM, using WHO growth standards resulted in an overall relative increase of 100% compared with WHO/CDC/NCHS-based results. When comparing estimates of eligibility for feeding program enrollment for moderately malnourished children, using WHO Z-scores compared with WHO/CDC/NCHS percentage median indicated an overall relative increase of 56% (Table 3). For severely malnourished children, using WHO Z-scores showed an overall relative increase of 260% compared with WHO/CDC/NCHS percentage median.

Analysis of the 2007 data indicated that, by converting from WHO/CDC/NCHS reference to WHO standards, the projected number of severely malnourished children would increase from approximately 6,800 to 30,000. This translates to an increase in operating expenses for therapeutic feeding programs by an estimated \$4.7 million (CI = \$3.2–\$6.3 million). This estimate does not take into account the additional cost for treating moderately malnourished children.

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Editorial Note: Results of this study demonstrate that transitioning to the new WHO growth standards will have substantial effects on the population prevalence of GAM and SAM, admissions to feeding programs, and costs of program

operations. This analysis shows moderate increases in GAM and substantial increases in SAM at levels similar to a previously published report based on displaced populations (10). Also, based on these estimates, three to four times as many children would be eligible for admission into therapeutic feeding programs.

The findings in this report are subject to at least one limitation. Errors might have occurred during field data collection, which can be challenging in austere settings such as Darfur, where access to the survey population often is limited because of a lack of security and a lack of qualified survey personnel.

CDC recommends that nutrition survey reports on acute malnutrition should, for the immediate future, use both the WHO/CDC/NCHS reference and the WHO standards. Considering the programmatic importance of comparing year-to-year data, if prevalences based only on the WHO growth standards were reported, they could not be compared easily with levels reported from previous years based on WHO/CDC/NCHS reference. For example, reporting a SAM level of 4.4% using the WHO standard, without explaining that it corresponds to a SAM level of 1.8% based on the WHO/CDC/NCHS reference, might be somewhat misleading. The guidelines that designate levels of GAM and SAM at which large-scale nutritional interventions are indicated should be updated to reflect expected changes in magnitude of acute malnutrition observed with the new standards. Finally, more

TABLE 2. Prevalence of global acute malnutrition (GAM) and severe acute malnutrition (SAM) based on World Health Organization/CDC/National Center for Health Statistics (WHO/CDC/NCHS) Z-score* and WHO Z-score growth standards, by year — Darfur, Sudan, 2005–2007

Condition	Year	WHO/CDC/NCHS Z-score		WHO Z-score		Relative change (%)
		Prevalence (%)	(95% CI)†	Prevalence (%)	(95% CI)	
GAM	2005 (N = 1,898)	12.1	(10.3–13.8)	14.1	(12.3–16.1)	17
	2006 (N = 2,171)	12.9	(11.1–14.8)	15.3	(13.4–17.2)	19
	2007 (N = 2,206)	16.1	(14.8–18.2)	17.2	(15.1–19.3)	7
	All years combined (N = 6,275)	13.7	(12.6–14.9)	15.6	(14.4–16.7)	14
SAM	2005 (N = 1,898)	1.5	(0.9–2.0)	3.0	(2.2–3.9)	100
	2006 (N = 2,171)	1.9	(1.3–2.5)	3.1	(2.3–3.9)	63
	2007 (N = 2,206)	1.8	(1.2–2.5)	4.4	(3.4–5.5)	144
	All years combined (N = 6,275)	1.8	(1.4–2.1)	3.6	(3.0–4.1)	100

* A Z-score is the number of standard deviations from the weight of an individual child to the reference mean weight, for a given height and sex.

† Confidence interval.

TABLE 3. Prevalence of moderate and severe acute malnutrition based on World Health Organization/CDC/National Center for Health Statistics (WHO/CDC/NCHS) percentage median* (% M) and WHO Z-score† growth standards, by year — Darfur, Sudan, 2005–2007

Condition	Year	WHO/CDC/NCHS (% M)		WHO (Z-score)		Relative change (%)
		Prevalence (%)	(95% CI)§	Prevalence (%)	(95% CI)	
Moderate malnutrition (supplementary feeding)	2005 (N = 1,898)	6.7	(5.3–8.1)	11.2	(9.2–13.1)	67
	2006 (N = 2,171)	7.4	(5.9–8.8)	12.2	(10.2–14.1)	65
	2007 (N = 2,206)	8.9	(7.3–10.5)	12.7	(10.6–14.8)	43
	All years combined (N = 6,275)	7.7	(6.9–8.5)	12.0	(11.0–13.0)	56
Severe malnutrition (therapeutic feeding)	2005 (N = 1,898)	1.0	(0.5–1.4)	3.0	(2.2–3.9)	200
	2006 (N = 2,171)	1.0	(0.5–1.3)	3.1	(2.3–3.9)	210
	2007 (N = 2,206)	1.0	(0.5–1.4)	4.4	(3.4–5.5)	341
	All years combined (N = 6,275)	1.0	(0.7–1.2)	3.6	(3.0–4.1)	260

* Percentage median is the ratio of the weight of an individual child to the reference mean weight, for a given height and sex.

† A Z-score is the number of standard deviations from the weight of an individual child to the reference mean weight, for a given height and sex.

§ Confidence interval.

research might be needed to determine what Z-score cutoffs are appropriate for classifying individual children as having moderate or severe acute malnutrition. The focus should be on determining cutoffs that are most sensitive and specific for malnutrition-related morbidity and mortality. If the currently recommended WHO Z-score cutoffs for admission into feeding programs are applied, both the funding and the size of the feeding programs (accounting for the number of trained staff required, infrastructure, and feeding commodities) will have to increase several-fold. If the agencies are not prepared to immediately substantially increase their feeding program funding and operations in parallel with a substantial increase in the number of children eligible for admission into feeding programs, the quality of care might be compromised and resources diluted.

WHO recommends that the new growth standards be used globally in all feeding programs for acutely malnourished children. The substantial increase in patient load expected with the adoption of the new standards underscores the need to monitor how rapidly international relief agencies and ministries of health are able to adapt in terms of enrollment rates, personnel resources, and financial expenditures.

References

- Dibley MJ, Goldsby JB, Staehling NW, Trowbridge FL. Development of normalized curves for the international growth reference: historical and technical considerations. *Am J Clin Nutr* 1987;46:736–48.
- Hamill PV, Drizd TA, Johnson CL, Reed RB, Roche AF, Moore WM. Physical growth: National Center for Health Statistics percentiles. *Am J Clin Nutr* 1979;32:607–29.
- World Health Organization. An evaluation of infant growth. WHO Working Group on Infant Growth. World Health Organization: Geneva, Switzerland; 1994.
- World Health Organization. WHO child growth standards: length/height-for-age, weight-for-age, weight-for-length, weight-for-height and body mass index-for-age: methods and development. Geneva, Switzerland: World Health Organization; 2006.
- de Onis M, Garza C, Onyango AW, Martorell R, eds. WHO child growth standards. *Acta Paediatrica* 2006;450(Suppl):1–101.
- World Health Organization. Physical status: the use and interpretation of anthropometry. World Health Organ Tech Report Ser 1995;854.
- World Health Organization and UNICEF. WHO child growth standards and the identification of severe acute malnutrition in infants and children. A joint statement by the World Health Organization and the United Nations Children's Fund. Geneva, Switzerland: World Health Organization and UNICEF; 2009.
- World Health Organization. The management of nutrition in major emergencies. Geneva, Switzerland: World Health Organization; 2000.
- Bachmann M. Cost effectiveness of community-based therapeutic care for children with severe acute malnutrition in Zambia: decision tree model. *Cost Eff Resour Alloc* 2009;7:2.
- Seal A, Kerac M. Operational implications of using 2006 World Health Organization growth standards in nutrition programmes: secondary data analysis. *BMJ* 2007;334:733.

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TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending May 30, 2009 (21st week)*

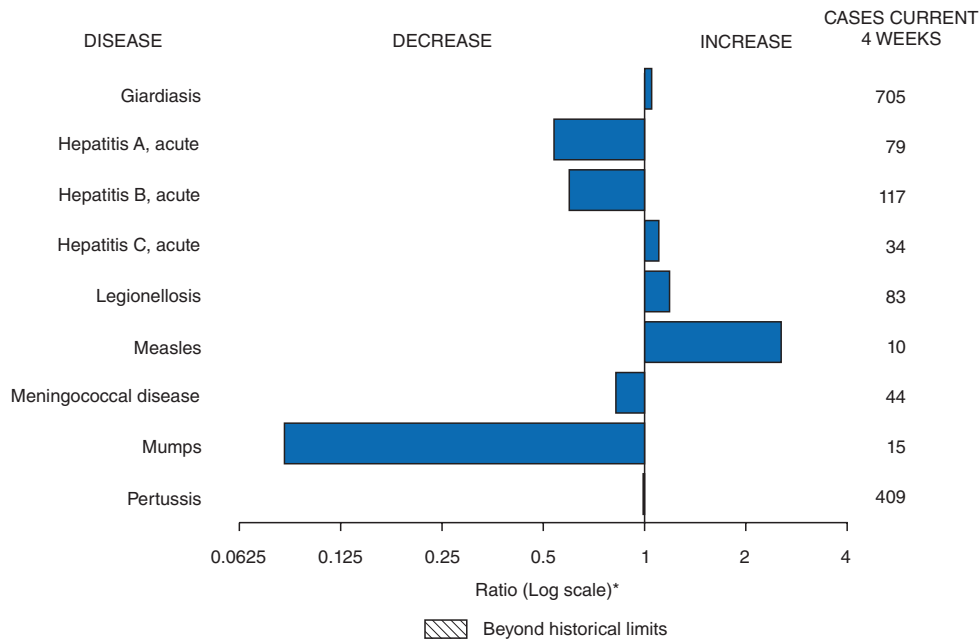
Disease	Current week	Cum 2009	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2008	2007	2006	2005	2004	
Anthrax	—	—	—	—	1	1	—	—	
Botulism:									
foodborne	—	8	1	17	32	20	19	16	
infant	—	20	2	109	85	97	85	87	
other (wound and unspecified)	—	11	0	19	27	48	31	30	
Brucellosis	1	35	2	77	131	121	120	114	FL (1)
Chancroid	—	17	0	25	23	33	17	30	
Cholera	—	2	0	3	7	9	8	6	
Cyclosporiasis§	1	32	16	139	93	137	543	160	FL (1)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup	—	—	0	62	55	67	80	112	
eastern equine	—	—	—	4	4	8	21	6	
Powassan	—	—	0	2	7	1	1	1	
St. Louis	—	—	0	13	9	10	13	12	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§,**:									
<i>Ehrlichia chaffeensis</i>	7	75	11	1,098	828	578	506	338	MO (3), MD (1), GA (1), FL (1), TN (1)
<i>Ehrlichia ewingii</i>	—	—	—	9	—	—	—	—	
<i>Anaplasma phagocytophilum</i>	2	33	10	739	834	646	786	537	NY (2)
undetermined	—	15	5	158	337	231	112	59	
<i>Haemophilus influenzae</i> ††									
invasive disease (age <5 yrs):									
serotype b	1	12	0	28	22	29	9	19	CO (1)
nonserotype b	1	81	3	238	199	175	135	135	AZ (1)
unknown serotype	4	88	4	166	180	179	217	177	VT (1), NYC (1), OH (2)
Hansen disease§	1	22	2	80	101	66	87	105	OH (1)
Hantavirus pulmonary syndrome§	—	3	1	18	32	40	26	24	
Hemolytic uremic syndrome, postdiarrheal§	3	50	4	289	292	288	221	200	OH (2), GA (1)
Hepatitis C viral, acute	9	316	15	869	845	766	652	720	IA (2), MD (1), WV (1), FL (3), OK (1), CA (1)
HIV infection, pediatric (age <13 years)§§	—	—	3	—	—	—	380	436	
Influenza-associated pediatric mortality§,¶¶	5	68	1	88	77	43	45	—	AZ (1), CA (2), CO (1), IL (1)
Listeriosis	6	185	11	760	808	884	896	753	PA (1), DE (1), MD (1), VA (1), FL (1), CA (1)
Measles***	5	25	2	140	43	55	66	37	NYC (2), PA (2), TX (1)
Meningococcal disease, invasive†††:									
A, C, Y, and W-135	—	121	6	318	325	318	297	—	
serogroup B	—	60	3	185	167	193	156	—	
other serogroup	—	10	1	34	35	32	27	—	
unknown serogroup	10	222	14	626	550	651	765	—	PA (1), OH (1), MO (2), NC (1), FL (1), CA (4)
Mumps	1	138	60	450	800	6,584	314	258	CA (1)
Novel influenza A virus infections§§§	—	11,054	—	2	4	N	N	N	
Plague	—	—	0	1	7	17	8	3	
Poliomyelitis, paralytic	—	—	—	—	—	—	1	—	
Polio virus infection, nonparalytic§	—	—	—	—	—	N	N	N	
Psittacosis§	—	6	0	9	12	21	16	12	
Q fever total§,¶¶¶:	—	24	4	120	171	169	136	70	
acute	—	21	1	106	—	—	—	—	
chronic	—	3	0	14	—	—	—	—	
Rabies, human	—	—	—	1	1	3	2	7	
Rubella****	—	1	0	17	12	11	11	10	
Rubella, congenital syndrome	—	1	—	—	—	1	1	—	
SARS-CoV§,††††	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	1	68	3	158	132	125	129	132	CT (1)
Syphilis, congenital (age <1 yr)	—	66	8	418	430	349	329	353	
Tetanus	—	4	1	19	28	41	27	34	
Toxic-shock syndrome (staphylococcal)§	—	33	2	73	92	101	90	95	
Trichinellosis	—	9	0	38	5	15	16	5	
Tularemia	—	11	3	122	137	95	154	134	
Typhoid fever	—	121	6	444	434	353	324	322	
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	2	26	0	62	37	6	2	—	MO (2)
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	0	—	2	1	3	1	
Vibriosis (noncholera <i>Vibrio</i> species infections)§	7	81	3	491	549	N	N	N	MN (1), MD (1), VA (1), FL (4)
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 May 30, 2009 (21st week)*

—: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts.
 * Incidence data for reporting year 2008 and 2009 are provisional, whereas data for 2004, 2005, 2006, and 2007 are finalized.
 † Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years. Additional information is available at <http://www.cdc.gov/epo/dphsi/phs/files/5yearweeklyaverage.pdf>.
 § Not notifiable in all states. Data from states where the condition is not notifiable are excluded from this table, except starting in 2007 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at <http://www.cdc.gov/epo/dphsi/phs/infdis.htm>.
 ¶ Includes both neuroinvasive and nonneuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for West Nile virus are available in Table II.
 ** The names of the reporting categories changed in 2008 as a result of revisions to the case definitions. Cases reported prior to 2008 were reported in the categories: Ehrlichiosis, human monocytic (analogous to *E. chaffeensis*); Ehrlichiosis, human granulocytic (analogous to *Anaplasma phagocytophilum*), and Ehrlichiosis, unspecified, or other agent (which included cases unable to be clearly placed in other categories, as well as possible cases of *E. ewingii*).
 †† Data for *H. influenzae* (all ages, all serotypes) are available in Table II.
 §§ Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Implementation of HIV reporting influences the number of cases reported. Updates of pediatric HIV data have been temporarily suspended until upgrading of the national HIV/AIDS surveillance data management system is completed. Data for HIV/AIDS, when available, are displayed in Table IV, which appears quarterly.
 ¶¶ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Sixty-seven influenza-associated pediatric deaths occurring during the 2008-09 influenza season have been reported.
 *** Of the five measles cases reported for the current week, one was imported, and four were indigenous.
 ††† Data for meningococcal disease (all serogroups) are available in Table II.
 §§§ These cases were obtained from state and territorial health departments in response to novel Influenza A (H1N1) infections and include cases in addition to those reported to the National Notifiable Diseases Surveillance System (NNDSS). Because of the volume of cases and the method by which they are being collected, a 5-year weekly average for this disease is not calculated.
 ¶¶¶ In 2008, Q fever acute and chronic reporting categories were recognized as a result of revisions to the Q fever case definition. Prior to that time, case counts were not differentiated with respect to acute and chronic Q fever cases.
 **** No rubella cases were reported for the current week.
 †††† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals May 30, 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 May 30, 2009, and May 24, 2008 (21st 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 week		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	9,260	22,633	25,700	425,697	472,703	63	131	333	2,940	2,711	73	109	481	1,664	1,631
New England	500	760	1,655	15,793	14,180	—	0	0	—	1	1	5	23	91	136
Connecticut	181	229	1,306	4,641	3,748	N	0	0	N	N	—	0	9	9	41
Maine§	29	48	72	1,034	1,021	N	0	0	N	N	1	1	6	10	7
Massachusetts	270	329	950	7,815	6,901	N	0	0	N	N	—	2	13	35	38
New Hampshire	4	32	63	459	839	—	0	0	—	1	—	1	4	16	27
Rhode Island§	—	54	244	1,368	1,230	—	0	0	—	—	—	0	3	2	3
Vermont§	16	22	53	476	441	N	0	0	N	N	—	1	7	19	20
Mid. Atlantic	1,686	2,852	6,734	60,094	60,680	—	0	0	—	—	6	13	35	203	199
New Jersey	—	380	769	6,310	9,322	N	0	0	N	N	—	0	4	1	16
New York (Upstate)	397	578	4,563	12,030	10,626	N	0	0	N	N	3	4	17	54	52
New York City	999	1,092	3,130	25,006	23,602	N	0	0	N	N	—	1	8	28	38
Pennsylvania	290	794	1,072	16,748	17,130	N	0	0	N	N	3	5	15	120	93
E.N. Central	1,012	3,404	4,382	62,118	79,744	1	0	3	15	22	14	25	125	371	388
Illinois	468	1,062	1,356	18,947	23,770	N	0	0	N	N	—	2	13	18	39
Indiana	—	394	713	8,447	8,931	N	0	0	N	N	—	3	17	58	55
Michigan	489	825	1,297	18,047	19,549	—	0	3	6	17	2	5	13	78	80
Ohio	19	783	1,300	9,987	18,590	1	0	2	9	5	12	7	59	127	86
Wisconsin	36	377	494	6,690	8,904	N	0	0	N	N	—	8	46	90	128
W.N. Central	382	1,319	1,547	25,611	26,899	—	0	1	1	—	18	17	68	253	244
Iowa	—	191	257	3,601	3,506	N	0	0	N	N	1	4	30	54	52
Kansas	140	186	401	3,971	3,660	N	0	0	N	N	—	1	8	23	21
Minnesota	—	265	316	4,392	5,990	—	0	0	—	—	13	4	14	62	59
Missouri	175	496	584	10,504	9,897	—	0	1	1	—	2	3	13	47	55
Nebraska§	27	97	254	1,770	1,979	N	0	0	N	N	—	2	8	25	38
North Dakota	—	25	60	156	752	N	0	0	N	N	—	0	10	1	—
South Dakota	40	56	85	1,217	1,115	N	0	0	N	N	2	2	9	41	19
S. Atlantic	1,963	4,529	5,730	72,952	90,973	—	0	1	4	2	14	21	49	331	290
Delaware	104	72	180	1,982	1,457	—	0	1	1	—	—	0	1	—	6
District of Columbia	93	125	228	2,819	2,828	—	0	0	—	—	—	0	2	—	7
Florida	424	1,386	1,906	29,741	29,550	N	0	0	N	N	9	8	35	107	128
Georgia	45	722	1,909	8,009	16,135	N	0	0	N	N	3	6	13	130	89
Maryland§	—	441	772	7,621	9,383	—	0	1	3	2	1	1	5	13	8
North Carolina	—	786	1,814	—	7,650	N	0	0	N	N	—	1	16	43	9
South Carolina§	671	544	887	9,122	10,538	N	0	0	N	N	—	1	6	16	14
Virginia§	604	616	903	12,094	12,071	N	0	0	N	N	1	1	4	17	20
West Virginia	22	68	101	1,564	1,361	N	0	0	N	N	—	0	3	5	9
E.S. Central	924	1,694	2,166	35,270	32,795	—	0	0	—	—	—	3	9	49	47
Alabama§	—	475	581	8,884	10,259	N	0	0	N	N	—	1	6	12	18
Kentucky	159	240	380	4,269	4,427	N	0	0	N	N	—	1	4	14	10
Mississippi	399	454	841	9,982	7,052	N	0	0	N	N	—	0	2	4	4
Tennessee§	366	562	796	12,135	11,057	N	0	0	N	N	—	1	5	19	15
W.S. Central	520	2,856	3,987	54,540	60,066	—	0	1	—	2	4	8	272	59	74
Arkansas§	193	278	417	5,962	5,761	N	0	0	N	N	2	1	10	12	15
Louisiana	247	428	1,114	7,520	8,101	—	0	1	—	2	—	1	5	6	13
Oklahoma	80	185	1,753	2,349	5,413	N	0	0	N	N	2	2	16	27	16
Texas§	—	1,955	2,511	38,709	40,791	N	0	0	N	N	—	3	258	14	30
Mountain	552	1,356	2,145	24,903	29,980	40	92	211	2,070	1,839	4	8	38	113	128
Arizona	71	449	627	6,476	9,932	40	90	209	2,036	1,789	—	1	10	11	14
Colorado	250	323	1,109	7,202	7,321	N	0	0	N	N	4	1	12	34	27
Idaho§	177	68	314	1,563	1,521	N	0	0	N	N	—	1	5	16	23
Montana§	11	58	89	1,227	1,273	N	0	0	N	N	—	0	4	13	17
Nevada§	18	174	365	3,970	4,071	—	1	3	27	26	—	0	4	6	5
New Mexico§	—	159	540	2,452	2,819	—	0	2	2	16	—	2	23	24	25
Utah	—	85	251	1,125	2,481	—	0	1	5	8	—	0	6	1	10
Wyoming§	25	34	97	888	562	—	0	1	—	—	—	0	2	8	7
Pacific	1,721	3,660	4,605	74,416	77,386	22	37	172	850	845	12	9	33	194	125
Alaska	71	89	199	1,837	1,916	N	0	0	N	N	—	0	1	2	1
California	1,167	2,869	3,583	58,677	60,086	22	37	172	850	845	10	6	14	109	77
Hawaii	61	115	247	2,338	2,348	N	0	0	N	N	—	0	1	1	1
Oregon§	223	188	631	3,796	4,244	N	0	0	N	N	—	1	31	60	23
Washington	199	403	557	7,768	8,792	N	0	0	N	N	2	2	10	22	23
American Samoa	—	0	8	—	62	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	4	9	—	81	—	0	0	—	—	—	0	0	—	—
Puerto Rico	166	134	269	3,076	2,759	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	9	40	106	280	—	0	0	—	—	—	0	0	—	—

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

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

* Incidence data for reporting year 2008 and 2009 are provisional. Data for 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 May 30, 2009, and May 24, 2008 (21st week)*

Reporting area	Giardiasis					Gonorrhea					Haemophilus influenzae, invasive All ages, all serotypes†				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	204	316	640	5,688	5,990	1,981	5,884	7,164	99,051	132,116	23	49	126	1,104	1,301
New England	2	28	64	401	503	65	96	301	1,925	1,972	1	3	18	74	70
Connecticut	—	5	14	76	122	30	51	275	879	811	—	0	12	24	13
Maine§	2	4	12	75	43	—	2	9	58	40	—	0	2	11	6
Massachusetts	—	11	27	150	214	31	38	112	800	922	—	1	5	32	38
New Hampshire	—	2	10	33	42	4	1	6	45	51	—	0	2	2	5
Rhode Island§	—	1	8	18	33	—	5	16	120	134	—	0	7	2	2
Vermont§	—	3	15	49	49	—	1	4	23	14	1	0	1	3	6
Mid. Atlantic	27	61	116	1,052	1,189	298	607	1,138	11,591	13,045	5	10	25	221	232
New Jersey	—	8	21	85	194	—	82	144	1,267	2,169	—	1	7	14	39
New York (Upstate)	21	23	81	429	380	51	116	664	2,172	2,407	2	3	20	54	62
New York City	2	15	30	283	347	191	209	577	4,505	3,989	2	2	10	53	41
Pennsylvania	4	16	46	255	268	56	192	267	3,647	4,480	1	4	10	100	90
E.N. Central	13	46	89	803	909	286	1,143	1,627	18,995	28,449	4	6	27	125	199
Illinois	—	10	32	133	238	159	352	499	5,654	8,013	—	2	9	38	64
Indiana	N	0	11	N	N	—	154	256	2,764	3,607	—	1	22	21	39
Michigan	2	12	22	217	201	111	291	493	5,818	7,306	—	0	3	12	13
Ohio	11	16	31	308	320	3	254	482	2,993	6,888	4	1	6	47	66
Wisconsin	—	8	20	145	150	13	102	149	1,766	2,635	—	0	2	7	17
W.N. Central	10	26	143	531	606	106	305	393	5,469	6,706	1	3	15	72	96
Iowa	5	6	18	97	100	—	30	53	565	614	—	0	0	—	2
Kansas	—	3	11	48	40	45	40	83	915	891	—	0	2	9	11
Minnesota	—	0	106	137	191	—	50	78	704	1,324	—	0	10	15	18
Missouri	5	8	22	174	166	38	143	184	2,602	3,184	1	1	4	34	44
Nebraska§	—	3	10	47	76	11	27	50	514	545	—	0	2	11	14
North Dakota	—	0	16	3	7	—	1	7	6	47	—	0	4	3	7
South Dakota	—	2	11	25	26	12	8	20	163	101	—	0	0	—	—
S. Atlantic	96	66	108	1,403	988	561	1,531	2,142	20,284	31,417	6	13	26	332	328
Delaware	—	1	3	12	17	27	16	35	340	477	—	0	2	3	3
District of Columbia	—	0	5	—	22	42	52	89	1,161	988	—	0	2	—	2
Florida	25	31	57	703	442	153	419	592	8,512	9,945	2	4	9	117	87
Georgia	62	13	63	393	221	8	263	876	2,613	5,768	—	2	9	69	70
Maryland§	4	6	10	92	91	—	121	212	1,990	2,441	—	1	6	40	54
North Carolina	N	0	0	N	N	—	302	647	—	3,796	4	1	17	41	30
South Carolina§	1	2	8	38	48	189	169	316	2,731	3,869	—	1	5	23	29
Virginia§	3	8	31	148	117	139	163	321	2,711	3,813	—	1	6	24	43
West Virginia	1	1	5	17	30	3	12	26	226	320	—	0	3	15	10
E.S. Central	1	8	22	112	156	267	541	771	10,149	11,827	—	3	6	62	76
Alabama§	1	4	12	53	84	—	164	216	2,567	4,072	—	0	4	18	9
Kentucky	N	0	0	N	N	43	86	153	1,264	1,699	—	0	2	7	6
Mississippi	N	0	0	N	N	121	144	253	3,044	2,634	—	0	1	—	11
Tennessee§	—	4	13	59	72	103	160	301	3,274	3,422	—	2	5	37	50
W.S. Central	6	7	22	113	111	144	930	1,307	15,654	20,606	1	2	22	52	64
Arkansas§	—	2	8	43	45	62	83	167	1,768	1,811	—	0	2	8	5
Louisiana	—	2	10	37	39	66	156	421	2,263	3,774	—	0	1	8	6
Oklahoma	6	3	18	33	27	16	70	437	1,185	1,972	1	1	20	36	48
Texas§	N	0	0	N	N	—	590	725	10,438	13,049	—	0	1	—	5
Mountain	11	27	62	396	468	35	200	371	3,242	4,922	3	5	11	113	161
Arizona	—	3	10	66	45	12	57	82	743	1,459	1	1	7	45	68
Colorado	10	9	27	135	177	16	62	293	1,275	1,483	2	1	5	31	28
Idaho§	1	3	14	38	49	3	3	13	41	70	—	0	2	2	6
Montana§	—	2	9	36	25	—	2	6	34	46	—	0	1	1	1
Nevada§	—	2	8	30	41	4	34	86	729	1,029	—	0	2	9	9
New Mexico§	—	1	8	28	35	—	23	52	332	549	—	1	3	14	24
Utah	—	7	18	47	83	—	5	15	62	248	—	0	2	11	25
Wyoming§	—	1	4	16	13	—	2	8	26	38	—	0	2	—	—
Pacific	38	54	127	877	1,060	219	575	755	11,742	13,172	2	2	13	53	75
Alaska	1	2	10	24	29	11	13	24	296	206	2	0	2	6	9
California	33	34	59	625	738	165	480	657	9,918	10,829	—	0	3	7	27
Hawaii	—	0	4	5	14	1	13	19	253	234	—	0	2	13	8
Oregon§	—	7	66	122	179	25	22	48	414	531	—	1	12	24	29
Washington	4	7	74	101	100	17	51	81	861	1,372	—	0	2	3	2
American Samoa	—	0	0	—	—	—	0	1	—	2	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	2	15	—	23	—	0	0	—	—
Puerto Rico	—	3	15	25	55	5	4	16	88	115	—	0	1	—	—
U.S. Virgin Islands	—	0	0	—	—	—	2	6	23	49	N	0	0	N	N

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

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

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

† 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 May 30, 2009, and May 24, 2008 (21st 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			
United States	26	39	89	671	1,114	23	71	193	1,233	1,504	27	51	152	555	729
New England	—	2	8	31	58	—	1	4	11	32	—	2	18	14	38
Connecticut	—	0	4	9	10	—	0	3	4	12	—	0	5	6	8
Maine§	—	0	5	1	3	—	0	2	5	5	—	0	2	—	1
Massachusetts	—	1	3	14	30	—	0	2	1	10	—	1	7	6	13
New Hampshire	—	0	2	3	5	—	0	2	1	1	—	0	5	—	4
Rhode Island§	—	0	2	3	9	—	0	1	—	3	—	0	14	1	8
Vermont§	—	0	1	1	1	—	0	1	—	1	—	0	1	1	4
Mid. Atlantic	2	5	13	67	126	3	6	17	105	197	8	15	60	139	170
New Jersey	—	1	5	5	28	—	1	5	8	60	—	1	14	6	23
New York (Upstate)	2	1	4	19	29	2	1	11	27	27	5	5	24	58	43
New York City	—	2	6	17	35	—	1	4	25	40	—	2	12	13	21
Pennsylvania	—	1	4	26	34	1	3	8	45	70	3	6	35	62	83
E.N. Central	1	5	11	77	164	—	9	20	159	176	4	8	41	101	156
Illinois	—	1	5	16	59	—	2	7	19	52	—	2	13	8	23
Indiana	—	0	3	5	10	—	1	18	25	10	—	1	6	7	11
Michigan	—	1	5	28	63	—	2	8	49	65	—	2	16	18	45
Ohio	1	1	4	23	16	—	2	13	50	43	4	4	18	63	70
Wisconsin	—	0	3	5	16	—	0	3	16	6	—	0	3	5	7
W.N. Central	1	2	16	47	146	—	2	16	71	29	—	2	8	19	34
Iowa	—	0	6	7	67	—	0	3	10	8	—	0	2	8	8
Kansas	—	0	1	4	9	—	0	3	4	3	—	0	1	1	1
Minnesota	1	0	12	12	16	—	0	11	11	3	—	0	4	—	3
Missouri	—	0	3	15	16	—	1	5	36	13	—	1	7	7	12
Nebraska§	—	0	2	8	36	—	0	3	9	2	—	0	3	2	9
North Dakota	—	0	2	—	—	—	0	1	—	—	—	0	3	1	—
South Dakota	—	0	1	1	2	—	0	1	1	—	—	0	1	—	1
S. Atlantic	6	7	15	167	142	6	19	32	409	395	9	8	22	140	146
Delaware	—	0	1	1	3	—	0	2	10	10	—	0	2	1	2
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	—	5
Florida	2	3	8	86	63	4	7	11	128	136	4	3	7	60	56
Georgia	2	1	4	24	25	—	3	9	55	65	—	1	5	18	12
Maryland§	—	0	4	16	17	—	2	6	39	35	1	2	9	23	33
North Carolina	2	1	9	19	9	—	1	19	113	41	3	0	7	25	8
South Carolina§	—	0	3	11	6	1	1	5	14	31	—	0	2	2	2
Virginia§	—	1	6	10	16	1	2	10	29	42	1	1	5	11	17
West Virginia	—	0	1	—	3	—	1	6	21	35	—	0	3	—	11
E.S. Central	—	1	5	12	28	—	8	13	116	148	1	2	10	27	36
Alabama§	—	0	2	3	5	—	2	7	37	40	—	0	2	4	5
Kentucky	—	0	3	1	10	—	2	7	31	44	—	1	4	11	18
Mississippi	—	0	2	5	—	—	1	3	5	14	—	0	1	—	—
Tennessee§	—	0	4	3	13	—	3	8	43	50	1	0	5	12	13
W.S. Central	—	4	43	65	101	11	11	96	187	315	1	1	21	21	23
Arkansas§	—	0	1	4	3	—	1	5	13	19	—	0	2	1	1
Louisiana	—	0	2	2	6	—	1	4	16	40	—	0	2	1	3
Oklahoma	—	0	6	1	3	2	2	16	45	32	1	0	6	2	1
Texas§	—	3	37	58	89	9	6	74	113	224	—	1	19	17	18
Mountain	6	3	31	55	84	—	3	10	49	74	1	2	8	32	33
Arizona	6	1	28	31	32	—	1	5	25	29	1	0	3	16	8
Colorado	—	0	2	7	17	—	0	3	8	11	—	0	2	1	3
Idaho§	—	0	1	—	12	—	0	2	2	3	—	0	1	—	1
Montana§	—	0	1	3	—	—	0	1	—	—	—	0	2	4	3
Nevada§	—	0	3	6	3	—	0	3	7	19	—	0	2	6	6
New Mexico§	—	0	1	5	14	—	0	2	4	7	—	0	2	—	3
Utah	—	0	2	3	3	—	0	3	3	3	—	0	2	5	9
Wyoming§	—	0	0	—	3	—	0	1	—	2	—	0	0	—	—
Pacific	10	8	25	150	265	3	7	36	126	138	3	3	9	62	93
Alaska	—	0	1	3	2	—	0	1	3	4	—	0	1	2	1
California	6	6	25	114	216	3	5	28	96	97	3	3	9	53	74
Hawaii	—	0	2	3	4	—	0	1	2	3	—	0	1	1	4
Oregon§	—	0	2	7	18	—	0	8	12	18	—	0	2	3	8
Washington	4	1	4	23	25	—	1	8	13	16	—	0	3	3	6
American Samoa	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	2	7	14	—	0	5	2	21	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

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

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

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending May 30, 2009, and May 24, 2008 (21st week)*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All serotypes				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	101	530	1,859	2,938	4,366	6	23	46	332	329	10	18	47	413	594
New England	12	112	834	350	1,581	—	1	6	8	12	—	0	4	15	17
Connecticut	—	35	264	—	687	—	0	4	1	—	—	0	1	1	1
Maine§	12	5	73	75	49	—	0	0	—	1	—	0	1	2	3
Massachusetts	—	26	400	117	539	—	0	4	6	8	—	0	3	9	12
New Hampshire	—	12	145	112	187	—	0	1	—	1	—	0	1	1	1
Rhode Island§	—	0	78	7	101	—	0	1	—	1	—	0	1	1	—
Vermont§	—	4	41	39	18	—	0	1	1	1	—	0	1	1	—
Mid. Atlantic	63	229	1,401	1,599	1,645	—	6	17	74	79	1	2	5	44	64
New Jersey	—	31	231	297	781	—	0	4	—	13	—	0	1	2	9
New York (Upstate)	51	99	1,368	621	309	—	0	10	17	10	—	0	2	10	17
New York City	—	10	54	—	121	—	3	11	43	45	—	0	2	8	10
Pennsylvania	12	50	338	681	434	—	1	3	14	11	1	1	4	24	28
E.N. Central	1	8	147	86	152	1	2	7	39	54	1	3	8	65	97
Illinois	—	0	13	—	7	—	1	5	12	27	—	1	6	13	34
Indiana	—	0	8	5	1	—	0	1	6	3	—	0	4	14	13
Michigan	1	1	10	9	—	—	0	2	6	8	—	0	3	12	14
Ohio	—	0	6	6	7	1	1	2	14	13	1	0	3	20	24
Wisconsin	—	5	129	66	137	—	0	3	1	3	—	0	1	6	12
W.N. Central	—	7	336	39	87	1	1	10	19	20	2	1	9	35	55
Iowa	—	1	9	5	25	—	0	3	4	2	—	0	1	2	11
Kansas	—	0	4	5	3	—	0	2	1	3	—	0	2	7	2
Minnesota	—	4	326	28	56	—	0	8	9	6	—	0	4	8	15
Missouri	—	0	1	—	1	1	0	2	4	5	2	0	2	13	16
Nebraska§	—	0	2	—	1	—	0	1	—	4	—	0	1	3	9
North Dakota	—	0	10	—	—	—	0	0	—	—	—	0	3	—	1
South Dakota	—	0	1	1	1	—	0	1	1	—	—	0	1	2	1
S. Atlantic	18	70	225	759	817	3	7	16	126	85	2	3	9	77	73
Delaware	4	11	36	167	242	—	0	1	1	1	—	0	1	1	—
District of Columbia	—	1	7	—	13	—	0	2	—	—	—	0	0	—	—
Florida	2	1	6	14	12	1	1	7	34	20	1	1	4	29	27
Georgia	—	0	6	15	10	1	1	4	26	24	—	0	2	12	8
Maryland§	7	29	165	381	412	1	2	8	33	26	—	0	3	4	6
North Carolina	—	1	6	16	2	—	1	7	17	2	1	0	5	15	3
South Carolina§	—	0	2	8	8	—	0	1	1	2	—	0	1	5	14
Virginia§	5	14	61	124	93	—	1	3	13	9	—	0	2	7	13
West Virginia	—	1	17	34	25	—	0	1	1	1	—	0	2	4	2
E.S. Central	—	0	5	6	13	—	0	2	11	7	—	0	3	15	35
Alabama§	—	0	1	1	6	—	0	1	3	3	—	0	1	3	3
Kentucky	—	0	2	—	1	—	0	2	4	2	—	0	1	3	7
Mississippi	—	0	1	—	—	—	0	1	—	—	—	0	1	1	9
Tennessee§	—	0	3	5	6	—	0	2	4	2	—	0	1	8	16
W.S. Central	1	2	21	10	30	—	1	10	8	16	—	2	11	36	64
Arkansas§	—	0	0	—	—	—	0	1	—	—	—	0	2	5	9
Louisiana	—	0	1	—	—	—	0	1	1	1	—	0	3	9	17
Oklahoma	—	0	1	—	—	—	0	2	—	1	—	0	3	2	8
Texas§	1	2	21	10	30	—	1	10	7	14	—	1	9	20	30
Mountain	1	1	13	11	6	—	0	3	3	10	—	1	4	33	32
Arizona	—	0	2	1	2	—	0	2	1	3	—	0	2	7	2
Colorado	—	0	1	2	2	—	0	1	1	3	—	0	2	10	6
Idaho§	1	0	1	3	1	—	0	1	—	—	—	0	1	4	4
Montana§	—	0	13	1	—	—	0	0	—	—	—	0	1	2	4
Nevada§	—	0	2	4	—	—	0	1	—	4	—	0	2	3	6
New Mexico§	—	0	2	—	1	—	0	1	—	—	—	0	1	3	4
Utah	—	0	1	—	—	—	0	1	1	—	—	0	1	1	4
Wyoming§	—	0	1	—	—	—	0	0	—	—	—	0	2	3	2
Pacific	5	3	13	78	35	1	3	10	44	46	4	4	14	93	157
Alaska§	—	0	2	1	—	—	0	1	1	2	—	0	2	2	2
California	4	2	6	66	25	—	2	8	32	35	4	2	8	56	123
Hawaii	N	0	0	N	N	—	0	1	1	2	—	0	1	3	1
Oregon§	—	0	6	9	10	—	0	4	5	4	—	0	9	23	18
Washington	1	0	12	2	—	1	0	3	5	3	—	0	6	9	13
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	2	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	1	1	—	0	1	—	2
U.S. Virgin Islands	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—

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

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

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

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

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending May 30, 2009, and May 24, 2008 (21st week)*

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	75	235	1,691	4,339	3,039	23	70	120	1,216	1,523	11	39	152	330	193
New England	1	18	35	175	365	—	8	21	114	138	1	0	2	4	2
Connecticut	—	0	4	6	26	—	3	17	49	62	—	0	0	—	—
Maine†	1	1	7	34	13	—	1	5	20	26	1	0	2	4	—
Massachusetts	—	12	30	105	287	—	0	0	—	—	—	0	1	—	1
New Hampshire	—	1	5	21	9	—	1	7	13	14	—	0	1	—	—
Rhode Island†	—	0	6	3	25	—	0	3	8	10	—	0	2	—	1
Vermont†	—	0	2	6	5	—	1	6	24	26	—	0	0	—	—
Mid. Atlantic	15	24	64	382	354	7	18	30	254	296	—	1	29	9	32
New Jersey	—	3	12	26	59	—	0	0	—	—	—	0	6	—	21
New York (Upstate)	1	6	41	74	107	7	9	20	136	144	—	0	29	1	3
New York City	7	0	21	40	38	—	0	2	—	8	—	0	2	6	5
Pennsylvania	7	10	33	242	150	—	7	17	118	144	—	0	2	2	3
E.N. Central	15	37	238	859	625	4	2	28	25	31	—	2	15	10	10
Illinois	—	14	45	173	60	—	1	20	6	8	—	1	10	6	9
Indiana	—	2	158	76	20	—	0	2	—	1	—	0	3	—	—
Michigan	2	8	21	195	77	1	1	9	14	17	—	0	1	1	—
Ohio	13	14	57	383	436	3	0	7	5	5	—	0	4	3	1
Wisconsin	—	2	7	32	32	N	0	0	N	N	—	0	1	—	—
W.N. Central	8	31	872	848	236	1	5	17	97	95	3	4	33	42	36
Iowa	—	4	21	47	34	—	0	5	9	8	—	0	2	—	1
Kansas	—	2	12	76	26	—	1	6	37	34	—	0	0	—	—
Minnesota	5	0	808	160	49	—	0	11	18	16	—	0	0	—	—
Missouri	3	14	51	476	99	1	1	8	17	6	3	4	32	41	33
Nebraska†	—	4	32	77	18	—	0	2	—	15	—	0	4	1	—
North Dakota	—	0	24	2	—	—	0	9	3	8	—	0	1	—	—
South Dakota	—	0	10	10	10	—	0	4	13	8	—	0	1	—	2
S. Atlantic	19	25	71	580	284	—	27	66	530	767	7	16	72	194	59
Delaware	—	0	3	6	4	—	0	0	—	—	—	0	5	3	3
District of Columbia	—	0	2	—	1	—	0	0	—	—	—	0	1	—	1
Florida	16	7	20	198	65	—	0	22	54	138	2	0	3	4	3
Georgia	—	3	9	79	21	—	5	47	102	167	—	1	9	9	13
Maryland†	—	3	10	36	43	—	7	16	130	186	—	1	7	16	12
North Carolina	1	0	65	153	59	N	4	4	N	N	3	9	55	136	11
South Carolina†	2	2	10	55	42	—	0	0	—	—	—	1	9	9	5
Virginia†	—	3	24	48	44	—	11	24	205	227	2	2	15	16	8
West Virginia	—	0	2	5	5	—	1	6	39	49	—	0	1	1	3
E.S. Central	2	11	33	254	95	—	3	7	58	69	—	4	23	48	31
Alabama†	1	2	18	88	19	—	0	0	—	—	—	1	8	9	11
Kentucky	—	4	15	91	14	—	1	4	24	13	—	0	1	—	—
Mississippi	—	1	5	17	41	—	0	1	—	1	—	0	3	1	3
Tennessee†	1	2	14	58	21	—	2	6	34	55	—	3	19	38	17
W.S. Central	1	40	384	671	282	4	0	9	21	41	—	2	134	16	14
Arkansas†	—	2	38	30	31	4	0	6	16	24	—	0	61	3	1
Louisiana	—	2	7	34	8	—	0	0	—	—	—	0	2	—	2
Oklahoma	1	0	40	12	7	—	0	9	4	16	—	0	71	3	4
Texas†	—	35	304	595	236	—	0	1	1	1	—	1	6	10	7
Mountain	9	14	31	312	404	—	2	9	37	21	—	1	3	6	8
Arizona	—	2	10	51	112	N	0	0	N	N	—	0	2	1	3
Colorado	8	4	12	111	61	—	0	0	—	—	—	0	1	—	—
Idaho†	1	1	5	35	20	—	0	2	—	—	—	0	1	—	—
Montana†	—	0	4	9	58	—	0	4	11	—	—	0	1	3	1
Nevada†	—	0	3	6	15	—	0	5	—	1	—	0	2	—	—
New Mexico†	—	1	10	29	23	—	0	2	14	14	—	0	1	1	1
Utah	—	4	19	70	109	—	0	6	1	1	—	0	1	1	2
Wyoming†	—	0	2	1	6	—	0	4	11	5	—	0	2	—	1
Pacific	5	24	98	258	394	7	4	13	80	65	—	0	1	1	1
Alaska	—	3	21	28	34	—	0	2	9	12	N	0	0	N	N
California	—	6	24	22	193	7	3	12	71	52	—	0	1	1	—
Hawaii	1	0	3	12	5	—	0	0	—	—	N	0	0	N	N
Oregon†	—	3	42	88	59	—	0	2	—	1	—	0	1	—	1
Washington	4	6	76	108	103	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	1	—	—	1	5	15	27	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N

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

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

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

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending May 30, 2009, and May 24, 2008 (21st 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		
United States	378	978	2,267	11,572	12,236	39	83	219	969	1,133	150	438	1,249	5,507	6,284
New England	—	33	164	599	923	2	3	23	64	98	—	3	12	59	95
Connecticut	—	0	138	138	491	—	0	23	23	47	—	0	7	7	40
Maine§	—	2	8	38	53	—	0	3	8	3	—	0	6	2	2
Massachusetts	—	23	51	263	295	—	1	11	15	30	—	2	9	40	44
New Hampshire	—	3	30	97	37	2	1	3	14	8	—	0	1	1	2
Rhode Island§	—	2	9	45	26	—	0	1	—	6	—	0	1	6	6
Vermont§	—	1	7	18	21	—	0	6	4	4	—	0	2	3	1
Mid. Atlantic	37	88	201	1,300	1,556	—	7	27	74	119	10	55	93	1,000	729
New Jersey	—	18	55	106	375	—	1	12	12	47	—	19	38	240	167
New York (Upstate)	19	29	65	367	350	—	3	12	33	33	9	7	31	74	197
New York City	3	19	49	328	377	—	1	5	25	14	—	11	28	175	321
Pennsylvania	15	28	78	499	454	—	0	8	4	25	1	15	36	511	44
E.N. Central	39	96	194	1,464	1,530	5	12	75	145	149	13	82	128	1,105	1,153
Illinois	—	27	71	364	425	—	1	10	29	29	—	16	34	212	381
Indiana	—	8	53	84	131	—	1	14	16	10	—	4	39	24	324
Michigan	6	18	38	323	290	—	3	43	34	23	—	5	24	102	35
Ohio	33	27	49	496	432	3	3	17	39	35	13	42	80	610	306
Wisconsin	—	12	50	197	252	2	3	20	27	52	—	8	33	157	107
W.N. Central	34	52	148	933	813	12	12	58	148	151	23	14	42	287	366
Iowa	8	7	16	140	144	3	3	21	37	40	1	3	12	40	54
Kansas	—	7	29	98	85	—	1	7	11	10	—	3	8	75	6
Minnesota	10	12	69	223	220	8	2	21	40	27	4	3	25	29	88
Missouri	15	13	48	198	217	1	2	11	38	49	18	3	31	133	123
Nebraska§	—	5	41	166	91	—	2	30	20	13	—	0	3	7	—
North Dakota	—	0	30	9	16	—	0	28	—	1	—	0	9	1	24
South Dakota	1	4	22	99	40	—	0	4	2	11	—	0	2	2	71
S. Atlantic	121	262	459	3,002	2,961	10	14	49	219	209	22	50	86	811	1,339
Delaware	1	2	9	24	47	—	0	2	5	6	1	0	7	27	4
District of Columbia	—	0	4	—	28	—	0	1	—	3	—	0	2	—	6
Florida	75	97	174	1,262	1,354	4	2	10	64	60	8	11	26	171	383
Georgia	12	38	96	493	481	—	2	8	21	16	7	13	40	208	555
Maryland§	7	17	37	219	216	1	2	11	27	32	1	4	12	112	24
North Carolina	6	28	106	501	264	—	2	21	54	18	4	5	27	157	35
South Carolina§	1	18	57	204	260	—	1	3	8	14	—	5	31	57	253
Virginia§	13	21	88	241	231	4	3	27	32	43	1	4	59	74	60
West Virginia	6	3	10	58	80	1	0	3	8	17	—	0	3	5	19
E.S. Central	7	60	140	650	737	—	5	12	54	87	9	27	58	365	841
Alabama§	1	16	49	191	215	—	1	3	10	31	—	5	18	64	191
Kentucky	—	10	18	142	121	—	1	7	14	17	—	2	25	86	146
Mississippi	1	13	57	125	179	—	0	1	3	4	—	1	6	11	209
Tennessee§	5	14	62	192	222	—	2	6	27	35	9	15	48	204	295
W.S. Central	18	142	1,282	776	1,115	1	6	63	45	106	52	96	948	1,046	1,094
Arkansas§	9	14	39	152	112	1	0	5	7	19	5	10	27	124	124
Louisiana	—	16	54	103	215	—	0	2	—	2	—	8	26	57	227
Oklahoma	9	15	58	175	138	—	1	19	6	6	6	3	43	79	42
Texas§	—	95	1,197	346	650	—	5	55	32	79	41	65	888	786	701
Mountain	24	60	110	865	1,024	3	10	40	110	142	7	27	54	395	239
Arizona	7	23	43	327	270	—	1	4	12	23	7	16	35	285	102
Colorado	9	12	20	189	311	2	3	18	54	37	—	3	11	36	27
Idaho§	1	3	12	56	49	1	2	15	12	29	—	0	2	2	5
Montana§	—	2	7	45	36	—	0	3	6	17	—	0	5	11	1
Nevada§	7	4	14	93	79	—	0	3	5	4	—	3	13	28	77
New Mexico§	—	7	32	70	149	—	1	4	14	18	—	2	12	30	17
Utah	—	6	19	68	100	—	1	9	6	10	—	1	3	3	7
Wyoming§	—	1	5	17	30	—	0	2	1	4	—	0	1	—	3
Pacific	98	119	534	1,983	1,577	6	10	31	110	72	14	32	82	439	428
Alaska	4	1	4	20	17	—	0	1	—	2	—	0	1	2	—
California	78	86	516	1,511	1,191	2	5	15	72	44	9	27	75	340	361
Hawaii	—	5	15	91	76	—	0	2	2	3	—	1	3	7	16
Oregon§	—	7	72	147	126	—	1	8	8	8	—	1	10	23	24
Washington	16	11	85	214	167	4	3	16	28	15	5	2	13	67	27
American Samoa	—	0	1	—	1	—	0	0	—	—	—	0	2	3	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	—	5	—	0	0	—	—	—	0	2	—	9
Puerto Rico	—	13	40	76	210	—	0	0	—	—	—	0	4	1	7
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

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

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

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending May 30, 2009, and May 24, 2008 (21st week)*

Reporting area	Streptococcal diseases, invasive, group A				<i>Streptococcus pneumoniae</i> , invasive disease, nondrug resistant†					
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max		
United States	60	96	237	2,569	2,855	14	34	121	793	904
New England	—	5	29	151	214	—	1	12	21	44
Connecticut	—	0	21	43	54	—	0	11	—	—
Maine§	—	0	3	9	14	—	0	1	—	1
Massachusetts	—	2	10	60	114	—	1	3	15	35
New Hampshire	—	1	4	25	15	—	0	1	4	7
Rhode Island§	—	0	8	4	8	—	0	2	—	1
Vermont§	—	0	3	10	9	—	0	1	2	—
Mid. Atlantic	8	18	38	478	608	5	4	33	116	110
New Jersey	—	1	6	3	107	—	1	4	14	33
New York (Upstate)	4	6	25	178	190	2	2	17	61	45
New York City	—	4	12	95	118	3	0	31	41	32
Pennsylvania	4	6	18	202	193	N	0	2	N	N
E.N. Central	5	17	43	517	569	2	6	18	115	162
Illinois	—	5	12	138	164	—	1	5	14	48
Indiana	—	3	23	82	74	—	0	13	11	17
Michigan	1	3	10	83	105	1	1	5	34	44
Ohio	4	4	13	143	152	1	1	6	42	30
Wisconsin	—	1	10	71	74	—	0	3	14	23
W.N. Central	6	6	37	218	219	—	2	11	66	40
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	1	0	5	32	25	N	0	1	N	N
Minnesota	—	0	34	84	101	—	0	7	28	9
Missouri	2	1	8	58	56	—	1	4	28	20
Nebraska§	—	1	3	27	19	—	0	1	3	4
North Dakota	—	0	2	2	7	—	0	3	3	2
South Dakota	3	0	2	15	11	—	0	2	4	5
S. Atlantic	20	22	46	568	555	1	7	16	166	175
Delaware	—	0	1	8	6	—	0	0	—	—
District of Columbia	—	0	2	—	6	N	0	0	N	N
Florida	5	6	12	136	127	1	1	6	36	31
Georgia	3	5	13	139	117	—	2	6	47	51
Maryland§	3	3	10	83	102	—	1	3	33	34
North Carolina	4	2	12	59	70	N	0	0	N	N
South Carolina§	1	1	5	36	35	—	1	6	27	28
Virginia§	4	3	9	86	73	—	0	4	15	27
West Virginia	—	1	4	21	19	—	0	2	8	4
E.S. Central	—	4	10	107	94	—	1	6	30	57
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	5	19	19	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	2	—	15
Tennessee§	—	3	8	88	75	—	1	6	30	42
W.S. Central	15	10	75	235	225	4	6	46	145	134
Arkansas§	—	0	2	9	6	—	0	4	16	8
Louisiana	—	0	2	6	10	—	0	3	12	6
Oklahoma	2	2	16	82	57	1	1	7	28	42
Texas§	13	6	59	138	152	3	4	34	89	78
Mountain	6	9	22	230	312	2	4	16	119	155
Arizona	1	3	8	71	105	—	2	10	69	68
Colorado	5	3	8	90	77	2	1	4	24	35
Idaho§	—	0	2	3	10	—	0	2	4	2
Montana§	N	0	0	N	N	N	0	0	N	N
Nevada§	—	0	1	4	6	—	0	1	—	2
New Mexico§	—	2	7	40	78	—	0	3	11	24
Utah	—	1	6	21	31	—	0	4	11	23
Wyoming§	—	0	1	1	5	—	0	1	—	1
Pacific	—	3	9	65	59	—	1	3	15	27
Alaska	—	0	4	8	12	—	0	3	10	16
California	N	0	0	N	N	N	0	0	N	N
Hawaii	—	3	8	57	47	—	0	2	5	11
Oregon§	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	—	0	8	—	19	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

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

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

† Includes cases of invasive pneumococcal disease, in children aged <5 years, caused by *S. pneumoniae*, which is susceptible or for which susceptibility testing is not available (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 May 30, 2009, and May 24, 2008 (21st 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		
United States	28	55	276	1,445	1,702	4	9	20	217	235	80	262	452	4,885	4,927
New England	—	1	48	26	31	—	0	5	1	3	4	5	15	135	130
Connecticut	—	0	48	—	—	—	0	5	—	—	1	1	5	28	8
Maine§	—	0	2	7	11	—	0	1	—	—	—	0	2	1	5
Massachusetts	—	0	1	1	—	—	0	1	1	—	3	4	11	92	101
New Hampshire	—	0	3	5	—	—	0	0	—	—	—	0	2	10	6
Rhode Island§	—	0	6	5	8	—	0	1	—	1	—	0	5	4	5
Vermont§	—	0	1	8	12	—	0	0	—	—	—	0	2	—	5
Mid. Atlantic	—	4	14	88	178	—	0	3	16	14	31	32	51	749	701
New Jersey	—	0	0	—	—	—	0	0	—	—	—	4	13	90	85
New York (Upstate)	—	1	10	38	32	—	0	2	10	4	2	2	8	42	51
New York City	—	1	4	2	75	—	0	2	—	—	24	22	36	482	437
Pennsylvania	—	1	8	48	71	—	0	2	6	10	5	5	11	135	128
E.N. Central	7	9	41	280	372	1	1	7	39	51	4	24	44	362	460
Illinois	N	0	0	N	N	N	0	0	N	N	3	9	19	96	168
Indiana	—	2	32	55	130	—	0	6	10	16	—	2	10	60	61
Michigan	1	0	2	15	13	1	0	1	2	2	1	4	18	94	86
Ohio	6	7	18	210	229	—	1	4	27	33	—	6	28	92	124
Wisconsin	—	0	0	—	—	—	0	0	—	—	—	1	4	20	21
W.N. Central	—	3	161	56	128	—	0	4	16	23	1	7	14	123	171
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	10	8
Kansas	—	1	5	17	54	—	0	2	9	3	1	0	3	10	13
Minnesota	—	0	156	—	15	—	0	4	—	15	—	2	6	29	40
Missouri	—	1	5	33	54	—	0	1	5	2	—	3	10	63	105
Nebraska§	—	0	0	—	—	—	0	0	—	—	—	0	2	10	5
North Dakota	—	0	2	4	2	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	2	2	3	—	0	2	2	3	—	0	1	1	—
S. Atlantic	21	23	53	726	692	3	4	14	101	99	21	62	262	1,135	996
Delaware	—	0	1	8	2	—	0	0	—	—	—	0	4	14	1
District of Columbia	N	0	0	N	N	N	0	0	N	N	3	3	9	73	51
Florida	16	15	36	447	363	2	3	13	69	59	1	21	38	424	395
Georgia	3	8	25	200	248	—	1	5	26	33	1	12	227	148	160
Maryland§	—	0	1	4	4	—	0	0	—	1	—	7	16	113	128
North Carolina	N	0	0	N	N	N	0	0	N	N	15	7	19	210	113
South Carolina§	—	0	0	—	—	—	0	0	—	—	1	2	6	39	35
Virginia§	N	0	0	N	N	N	0	0	N	N	—	5	16	113	110
West Virginia	2	1	13	67	75	1	0	3	6	6	—	0	1	1	3
E.S. Central	—	5	25	165	169	—	1	3	24	26	14	22	36	467	417
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	17	167	179
Kentucky	—	2	5	47	43	—	0	2	7	8	1	1	10	24	39
Mississippi	—	0	2	—	1	—	0	1	—	—	6	3	18	86	51
Tennessee§	—	3	22	118	125	—	0	3	17	18	7	8	19	190	148
W.S. Central	—	1	7	48	60	—	0	3	9	11	2	48	80	916	823
Arkansas§	—	0	5	29	10	—	0	3	6	3	2	3	35	76	52
Louisiana	—	1	6	19	50	—	0	1	3	8	—	14	40	223	198
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	7	23	37
Texas§	—	0	0	—	—	—	0	0	—	—	—	29	40	594	536
Mountain	—	2	7	54	71	—	0	3	10	7	—	9	20	120	258
Arizona	—	0	0	—	—	—	0	0	—	—	—	4	11	21	135
Colorado	—	0	0	—	—	—	0	0	—	—	—	2	10	39	68
Idaho§	N	0	1	N	N	N	0	1	N	N	—	0	2	3	1
Montana§	—	0	1	—	—	—	0	0	—	—	—	0	7	—	—
Nevada§	—	1	4	26	34	—	0	2	6	2	—	1	7	38	29
New Mexico§	—	0	0	—	—	—	0	0	—	—	—	1	5	19	12
Utah	—	1	6	22	37	—	0	3	4	5	—	0	2	—	12
Wyoming§	—	0	2	6	—	—	0	0	—	—	—	0	1	—	1
Pacific	—	0	1	2	1	—	0	1	1	1	3	46	66	878	971
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
California	N	0	0	N	N	N	0	0	N	N	2	42	59	803	883
Hawaii	—	0	1	2	1	—	0	1	1	1	—	0	3	14	11
Oregon§	N	0	0	N	N	N	0	0	N	N	—	0	3	12	4
Washington	N	0	0	N	N	N	0	0	N	N	1	3	9	49	73
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	—	—	6	3	11	83	62
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

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

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

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending May 30, 2009, and May 24, 2008 (21st week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Neuroinvasive					Nonneuroinvasive§				
		Med	Max			Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
United States	149	366	772	7,121	15,904	—	1	75	—	4	—	0	77	—	14
New England	—	19	49	136	791	—	0	2	—	—	—	0	1	—	1
Connecticut	—	11	26	—	388	—	0	2	—	—	—	0	1	—	1
Maine¶	—	1	11	—	139	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
New Hampshire	—	4	11	93	132	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Vermont¶	—	4	17	43	132	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	24	39	61	778	1,247	—	0	8	—	—	—	0	4	—	—
New Jersey	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
New York (Upstate)	N	0	0	N	N	—	0	5	—	—	—	0	2	—	—
New York City	—	0	0	—	—	—	0	2	—	—	—	0	2	—	—
Pennsylvania	24	39	61	778	1,247	—	0	2	—	—	—	0	1	—	—
E.N. Central	72	146	241	3,359	3,813	—	0	8	—	—	—	0	3	—	—
Illinois	3	35	73	810	539	—	0	4	—	—	—	0	2	—	—
Indiana	—	0	14	83	—	—	0	1	—	—	—	0	1	—	—
Michigan	26	48	90	1,017	1,622	—	0	4	—	—	—	0	2	—	—
Ohio	43	42	91	1,240	1,340	—	0	3	—	—	—	0	1	—	—
Wisconsin	—	6	50	209	312	—	0	2	—	—	—	0	1	—	—
W.N. Central	5	22	114	591	686	—	0	6	—	1	—	0	21	—	—
Iowa	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
Kansas	—	6	22	165	284	—	0	2	—	1	—	0	3	—	—
Minnesota	—	0	0	—	—	—	0	2	—	—	—	0	4	—	—
Missouri	5	12	51	390	379	—	0	3	—	—	—	0	1	—	—
Nebraska¶	N	0	0	N	N	—	0	1	—	—	—	0	6	—	—
North Dakota	—	0	108	36	—	—	0	2	—	—	—	0	11	—	—
South Dakota	—	0	4	—	23	—	0	5	—	—	—	0	6	—	—
S. Atlantic	35	59	133	1,110	2,512	—	0	4	—	—	—	0	4	—	—
Delaware	—	0	5	2	12	—	0	0	—	—	—	0	1	—	—
District of Columbia	—	0	1	—	17	—	0	2	—	—	—	0	1	—	—
Florida	28	29	67	778	932	—	0	2	—	—	—	0	0	—	—
Georgia	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
Maryland¶	N	0	0	N	N	—	0	2	—	—	—	0	3	—	—
North Carolina	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
South Carolina¶	—	6	39	82	469	—	0	0	—	—	—	0	1	—	—
Virginia¶	—	10	60	28	717	—	0	0	—	—	—	0	1	—	—
West Virginia	7	10	32	220	365	—	0	1	—	—	—	0	0	—	—
E.S. Central	—	5	28	17	739	—	0	7	—	—	—	0	9	—	4
Alabama¶	—	5	28	16	731	—	0	3	—	—	—	0	2	—	1
Kentucky	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	1	1	8	—	0	4	—	—	—	0	8	—	2
Tennessee¶	N	0	0	N	N	—	0	2	—	—	—	0	3	—	1
W.S. Central	—	64	355	481	4,800	—	0	8	—	1	—	0	7	—	5
Arkansas¶	—	4	47	19	395	—	0	1	—	—	—	0	1	—	—
Louisiana	—	1	5	27	41	—	0	3	—	—	—	0	5	—	—
Oklahoma	N	0	0	N	N	—	0	1	—	1	—	0	1	—	2
Texas¶	—	50	345	435	4,364	—	0	6	—	—	—	0	4	—	3
Mountain	9	26	83	593	1,261	—	0	12	—	2	—	0	22	—	3
Arizona	—	0	0	—	—	—	0	10	—	1	—	0	8	—	—
Colorado	9	11	44	288	516	—	0	4	—	—	—	0	10	—	1
Idaho¶	N	0	0	N	N	—	0	1	—	1	—	0	6	—	1
Montana¶	—	3	27	70	170	—	0	0	—	—	—	0	2	—	—
Nevada¶	N	0	0	N	N	—	0	2	—	—	—	0	3	—	—
New Mexico¶	—	2	10	66	126	—	0	1	—	—	—	0	1	—	—
Utah	—	10	31	169	440	—	0	2	—	—	—	0	5	—	—
Wyoming¶	—	0	1	—	9	—	0	0	—	—	—	0	2	—	1
Pacific	4	2	7	56	55	—	0	38	—	—	—	0	23	—	1
Alaska	4	1	6	36	20	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	37	—	—	—	0	20	—	1
Hawaii	—	1	4	20	35	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	2	—	—	—	0	4	—	—
Washington	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	1	4	—	50	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	8	17	114	294	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

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

† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for California serogroup, eastern equine, Powassan, St. Louis, and western equine diseases are available in Table 1.

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

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

TABLE III. Deaths in 122 U.S. cities,* week ending May 30, 2009 (21st week)

Reporting area	All causes, by age (years)							Reporting area	All causes, by age (years)						
	All Ages	≥65	45-64	25-44	1-24	<1	P&† Total		All Ages	≥65	45-64	25-44	1-24	<1	P&† Total
New England	477	339	104	16	13	5	46	S. Atlantic	1,256	768	328	97	28	35	68
Boston, MA	129	81	32	6	8	2	13	Atlanta, GA	164	104	35	19	5	1	5
Bridgeport, CT	30	22	6	1	1	—	2	Baltimore, MD	114	56	44	8	2	4	13
Cambridge, MA	10	7	3	—	—	—	—	Charlotte, NC	92	55	23	9	2	3	5
Fall River, MA	22	20	2	—	—	—	2	Jacksonville, FL	120	75	35	5	3	2	15
Hartford, CT	70	48	16	2	3	1	10	Miami, FL	92	60	25	5	1	1	5
Lowell, MA	25	14	9	2	—	—	1	Norfolk, VA	57	35	10	5	1	6	1
Lynn, MA	8	8	—	—	—	—	—	Richmond, VA	55	31	18	2	1	3	2
New Bedford, MA	27	23	2	1	—	1	—	Savannah, GA	63	47	11	2	1	2	4
New Haven, CT	12	8	3	—	1	—	1	St. Petersburg, FL	40	29	8	3	—	—	—
Providence, RI	54	40	11	2	—	1	6	Tampa, FL	153	104	35	11	3	—	8
Somerville, MA	5	4	1	—	—	—	—	Washington, D.C.	297	164	83	28	9	13	9
Springfield, MA	19	15	4	—	—	—	2	Wilmington, DE	9	8	1	—	—	—	1
Waterbury, CT	16	9	7	—	—	—	1	E.S. Central	766	514	179	46	16	11	58
Worcester, MA	50	40	8	2	—	—	8	Birmingham, AL	175	117	42	12	3	1	16
Mid. Atlantic	1,657	1,152	354	101	24	25	79	Chattanooga, TN	80	62	12	3	2	1	3
Albany, NY	42	33	5	3	—	1	2	Knoxville, TN	75	51	18	2	2	2	6
Allentown, PA	20	16	2	1	—	1	3	Lexington, KY	33	22	8	1	1	1	3
Buffalo, NY	74	59	7	6	—	2	12	Memphis, TN	168	110	40	13	2	3	12
Camden, NJ	27	20	4	1	1	1	2	Mobile, AL	68	44	17	3	2	2	6
Elizabeth, NJ	16	13	2	1	—	—	2	Montgomery, AL	28	16	8	3	1	—	2
Erie, PA	48	41	5	2	—	—	2	Nashville, TN	139	92	34	9	3	1	10
Jersey City, NJ	21	12	8	1	—	—	—	W.S. Central	1,143	728	285	78	29	23	53
New York City, NY	914	627	204	57	16	10	30	Austin, TX	70	47	16	4	2	1	5
Newark, NJ	24	9	9	2	2	2	1	Baton Rouge, LA	60	51	6	2	1	—	—
Paterson, NJ	10	7	2	1	—	—	—	Corpus Christi, TX	46	29	13	2	1	1	2
Philadelphia, PA	115	70	34	6	3	2	4	Dallas, TX	130	76	38	8	4	4	7
Pittsburgh, PA§	31	17	9	3	2	—	4	El Paso, TX	65	50	9	4	2	—	2
Reading, PA	27	20	5	1	—	1	2	Fort Worth, TX	U	U	U	U	U	U	U
Rochester, NY	119	84	21	9	—	4	6	Houston, TX	361	199	112	29	9	12	22
Schenectady, NY	21	16	4	—	—	1	—	Little Rock, AR	65	46	11	6	1	1	4
Scranton, PA	25	21	3	1	—	—	2	New Orleans, LA	U	U	U	U	U	U	U
Syracuse, NY	65	47	14	4	—	—	3	San Antonio, TX	208	146	42	13	5	2	6
Trenton, NJ	24	15	8	1	—	—	1	Shreveport, LA	46	23	15	5	2	1	3
Utica, NY	15	13	2	—	—	—	1	Tulsa, OK	92	61	23	5	2	1	2
Yonkers, NY	19	12	6	1	—	—	2	Mountain	870	566	189	65	30	19	52
E.N. Central	1,636	1,077	396	95	30	38	102	Albuquerque, NM	101	70	17	7	5	2	9
Akron, OH	33	21	8	2	1	1	1	Boise, ID	37	24	9	2	2	—	2
Canton, OH	31	21	8	1	—	1	1	Colorado Springs, CO	31	21	9	—	1	—	—
Chicago, IL	298	175	80	28	8	7	29	Denver, CO	68	47	17	1	2	1	3
Cincinnati, OH	67	50	10	3	2	2	5	Las Vegas, NV	247	156	68	17	3	3	14
Cleveland, OH	192	135	47	6	4	—	6	Ogden, UT	24	17	4	2	1	—	—
Columbus, OH	135	97	31	2	1	4	5	Phoenix, AZ	154	86	34	20	8	5	10
Dayton, OH	100	67	28	3	1	1	6	Pueblo, CO	23	18	2	2	1	—	1
Detroit, MI	111	55	40	14	2	—	9	Salt Lake City, UT	127	86	18	10	5	8	10
Evansville, IN	32	23	8	1	—	—	2	Tucson, AZ	58	41	11	4	2	—	3
Fort Wayne, IN	69	51	12	4	1	1	1	Pacific	1,485	1,019	326	79	31	30	127
Gary, IN	18	12	4	—	2	—	—	Berkeley, CA	18	14	2	2	—	—	1
Grand Rapids, MI	40	28	6	5	1	—	4	Fresno, CA	120	76	36	4	1	3	8
Indianapolis, IN	163	94	43	12	3	11	13	Glendale, CA	33	28	5	—	—	—	4
Lansing, MI	31	22	3	3	1	2	—	Honolulu, HI	50	32	12	3	2	1	5
Milwaukee, WI	67	49	14	—	1	3	6	Long Beach, CA	42	27	10	3	—	2	4
Peoria, IL	41	29	8	3	1	—	2	Los Angeles, CA	204	121	52	19	6	6	21
Rockford, IL	61	39	14	4	1	3	6	Pasadena, CA	17	8	5	2	—	2	1
South Bend, IN	37	32	4	1	—	—	2	Portland, OR	75	52	17	3	2	1	3
Toledo, OH	59	38	17	3	—	1	1	Sacramento, CA	177	122	39	8	5	3	14
Youngstown, OH	51	39	11	—	—	1	3	San Diego, CA	140	103	24	4	5	4	17
W.N. Central	507	344	107	29	16	9	34	San Francisco, CA	105	77	21	4	—	3	12
Des Moines, IA	74	57	15	2	—	—	1	San Jose, CA	176	129	34	9	2	2	16
Duluth, MN	23	21	1	1	—	—	2	Santa Cruz, CA	32	25	4	1	1	1	—
Kansas City, KS	14	6	7	1	—	—	1	Seattle, WA	124	81	29	10	3	1	14
Kansas City, MO	92	47	22	11	7	5	5	Spokane, WA	65	49	15	1	—	—	6
Lincoln, NE	34	28	4	1	—	1	2	Tacoma, WA	107	75	21	6	4	1	1
Minneapolis, MN	46	25	15	3	2	1	4	Total¶	9,797	6,507	2,268	606	217	195	619
Omaha, NE	69	51	13	2	2	1	11								
St. Louis, MO	57	34	14	4	2	1	6								
St. Paul, MN	52	40	9	1	2	—	1								
Wichita, KS	46	35	7	3	1	—	1								

U: Unavailable. —: No reported cases.

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

† Pneumonia and influenza.

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

¶ Total includes unknown ages.

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