



# MMWR™

## Morbidity and Mortality Weekly Report

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### World TB Day – March 24, 2009

World TB Day is observed each year on March 24 to commemorate the date in 1882 when Dr. Robert Koch announced the discovery of *Mycobacterium tuberculosis*, the bacterium that causes tuberculosis (TB). Worldwide, TB remains one of the leading causes of death from infectious disease. An estimated 2 billion persons are infected with *M. tuberculosis* (1). In 2006, approximately 9.2 million persons became ill from TB, and 1.7 million died from the disease (1). World TB Day provides an opportunity for TB programs, nongovernmental organizations, and other partners to describe problems and solutions related to the TB pandemic and to support worldwide TB control efforts. The U.S. theme for this year's observance is Partnerships for TB Elimination.

After approximately 30 years of decline (from 84,304 in 1953 to 22,201 in 1985), the number of TB cases reported in the United States increased 20% (to 26,673) during 1985–1992 (2). This led to a renewed emphasis on TB control and prevention during the 1990s. However, the average annual decline has slowed since 2000. In addition, multidrug-resistant TB remains a threat, extensively drug-resistant TB has become an emerging threat, and persons of racial/ethnic minority populations and foreign-born persons continue to account for a greater percentage of TB cases. Additional information about World TB Day and CDC TB-elimination activities is available at <http://www.cdc.gov/tb/worldtbd>.

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2. CDC. Reported tuberculosis in the United States, 2007. Atlanta, GA: US Department of Health and Human Services, CDC; 2008. Available at <http://www.cdc.gov/tb/surv/2007/pdf/fullreport.pdf>.

### Trends in Tuberculosis – United States, 2008

In 2008, a total of 12,898 incident tuberculosis (TB) cases were reported in the United States; the TB rate declined 3.8% from 2007 to 4.2 cases per 100,000 population, the lowest rate recorded since national reporting began in 1953. This report summarizes provisional 2008 data from the National TB Surveillance System and describes trends since 1993. Despite this overall improvement, progress has slowed in recent years; the average annual percentage decline in the TB rate decreased from 7.3% per year during 1993–2000 to 3.8% during 2000–2008.\* Foreign-born persons and racial/ethnic minorities continued to bear a disproportionate burden of TB disease in the United States. In 2008, the TB rate in foreign-born persons in the United States was 10 times higher than in U.S.-born persons. TB rates among Hispanics and blacks were nearly eight times higher than among non-Hispanic whites, and rates among Asians were nearly 23 times higher than among non-Hispanic whites. In 2008, among persons with TB whose country of origin was known, approximately 95% of Asians, 76% of Hispanics, 32% of blacks, and 18% of

\*Population denominators for TB case rates for 1993–1999 were calculated using bridged-race 1990–1999 intercensal population estimates for 1993–1999, available at <http://www.cdc.gov/nchs/about/major/dvs/popbridge/datadoc.htm#inter1>. Population denominators for TB cases rates for 2000–2008 were calculated using annual estimates of the U.S. population, available at <http://www.census.gov/popest/states/NST-ann-est.html>.

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whites were foreign born. Among U.S.-born racial and ethnic groups, the greatest racial disparity in TB rates was for U.S.-born blacks, whose rate was seven times higher than the rate for U.S.-born whites. Intensified efforts are needed to address the slowing decline in TB incidence and the persistent disparities that exist between U.S.-born and foreign-born persons and between whites and minorities in the United States.

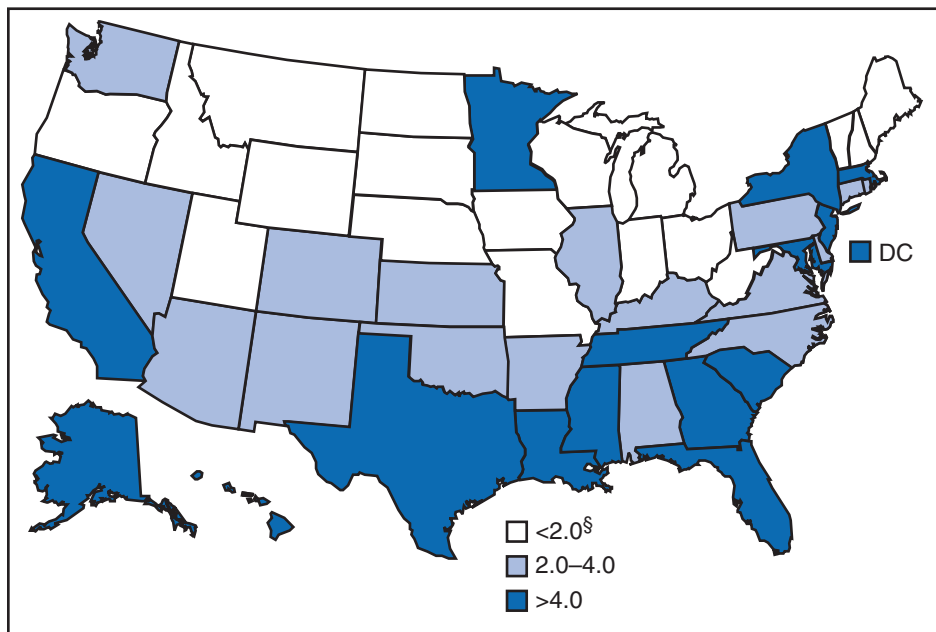
Health departments in the 50 states and the District of Columbia (DC) electronically report to CDC verified TB cases that meet the CDC/Council of State and Territorial Epidemiologists case definition.<sup>†</sup> Reports include the patient's race, ethnicity (i.e., Hispanic or non-Hispanic), treatment information, and, whenever available, drug-susceptibility test results. CDC calculates national and state TB rates overall and by racial/ethnic group using current U.S. Census population estimates. U.S. Census annual estimates were used to calculate the national TB rate and the percentage change from 2007 to 2008. Population denominators used to calculate TB rates and percentage changes over time according to national origin (U.S.-born versus foreign-born persons) were from the U.S. Census Current Population Survey. A U.S.-born person was defined as someone born in the United States or its associated jurisdictions or someone born in a foreign country but having at least one U.S.-born parent. Persons not meeting this definition were classified as foreign born. For 2008, patients with unknown origin of birth represented 0.6% (74 of 12,898) of total cases. For this report, persons identified as white, black, Asian, American Indian/Alaska Native, native Hawaiian or other Pacific Islander, or of multiple races were all classified as non-Hispanic. Persons identified as Hispanic might be of any race.

In 2008, TB rates in the 51 reporting areas ranged from 0.5 (North Dakota) to 9.6 (Hawaii) cases per 100,000 population (median: 3.0 cases per 100,000 population) (Figure 1). Thirty-three states and DC had lower rates in 2008 than in 2007; however, 17 states had higher rates. Four states (California, Florida, New York, and Texas) reported more than 500 cases each for 2008, a decline from seven states with at least 500 cases in 2006 and five states in 2007. Combined, these four states accounted for approximately half (49.2% [6,349]) of all TB cases in 2008.

Among U.S.-born persons, the number and rate of TB cases continued to decline in 2008. The number of TB cases in U.S.-born persons (5,283 [or 41.2% of all cases in persons with known origin]) declined 3.9% compared with 2007 and 69.7% compared with 1993 (Figure 2). In 2008, the TB rate among U.S.-born persons was 2.0 per 100,000 population,

<sup>†</sup> Available at [http://www.cdc.gov/epo/dphsi/casedef/tuberculosis\\_current.htm](http://www.cdc.gov/epo/dphsi/casedef/tuberculosis_current.htm).

FIGURE 1. Rate\* of tuberculosis (TB) cases, by state/area — United States, 2008†



SOURCE: National TB Surveillance System.

\* Per 100,000 population.

† Data updated as of February 18, 2009. Data for 2008 are provisional.

§ TB rate cutoff points were based on terciles: 18 states had TB case rates of <math>< 2.0</math> (range: 0.46–1.99) per 100,000, 17 states had TB case rates of 2.0–4.0 (range: 2.03–3.92) per 100,000, and 15 states and the District of Columbia had TB case rates of <math>> 4.0</math> (range: 4.02–9.63) per 100,000.

representing a 4.7% decline since 2007 and a 72.6% decline since 1993. Blacks (42.2% [2,227 of 5,283]) had the highest number of TB cases among U.S.-born persons.

Among foreign-born persons in the United States, both the number and rate of TB cases declined in 2008. A total of 7,541 TB cases were reported among foreign-born persons (58.8% of all cases in persons with known origin), a 2.8% decrease from the 7,757 cases reported in 2007. The TB rate among foreign-born persons in 2008 was 20.2 per 100,000 population, which was a 2.6% decline since 2007 and a 40.6% decline since 1993. In 2008, four countries accounted for approximately half (50.1%) of foreign-born TB cases: Mexico (1,742), the Philippines (855), India (598), and Vietnam (580).

In 2008, more TB cases were reported among Hispanics than any other racial/ethnic group, followed by Asians and blacks (Table). Asians had the highest TB case rate among all racial/ethnic groups. From 2007 to 2008, TB rates declined for all racial/ethnic minorities. The greatest annual decline in TB rate was among blacks (-7.0%), followed by Hispanics (-5.1%) and Asians (-4.6%). The smallest decline in 2008 was among whites (-3.6%).

In 2008, among 7,652 persons with TB with a known human immunodeficiency virus (HIV) test result, 802 (10.5%) were infected with HIV. California, Michigan, and Vermont data were not available for this calculation. § In 2007, excluding

data from California and Vermont, among 8,289 persons with TB with an HIV test result, 884 (10.7%) were infected with HIV.

A total of 125 cases of multidrug-resistant TB (MDR TB) § were reported in 2007, the most recent year for which complete drug-susceptibility data were available. Drug-susceptibility test results for isoniazid and rifampin were reported for 97.4% (10,477 of 10,762) and 97.8% (10,190 of 10,421) of culture-confirmed TB cases in 2006 and 2007, respectively. Among culture-positive cases with susceptibility testing performed, the percentage of TB cases that were MDR TB for 2007 (1.2% [125 of 10,190]) was similar to the percentage for 2006 (1.2% [124 of 10,477]). The percentage of MDR TB cases among persons without a previous history of TB has remained stable at approximately 1.0% since 1997. In 2007, the percentage of MDR TB cases among persons with a previous history of TB

was 3.6%. In 2007, MDR TB continued to disproportionately affect foreign-born persons, who accounted for 81.6% of MDR TB cases. Foreign-born persons had higher percentages of MDR TB, both among persons with (5.2%) and without (1.5%) a previous history of TB. Cases of extensively drug-resistant TB (XDR TB)\*\* have been reported every year in the United States except 2003 since drug-susceptibility reporting began in 1993. Four XDR TB cases were reported in 2006 and two in 2007. Provisional data indicate that four XDR TB cases were reported for 2008.

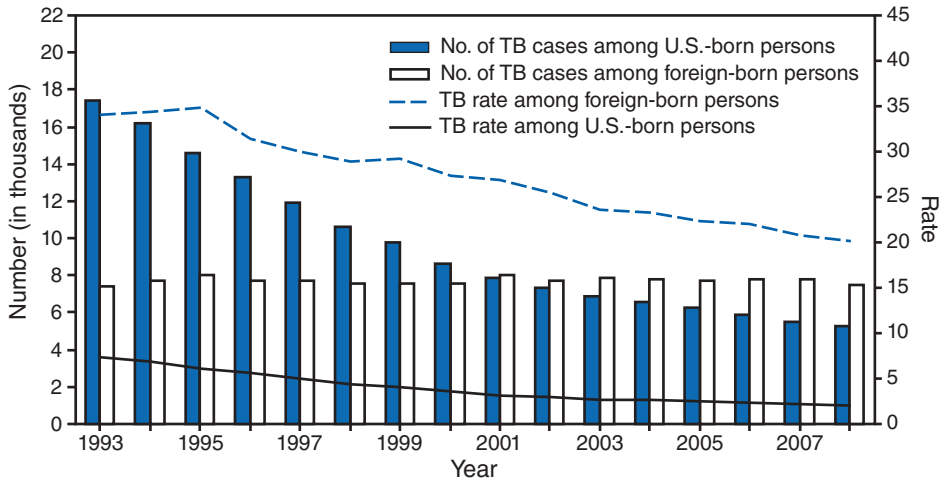
The recommended length of drug therapy for most types of TB is 6–9 months. In 2005, the latest year for which end-of-treatment data are complete, 83.0% of patients for whom  $\leq 1$  year of treatment was indicated completed therapy within 1 year, which is below the *Healthy People 2010* target of 90% (objective 14-12) (2).

§ For HIV calculations, Michigan was excluded because HIV data were not available at the time of this report. Vermont no longer reports HIV status to CDC. Data from California were not included because the state reports HIV data separately from TB data and 1 year later than all other states.

† Defined as a case of TB in a person with a *Mycobacterium tuberculosis* isolate resistant to at least isoniazid and rifampin (1).

\*\* Defined as a case of TB in a person with an *M. tuberculosis* isolate with resistance to at least isoniazid and rifampin among first-line anti-TB drugs, resistance to any fluoroquinolone (e.g., ciprofloxacin or ofloxacin), and resistance to at least one second-line injectable drug (e.g., amikacin, capreomycin, or kanamycin) (1).

**FIGURE 2. Number and rate\* of tuberculosis (TB) cases among U.S.- and foreign-born persons, by year reported — United States, 1993–2008†**



**SOURCE:** National TB Surveillance System.  
 \* Per 100,000 population.  
 † Data are updated as of February 18, 2009. Data for 2008 are provisional.

**Reported by:** R Pratt, V Robison, T Navin, Div of TB Elimination, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention; E Bloss, EIS Officer, CDC.

**Editorial Note:** In 2008, the number of TB cases and annual TB rate reached all-time lows in the United States. After the resurgence of TB during 1985–1992, the annual TB rate has steadily decreased. However, since 2000, the pace of that decline has slowed. To hasten the decline of TB in the United States, intensified efforts are required to address the disproportionately high rates of TB that persist among foreign-born persons and racial/ethnic minorities.

The proportion of TB cases contributed by foreign-born persons has increased each year since 1993. This is a reflection of high rates of TB in countries of origin for U.S. immigrants. To help address this, in 2007, CDC issued revised

technical instructions for TB screening and treatment among persons applying for immigration to the United States (3). The revision included instructions for 1) more comprehensive diagnostic testing among applicants (e.g., cultures and drug-susceptibility testing for persons with suspected TB); 2) the administration of directly observed therapy overseas, before entry into the United States; and 3) targeted tuberculin skin testing (before entry into the United States) of children from high-incidence countries and contacts of persons known to have TB. In addition, CDC continues to work with international partners, including the Stop TB Partnership, to strengthen TB control in countries with high TB incidence. For example, to facilitate patient referral and treatment among persons

who cross the U.S.-Mexico border, bilateral initiatives (e.g., CureTB) are improving coordination of TB care between U.S. TB programs and Mexican counterparts. Modeling has suggested that U.S.-funded expansion of the directly observed treatment (short course) strategy in selected high-incidence countries (e.g., Mexico) might be a cost-saving approach to reducing TB-related morbidity and mortality among U.S. immigrants (4).

The proportion of TB cases that are multidrug resistant has remained approximately 1% of culture-positive cases since 1997; however, MDR TB has continued to disproportionately affect foreign-born persons in the United States. CDC continues to provide technical assistance to domestic and international partners to increase detection of MDR TB and improve access to second-line TB drugs (5).

**TABLE. Number and rate\* of tuberculosis cases and percentage change, by race and ethnicity — United States, 2007–2008†**

Race/Ethnicity	2007		2008		% change in rates 2007 to 2008	Population§	
	No.	Rate	No.	Rate		2007	2008
<b>Hispanic</b>	3,873	8.5	3,794	8.1	-5.1	45,504,311	46,975,772
<b>Non-Hispanic</b>							
Black	3,468	9.4	3,261	8.7	-7.0	37,037,204	37,429,838
Asian	3,441	26.3	3,374	25.1	-4.6	13,079,642	13,446,083
White	2,212	1.1	2,137	1.1	-3.6	199,091,567	199,559,050
Other¶	254	3.7	257	3.6	-1.2	6,908,433	7,071,783
Unknown	40	—	75	—	—	—	—
<b>Total</b>	<b>13,288</b>	<b>4.4</b>	<b>12,898</b>	<b>4.2</b>	<b>-3.8</b>	<b>301,621,157</b>	<b>304,482,526</b>

\* Per 100,000 population.  
 † Data are updated as of February 18, 2009. Data for 2008 are provisional.  
 § Based on U.S. Census population data.  
 ¶ Includes American Indian/Alaska Native (2008, n = 137, rate: 5.9 per 100,000; 2007, n = 136, rate: 6.0 per 100,000), Native Hawaiian or other Pacific Islander (2008, n = 76, rate: 17.9 per 100,000; 2007, n = 95, rate: 22.8 per 100,000), and multiple race (2008, n = 44, rate: 1.0 per 100,000; 2007, n = 23, rate: 0.6 per 100,000).



In 2008, TB rates declined for all racial/ethnic minorities, yet among the U.S. born, blacks continue to experience a disproportionately high rate of TB. CDC's TB Epidemiologic Studies Consortium currently is conducting studies to understand how to reduce TB in blacks effectively, including a study to identify barriers to treatment adherence for latent TB infection and TB disease and a study examining the determinants of early diagnosis, prevention, and treatment of TB.

The findings in this report are subject to at least two limitations. First, the analysis was based on provisional 2008 data that are subject to change. This applies to TB case counts and HIV testing results data, both of which were incomplete. Additional data might change the results marginally. Second, population denominator data were drawn from multiple U.S. census sources and are subject to periodic adjustment. CDC's annual TB surveillance summary, due to be published in fall 2009, will provide updated data.

To ensure that TB rates decline further in the United States, especially among foreign-born persons and minority populations, TB prevention and control capacity should be increased (6–8). Additional capacity should be used to 1) improve case management and contact investigations; 2) intensify outreach, testing, and treatment of high-risk and hard-to-reach populations; 3) enhance treatment and diagnostic tools; 4) increase scientific research to better understand TB transmission; and 5) continue collaboration with other nations to reduce TB globally.

### Acknowledgments

The findings in this report are based, in part, on data contributed by state and local TB control officials.

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## Two Simultaneous Outbreaks of Multidrug-Resistant Tuberculosis — Federated States of Micronesia, 2007–2009

In July 2008, CDC responded to a request from the Federated States of Micronesia (FSM) to investigate the first documented cases of multidrug-resistant tuberculosis (MDR TB) in Chuuk State. Compared with drug-susceptible TB disease, MDR TB is resistant to at least isoniazid and rifampin, the two most effective TB medications, making treatment more difficult and outcomes more likely fatal (1). Second-line TB drugs\* for treating MDR TB were not available in FSM, and during December 2007–June 2008 four patients with MDR TB had died, including a child aged 2 years. This report describes the investigation by the World Health Organization (WHO) and CDC, which initially identified five confirmed cases in two distinct clusters, characterized by two distinct geographic locations, genotypes, and drug-susceptibility patterns. Extensive transmission has occurred among household contacts; 16 (8%) of the 205 contacts identified have confirmed or suspected MDR TB disease, and 124 (60%) have latent TB infection. Among 21 confirmed and suspected cases of MDR TB identified as of March 13, 2009, 10 have been in persons aged <15 years. With the death of a child aged 4 years in November 2008, a total of five persons have died of MDR TB. Multiple U.S. government agencies and other organizations are assisting local health authorities with resources to procure second-line TB drugs, ensure directly observed therapy (DOT), and identify and evaluate contacts. These simultaneous and continuing outbreaks demonstrate how a lack of basic TB control activities can allow the emergence and spread of drug-resistant TB.

FSM comprises four states and more than 600 islands spread across 1 million square miles in the western Pacific Ocean. Half of the population of 108,000 lives in Chuuk, the largest state (2). TB is endemic in Chuuk, where 70 cases of TB were recorded in 2007. The 2007 incidence rate (127 TB cases per 100,000) is 29 times higher than the 2007 U.S. rate (3).

\* Second-line TB drugs include aminoglycosides (e.g., amikacin, capreomycin, kanamycin), fluoroquinolones (e.g., ciprofloxacin, levofloxacin, and moxifloxacin), ethionamide, cycloserine, and para-aminosalicylic acid (PAS), among others.

Limited transportation hinders access to the only hospital in Chuuk, which provides chest radiography and smear microscopy services to help diagnose TB. Culture confirmation, drug-susceptibility testing, and genotyping were not available routinely for TB cases in FSM until January 2006, when referral laboratories in Hawaii and California began to offer these services. Before 2008, the state's geography, combined with limited TB program staffing, precluded active case-finding via routine contact investigations or the administration of DOT, a cornerstone of TB treatment that improves completion of therapy and prevents the emergence of drug resistance. Before July 2008, TB patients were identified as they showed signs or symptoms of TB disease at the local clinic or hospital; all received self-administered therapy. FSM's National TB Program has an annual budget of \$170,000, and second-line drugs for treating MDR TB were not available because of funding constraints.

In June 2007, pulmonary TB was diagnosed in a Chuuk resident aged 37 years. Sputum-smear microscopy detected acid-fast bacilli, and a chest radiograph showed lung cavitation, both indicators of contagiousness. In November 2007, drug-susceptibility test results confirmed multidrug resistance. The patient did not have access to second-line drugs and died. During December 2007–June 2008, four additional patients with MDR TB disease came to the local clinic or hospital. None of the four patients were treated with second-line drugs; three died, including a child aged 2 years. In May 2008, FSM authorities requested CDC assistance because of the 80% fatality rate and evidence of recent MDR TB transmission.

A confirmed case was defined as laboratory-confirmed MDR TB disease in a Chuuk resident during January 2006–June 2008. A suspected case of MDR TB disease was defined as exposure (based on intensity and duration of contact) to a patient with confirmed TB and clinical findings of TB disease (i.e., laboratory confirmation pending). Patients (or proxies for deceased patients) were interviewed and laboratory and medical records reviewed.

The July 2008 investigation focused on the initial five confirmed MDR TB cases. All patients were born in Chuuk; their median age was 16 years (range: 2–37 years), and four were female. None of the patients had a history of TB disease or treatment with TB drugs. All five patients had pulmonary TB, two with cavitation on chest radiograph and hemoptysis. None of the four patients who died before the investigation had been tested for human immunodeficiency virus (HIV) infection; the surviving patient had a negative HIV test result in July 2008. Two distinct clusters, associated with two different villages, were identified based on genotypes and drug-susceptibility patterns (Figure).

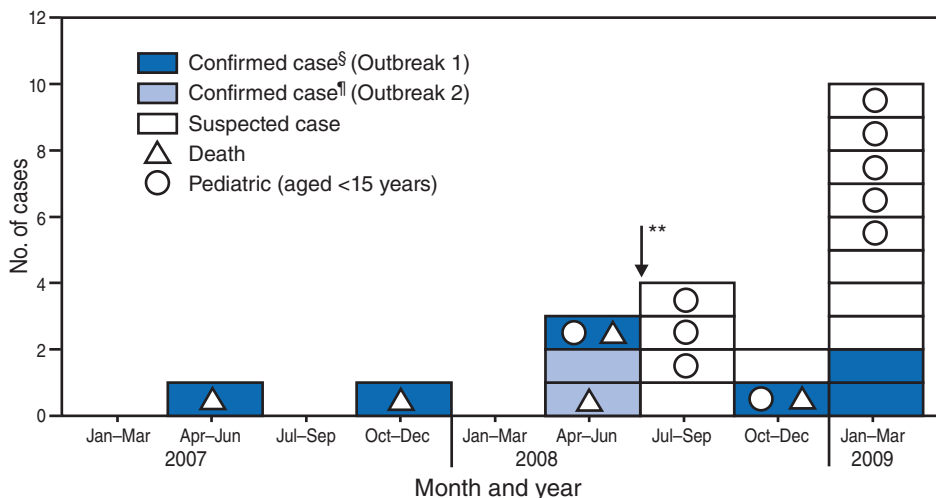
In the first cluster of three cases, *Mycobacterium tuberculosis* isolates had a matching genotype and resistance to five drugs: isoniazid, rifampin, pyrazinamide, ethambutol, and streptomycin. This drug-susceptibility pattern had not been seen in Chuuk since routine drug-susceptibility testing became available in January 2006. The index patient in this cluster had worked during 1987–2000 in the garment industry in the Commonwealth of the Northern Mariana Islands (Saipan), which employs migrants from Southeast Asian countries (4) where MDR TB is common (5).

In the second cluster of two cases, the isolates had a matching genotype and resistance to three drugs: isoniazid, rifampin, and ethionamide. The two patients were cousins whose extended family included five persons who previously had TB disease with isolates genotypically matched to those of the outbreak patients. However, the earlier isolates had resistance to isoniazid and ethionamide only. These five previous cases of non-MDR TB were diagnosed from January 2006, when genotyping became routinely available in Chuuk, to October 2007. Household caregivers reported that the five patients had self-administered therapy inconsistently or incompletely.

During investigations of the five initial cases of MDR TB disease, a standardized clinical examination, chest radiography, and tuberculin skin testing were used to evaluate contacts for TB disease and latent TB infection (6). The 205 named contacts, of whom 163 (80%) were household members and 42 (20%) were health-care workers, had a median age of 20 years (range: 4 months–62 years), and 117 (57%) were female. During July 1, 2008–March 13, 2009, three additional MDR TB cases were confirmed among household members (Figure), including a household contact aged 4 years who in November 2008 died of meningitis later confirmed to be caused by MDR TB. Based on history of household exposure to a patient with confirmed TB and clinical findings (e.g., chest radiography consistent with TB disease), 13 other suspected cases of MDR TB disease were identified; all 13 patients began treatment based on the drug-susceptibility results of the respective source case (Table). Although fewer than one third of the contacts were aged <15 years (60 of 205), they accounted for more than half of the suspected and confirmed MDR TB cases since July 2008 (nine of 16). Latent TB infection was diagnosed in 124 (60%) contacts, although many of the adults were probably infected before this documented emergence of MDR TB in Chuuk. Among contacts aged <15 years, 20 (33%) of 60 had latent TB infection. All household contacts with latent TB infection have begun receiving second-line drugs based on the drug-susceptibility results of the respective source case (1,7).

Multiple agencies have joined FSM in responding to the MDR TB outbreaks: the U.S. departments of Interior, Health and Human Services, State, and Defense; WHO; the

**FIGURE. Number of confirmed and suspected multidrug-resistant tuberculosis cases (N = 21) in two outbreaks,\* by initial sputum collection date — Chuuk State, Federated States of Micronesia, 2007–2009†**



\* Based on geographic location, genotypes, and drug-resistance patterns.

† As of March 13, 2009.

§ Resistance to isoniazid, rifampin, ethambutol, pyrazinamide, and streptomycin.

¶ Resistance to isoniazid, rifampin, and ethionamide.

\*\* Investigation by CDC and World Health Organization began in July 2008.

**TABLE. Demographics, clinical characteristics, and treatment status of 21 Chuuk State residents with multidrug-resistant tuberculosis in two outbreaks\* — Federated States of Micronesia, 2007–2009**

Characteristic	No.	(%)
<b>Pediatric (aged &lt;15 years)</b>	10	(48)
<b>Female</b>	16	(76)
<b>Symptoms</b>		
Cough	9	(43)
Hemoptysis	3	(14)
<b>Tuberculous meningitis</b>	2	(10)
<b>Pulmonary disease</b>	19	(90)
Acid-fast bacilli on smear microscopy	9	(43)
Cavitation on chest radiograph	4	(19)
With extrapulmonary lymphadenitis	3	(14)
<b>Geographic location, genotype pattern, and drug resistance</b>		
Outbreak 1 (resistant to five drugs†)	6	(29)
Outbreak 2 (resistant to three drugs§)	2	(10)
Pending	13	(62)
<b>Died</b>	5	(24)
<b>Currently on treatment</b>	16	(76)

\* Based on geographic location, genotypes, and drug-resistance patterns.

† Isoniazid, rifampin, ethambutol, pyrazinamide, and streptomycin.

§ Isoniazid, rifampin, and ethionamide.

Secretariat of the Pacific Community; and the Commonwealth of the Northern Mariana Islands Department of Public Health. Recommendations based on U.S. guidelines (8) and the *International Standards for TB Care* (9) have resulted in the following actions: 1) a consistent supply of fluoroquinolones, aminoglycosides, and other second-line drugs was procured; 2) Chuuk State Hospital added a separate ward for inpatient

treatment of patients with TB; 3) TB program staff members received on-site training on providing DOT and conducting contact investigations; 4) nine new outreach workers were hired to administer DOT, and three vehicles were acquired to help workers investigate contacts; 5) the hospital laboratory was equipped for processing specimens for smear microscopy daily and shipping specimens for culture and drug-susceptibility testing weekly. For 2008, the improved case-detection capacity increased the recorded TB incidence to 204 cases per 100,000 persons. The Chuuk TB program is consulting with U.S. MDR TB experts by telephone and e-mail for assistance with complex treatment decisions, and implementing measures to prevent the selection of drug-resistant strains and reduce all TB transmission.

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**Editorial Note:** These two clusters of MDR TB represent two distinct outbreaks and illustrate two mechanisms for the emergence of drug resistance. In the first outbreak, the index patient had not been treated previously for TB and probably became infected with a MDR TB strain before returning to Chuuk in 2000 from Saipan; this case illustrates primary (i.e., initial) drug resistance. In the second outbreak, lack of DOT for the five family members with TB disease initially resistant to only isoniazid and ethionamide probably led to secondary (i.e., acquired) rifampin resistance. At least one of these five previous patients thus acquired multidrug resistance and transmitted MDR TB to the index case in the second outbreak.

The emergence and transmission of MDR TB in these outbreaks were caused by the inability to follow standard TB control practices or to provide appropriate drugs. The findings also highlight the vulnerability of pediatric contacts and the challenges of diagnosing and treating MDR TB in resource-limited settings. Laboratory capacity and access to second-line TB drugs are fundamental to controlling MDR TB (1), and finding and curing all persons with TB is critical for interrupting transmission (8). Contact investigations enable active case-finding and early identification of recently infected



contacts at highest risk for developing TB disease. Infection control practices (e.g., isolating contagious patients initially during treatment and wearing appropriate personal protective equipment) can prevent transmission of susceptible and drug-resistant TB, and are particularly important in congregate settings such as clinics, hospitals, and prisons. Uniform DOT for patients with TB disease prevents acquired drug resistance (5) and, where feasible, DOT should be offered for contacts with latent TB infection as well.

The measures implemented in response to the MDR TB outbreaks in Chuuk have reflected all five aspects of the WHO global response plan for drug-resistant TB (10), which calls for augmenting the public health infrastructure to control TB, strengthening laboratory services for early diagnosis, improving surveillance to better understand drug resistance, implementing infection control to prevent transmission, and enhancing management of drug-resistant TB cases to reach the *Global Plan to Stop TB 2006–2015* goals.<sup>†</sup> Tangible progress in treating and preventing the spread of TB has been made in Chuuk as recommendations from the investigation have been implemented.

In 2008, an estimated 500,000 persons in the world developed MDR TB, largely as a result of inadequate TB control activities (5). In many countries where TB is endemic, ongoing transmission of multiple strains of MDR TB probably will be discovered as access to laboratory services improves (10). The challenge of primary drug resistance is likely to be exacerbated further by the increasing numbers of migratory and displaced populations (4). Many developing countries provide free first-line TB drugs through TB control programs. However, effective and sustainable mechanisms for access to expensive second-line TB drugs are needed for timely treatment of patients with drug-resistant TB. The multiagency response to the MDR TB outbreaks in Chuuk is a good example of the coordinated efforts that are needed to control MDR TB in many developing countries. As in Chuuk, a concerted focus on improving access to enhanced laboratory services and second-line TB drugs, and building local capacity for finding, diagnosing, and curing all forms of TB is necessary to address the global threat of MDR TB.

#### Acknowledgments

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## Guidance for Control of Infections with Carbapenem-Resistant or Carbapenemase-Producing *Enterobacteriaceae* in Acute Care Facilities

Infection with carbapenem-resistant *Enterobacteriaceae* (CRE) or carbapenemase-producing *Enterobacteriaceae* is emerging as an important challenge in health-care settings (1). Currently, carbapenem-resistant *Klebsiella pneumoniae* (CRKP) is the species of CRE most commonly encountered in the United States. CRKP is resistant to almost all available

<sup>†</sup> Available at <http://www.stoptb.org/globalplan>.



antimicrobial agents, and infections with CRKP have been associated with high rates of morbidity and mortality, particularly among persons with prolonged hospitalization and those who are critically ill and exposed to invasive devices (e.g., ventilators or central venous catheters). This report provides updated recommendations from CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC) for the control of CRE or carbapenemase-producing *Enterobacteriaceae* in acute care (inpatient) facilities. For all acute care facilities, CDC and HICPAC recommend an aggressive infection control strategy, including managing all patients with CRE using contact precautions and implementing Clinical and Laboratory Standards Institute (CLSI) guidelines for detection of carbapenemase production. In areas where CRE are not endemic, acute care facilities should 1) review microbiology records for the preceding 6–12 months to determine whether CRE have been recovered at the facility, 2) if the review finds previously unrecognized CRE, perform a point prevalence culture survey in high-risk units to look for other cases of CRE, and 3) perform active surveillance cultures of patients with epidemiologic links to persons from whom CRE have been recovered. In areas where CRE are endemic, an increased likelihood exists for importation of CRE, and facilities should consider additional strategies to reduce rates of CRE (2). Acute care facilities should review these recommendations and implement appropriate strategies to limit the spread of these pathogens.

For CRKP, the most important mechanism of resistance is the production of a carbapenemase enzyme, *bla<sub>KPC</sub>*. The gene that encodes the *bla<sub>KPC</sub>* enzyme is carried on a mobile piece of genetic material (transposon), which increases the risk for dissemination. Since first described in North Carolina in 1999, CRKP has been identified in 24 states and is recovered routinely in certain hospitals in New York and New Jersey (3). Analysis of 2007 data regarding health-care-associated infections reported to CDC indicated that 8% of all *Klebsiella* isolates were CRKP, compared with fewer than 1% in 2000 (CDC, unpublished data, 2008). CRKP poses significant treatment challenges, and CRKP infections have been associated with increased mortality, length of stay, and increased cost (4). The emergence and spread of CRKP and other types of CRE is another in a series of worrisome public health developments regarding antimicrobial resistance among gram-negative bacteria and underscores the immediate need for aggressive detection and control strategies (5).

A difficulty in detecting CRE is the fact that some strains that harbor *bla<sub>KPC</sub>* have minimal inhibitory concentrations (MICs) that are elevated but still within the susceptible range for carbapenems. Because these strains are susceptible to carbapenems, they are not identified as potential clinical

or infection control risks using current susceptibility testing guidelines. To address this challenge, in January 2009, CLSI published a recommendation that carbapenem-susceptible *Enterobacteriaceae* with elevated MICs or reduced disk diffusion zone sizes be tested for the presence of carbapenemases using the modified Hodge test (MHT) (6). The MHT is a phenotypic test used to detect carbapenemases in isolates demonstrating elevated but susceptible carbapenem MICs and has demonstrated sensitivity and specificity exceeding 90% in identifying carbapenemase-producing *Enterobacteriaceae* (6). If the MHT reveals the presence of a carbapenemase, CLSI recommends that a comment be added to the microbiology report to inform clinicians and infection preventionists. Because treatment information on MHT-positive, carbapenem-susceptible isolates is limited, CLSI guidelines do not recommend any changes regarding the reporting of susceptibility results themselves. Strains of *Enterobacteriaceae* that test intermediate or resistant to carbapenems should be reported as such and do not need to be subjected to the MHT.

Patients with unrecognized CRKP colonization have served as reservoirs for transmission during health-care-associated outbreaks (7). For example, during an outbreak of 39 cases of CRKP infection in a hospital in Puerto Rico in 2008, in addition to a review of infection control practices, active surveillance cultures were performed on patients in the same units as persons with confirmed CRKP infection. Cultures performed on 30 patients in the intensive care unit revealed two colonized patients who were not previously known to harbor CRKP and were not placed in contact precautions (CDC, unpublished data, 2008). Control of the outbreak was hindered by lack of compliance with infection control practices. Health-care personnel adherence to recommendations for gown and glove use was low (62%) at the hospital, and appropriate hand hygiene (i.e., hand washing or using a waterless alcohol-based hand rub before and after patient contact) was observed in only 48% of patient encounters. The hospital eventually was able to control the outbreak through enhanced infection control compliance, patient cohorting, and weekly perirectal surveillance cultures of patients in the outbreak units until no new cases were identified.

Experience from the outbreak in Puerto Rico and elsewhere (notably Israel) suggests that early detection through use of targeted surveillance and introduction of strict infection control measures (including reinforcement of hand hygiene and contact precautions) can help control the spread of CRKP (7). Other recent reports have demonstrated that microbiologic surveillance for CRKP can be accomplished using broth-based culture techniques that are widely available and also by in-house prepared molecular techniques and a commercial chromogenic agar (4,7–9); however, the latter two methods are

not currently approved by the Food and Drug Administration. The screening tests used in several studies were performed on rectal or perirectal swabs; limited data indicate that surveillance screening of stool specimens, rectal swabs, or perirectal swabs might produce higher yield than testing of other body sites (e.g., nares or skin) (9).

## CDC and HICPAC Recommendations

In light of the clinical and infection control challenges posed by CRE and advances in the ability to detect these pathogens, CDC and HICPAC have developed new guidance for CRE infection prevention and control in an effort to limit the further emergence of these organisms (Box). These recommendations are based on strategies outlined in the 2006 HICPAC guidelines for management of multidrug-resistant organisms in health-care settings (2).

All patients colonized or infected with CRE or carbapenemase-producing *Enterobacteriaceae* should be placed on contact precautions. Acute care facilities should establish a protocol, in conjunction with CLSI guidelines, to detect nonsusceptibility and carbapenemase production in *Enterobacteriaceae*, particularly *Klebsiella* spp. and *Escherichia coli*, and immediately alert epidemiology and infection control staff members if identified. All acute care facilities should review microbiology records for the preceding 6–12 months to ensure that previously unrecognized CRE cases have not occurred. If previously unrecognized cases are identified, facilities should conduct a point prevalence survey (a single round of active surveillance cultures) in units with patients at high risk (e.g., intensive care units, units where previous cases have been identified, and units where many patients are exposed to broad-spectrum antimicrobials) to identify any additional patients colonized with carbapenem-resistant or carbapenemase-producing *Klebsiella* spp. and *E. coli*. The recommended surveillance culture methodology is aimed at detecting carbapenem resistance or carbapenemase production in *Klebsiella* spp. and *E. coli* only, because 1) this method facilitates performing the test in the microbiology laboratory without the use of molecular methods and 2) these organisms represent the majority of CRE encountered in the United States. When a case of hospital-associated CRE is identified, facilities should conduct a single round of active surveillance testing of patients with epidemiologic links to the CRE case (e.g., those patients in the same unit or patients who have been cared for by the same health-care personnel).

The goal of active surveillance is to identify undetected carriers of carbapenem-resistant or carbapenemase-producing *Klebsiella* spp. and *E. coli*. Identification of other cases among patients with epidemiologic links to persons with confirmed infection suggests patient-to-patient transmission (7); in such

instances, infection prevention measures should be vigorously reinforced, and surveillance cultures repeated periodically (e.g., weekly) until no new cases are identified. Situations where periodic point prevalence surveys repeatedly fail to identify other colonized patients suggest that infection control measures at the facility are effective in controlling transmission. In such instances, consideration should be given to halting active surveillance cultures in response to clinical cases and replacing them with periodic point prevalence surveys in units with patients at high risk to ensure that carbapenem-resistant or carbapenemase-producing *Klebsiella* spp. and *E. coli* do not reemerge.

Because the prevalence of CRE is low in the majority of U.S. hospitals, routine microbiologic surveillance of persons admitted, such as that performed in some facilities to detect carriage of methicillin-resistant *Staphylococcus aureus*, is not recommended. However, in some areas of the United States, notably New York City, CRE are routinely recovered, including from many patients who are admitted from the community. In these settings, point prevalence surveys in response to detected clinical cases might be less useful in controlling transmission of CRE. Facilities in regions where CRE are endemic should monitor clinical cases of CRE and implement the intensified (i.e., Tier 2) infection control strategies outlined in the 2006 HICPAC guidelines if rates of CRE are not decreasing (2). The challenges to hospitals of allocating additional resources to prevent and control CRE are balanced by the fact that an aggressive infection control strategy, such as that recommended in this report, offers an opportunity to limit the impact of these problematic pathogens while CRE prevalence remains low in most U.S. hospitals.

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**BOX. Infection prevention and control guidance for carbapenem-resistant *Enterobacteriaceae* (or carbapenemase-producing *Enterobacteriaceae*) in acute care facilities — CDC and the Healthcare Infection Control Practices Advisory Committee****Infection Prevention and Control**

- All acute care facilities should implement contact precautions for patients colonized or infected with carbapenem-resistant *Enterobacteriaceae* (CRE) or carbapenemase-producing *Enterobacteriaceae*. No recommendation can be made regarding when to discontinue contact precautions.

**Laboratory**

- Clinical microbiology laboratories should follow Clinical and Laboratory Standards Institute guidelines for susceptibility testing (*I*) and establish a protocol for detection of carbapenemase production (e.g., performance of the modified Hodge test).
- Clinical microbiology laboratories should establish systems to ensure prompt notification of infection prevention staff of all *Enterobacteriaceae* isolates that are nonsusceptible to carbapenems or *Klebsiella* spp. or *Escherichia coli* isolates that test positive for a carbapenemase.

**Surveillance**

- All acute care facilities should review clinical culture results for the preceding 6–12 months to determine whether previously unrecognized CRE have been present in the facility.
  - If this review identifies previously unrecognized CRE, a point prevalence survey (a single round of active surveillance cultures) should be performed to look for CRE in high-risk units (e.g., intensive care units, units where previous cases have been identified, and units where many patients are exposed to broad-spectrum antimicrobials).
  - If this review does not identify previously unrecognized CRE, monitoring for clinical infections should be continued.
- If CRE or carbapenemase-producing *Klebsiella* spp. or *E. coli* are detected from one or more clinical cultures **OR** if the point prevalence survey reveals unrecognized colonization, the facility should investigate for possible transmission by:
  - Conducting active surveillance testing of patients with epidemiologic links to a patient with CRE infection (e.g., patients in the same unit or who have been cared for by the same health-care personnel).
    - Continue active surveillance periodically (e.g., weekly) until no new cases of colonization or infection suggesting cross-transmission are identified.
    - If transmission of CRE is not identified after repeated active surveillance testing, consider altering the surveillance strategy by performing periodic point prevalence surveys in high-risk units.
  - In areas where CRE are endemic, an increased likelihood exists for importation of CRE, and the procedures outlined might not be sufficient to prevent transmission. Facilities in such areas should monitor clinical cases and consider additional strategies to reduce rates of CRE as described in the 2006 Tier 2 guidelines for management of multidrug-resistant organisms in health-care settings (2). Recommendations for rate calculations have been described previously (3).

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### Notice to Readers

#### **World Water Day – March 22, 2009**

Each year on March 22, World Water Day attracts international attention to the need to conserve and develop water resources. Shared Waters—Shared Opportunities, the theme for World Water Day 2009, focuses on issues associated with 263 lakes and river basins that cross the borders of two or more countries.

Worldwide, nearly one third of those 263 water basins are shared by three or more countries, and 19 are shared by five or more countries (1). Despite the complexity of these boundaries, hundreds of successful international transboundary agreements have been negotiated. The United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Economic Commission for Europe, and other organizations are working to ensure the peaceful collaboration of countries who share water systems (1).

Many countries lack resources to provide their inhabitants with safe drinking water and adequate sanitation. Approximately 880 million people still lack access to improved sources of drinking water (2), leaving them at risk for water-, sanitation-, and hygiene-related diseases. Worldwide, 1.6 million deaths per year result from unsafe water, poor sanitation, and lack of hygiene (3). Most of these deaths occur among children aged <5 years. The ongoing cholera epidemic in Zimbabwe (4), which has affected approximately 91,000 persons and caused more than 4,000 deaths (5) since it began in

August 2008, is an example of the health risks of waterborne diseases, although most cases and fatalities resulting from waterborne diseases are never reported.

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### Notice to Readers

#### **2008 State Reportable Condition Assessment Results**

The Council of State and Territorial Epidemiologists (CSTE) recently completed work on an assessment that captured information regarding which public health conditions were reportable by clinicians, laboratories, hospitals, or other public health reporters, as mandated by law or regulation in 50 U.S. states, four U.S. territories, and two autonomous reporting jurisdictions (New York City and the District of Columbia). A total of 255 conditions, including infectious conditions and noninfectious conditions (e.g., injuries, cancer, and work-related conditions) were included in the assessment. Results for both the 2008 and 2007 assessments are available, using a web query tool, at <http://www.cste.org/dnn/programsandactivities/publichealthinformatics/statereportableconditionsqueryresults/tabid/261/default.aspx>.

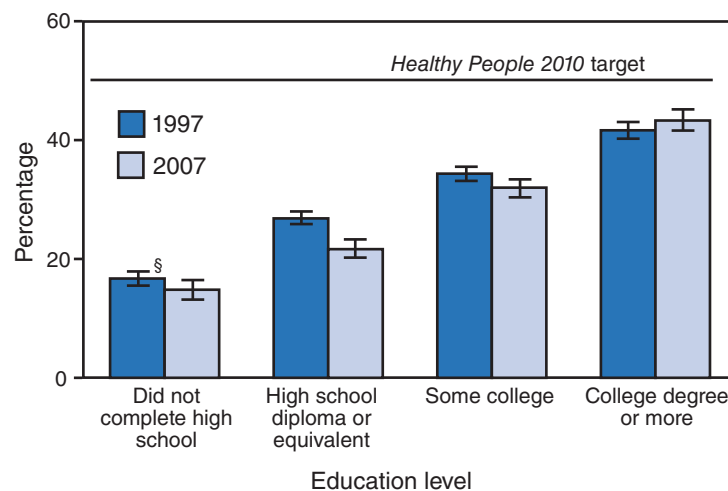
Feedback concerning the 2008 assessment or the web query tool should be directed to CSTE via e-mail ([ldwyer@cste.org](mailto:ldwyer@cste.org)). Subject matter experts at CDC or local or state health departments who are interested in helping CSTE develop requirements for the 2009 assessment may also notify CSTE at the same e-mail address.



## QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

### Percentage of Adults Aged $\geq 25$ Years Who Reported Regular Leisure-Time Physical Activity,\* by Education Level — National Health Interview Survey, United States, 1997 and 2007†



\* Defined as at least 30 minutes of moderate activity, five times per week, or at least 20 minutes of vigorous physical activity, three times per week.

† Data were age adjusted to the 2000 standard population.

§ 95% confidence interval.

In 1997 and 2007, the percentage of adults aged  $\geq 25$  years who reported regular leisure-time physical activity increased with level of education. In 2007, persons with a college degree or more were nearly three times as likely to report regular leisure-time physical activity (43.4%) as those who did not complete high school (14.9%). However, regardless of education level, from 1997 to 2007 no progress was made toward meeting the *Healthy People 2010* target of 50% of persons reporting regular leisure-time physical activity (objective 22-2).

**SOURCES:** National Health Interview Surveys, 1997 and 2007. Available at <http://www.cdc.gov/nchs/nhis.htm>.

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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 March 14, 2009 (10th week)\***

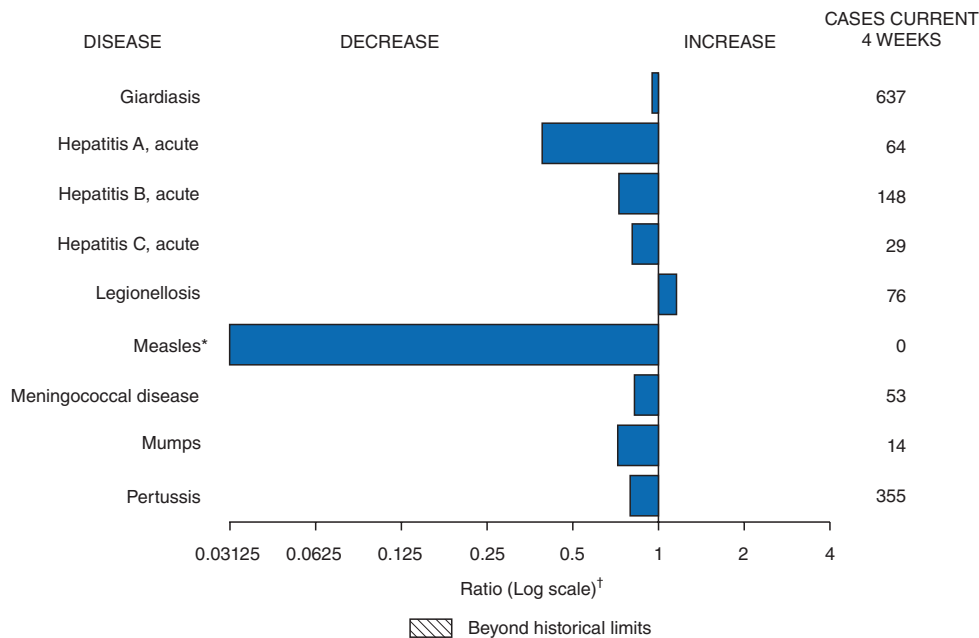
Disease	Current week	Cum 2009	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2008	2007	2006	2005	2004	
Anthrax	—	—	0	—	1	1	—	—	
Botulism:									
foodborne	—	4	0	14	32	20	19	16	
infant	—	6	2	100	85	97	85	87	
other (wound and unspecified)	2	6	0	19	27	48	31	30	WA (1), CA (1)
Brucellosis	2	7	2	80	131	121	120	114	CA (2)
Chancroid	2	7	1	29	23	33	17	30	MA (1), WI (1)
Cholera	—	—	—	3	7	9	8	6	
Cyclosporiasis§	—	20	3	135	93	137	543	160	
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup	—	—	0	49	55	67	80	112	
eastern equine	—	—	—	3	4	8	21	6	
Powassan	—	—	—	2	7	1	1	1	
St. Louis	—	—	—	10	9	10	13	12	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§,**:									
<i>Ehrlichia chaffeensis</i>	5	21	2	912	828	578	506	338	OH (1), NC (3), CA (1)
<i>Ehrlichia ewingii</i>	—	—	—	8	—	—	—	—	
<i>Anaplasma phagocytophilum</i>	—	5	1	599	834	646	786	537	
undetermined	—	2	0	68	337	231	112	59	
<i>Haemophilus influenzae</i> ,††									
invasive disease (age <5 yrs):									
serotype b	1	6	0	29	22	29	9	19	OK (1)
nonserotype b	3	39	4	189	199	175	135	135	OH (1), NC (1), FL (1)
unknown serotype	6	38	4	184	180	179	217	177	NY (1), OH (2), MI (1), MO (1), NC (1)
Hansen disease§	—	10	2	75	101	66	87	105	
Hantavirus pulmonary syndrome§	—	—	0	18	32	40	26	24	
Hemolytic uremic syndrome, postdiarrheal§	6	15	2	266	292	288	221	200	GA (6)
Hepatitis C viral, acute	8	114	13	863	845	766	652	720	IA (1), MO (1), GA (1), FL (3), KY (1), CA (1)
HIV infection, pediatric (age <13 years)§§	—	—	5	—	—	—	380	436	
Influenza-associated pediatric mortality§,¶¶	6	33	3	88	77	43	45	—	NY (1), NJ (1), MI (1), NV (1), NYC (1), TX (1)
Listeriosis	3	78	9	722	808	884	896	753	WA (1), CA (2)
Measles***	—	3	2	137	43	55	66	37	
Meningococcal disease, invasive†††:									
A, C, Y, and W-135	4	52	9	325	325	318	297	—	NC (2), FL (2)
serogroup B	1	21	4	178	167	193	156	—	WA (1)
other serogroup	—	3	1	30	35	32	27	—	
unknown serogroup	11	86	19	600	550	651	765	—	NY (1), NE (1), NC (1), FL (1), OR (2), CA (5)
Mumps	3	55	25	419	800	6,584	314	258	MO (1), FL (1), CA (1)
Novel influenza A virus infections	—	1	—	2	4	N	N	N	
Plague	—	—	0	1	7	17	8	3	
Poliomyelitis, paralytic	—	—	—	—	—	—	1	—	
Polio virus infection, nonparalytic§	—	—	—	—	—	N	N	N	
Psittacosis§	—	2	0	11	12	21	16	12	
Q fever total§,§§§:	3	12	2	99	171	169	136	70	
acute	3	9	0	89	—	—	—	—	OH (1), MO (1), FL (1)
chronic	—	3	0	10	—	—	—	—	
Rabies, human	—	—	—	1	1	3	2	7	
Rubella¶¶¶	—	—	0	18	12	11	11	10	
Rubella, congenital syndrome	—	1	0	—	—	1	1	—	
SARS-CoV§,****	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	—	22	4	144	132	125	129	132	
Syphilis, congenital (age <1 yr)	—	20	6	336	430	349	329	353	
Tetanus	—	1	0	19	28	41	27	34	
Toxic-shock syndrome (staphylococcal)§	2	16	2	75	92	101	90	95	CA (2)
Trichinellosis	—	6	0	37	5	15	16	5	
Tularemia	—	3	0	115	137	95	154	134	
Typhoid fever	2	53	6	428	434	353	324	322	CA (2)
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	1	7	0	46	37	6	2	—	FL (1)
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	—	—	2	1	3	1	
Vibriosis (noncholera <i>Vibrio</i> species infections)§	5	27	2	487	549	N	N	N	FL (2), CA (3)
Yellow fever	—	—	—	—	—	—	—	—	

See Table I footnotes on next page.

**TABLE I. (Continued) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending March 14, 2009 (10th 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. Thirty-two influenza-associated pediatric deaths occurring during the 2008-09 influenza season have been reported.  
 \*\*\* No measles cases were reported for the current week.  
 ††† Data for meningococcal disease (all serogroups) are available in Table II.  
 §§§ 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 March 14, 2009, with historical data**



\* No measles cases were reported for the current 4-week period yielding a ratio for week 10 of zero (0).  
 † 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 March 14, 2009, and March 8, 2008 (10th 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		
<b>United States</b>	12,587	21,401	24,762	187,287	225,238	227	125	343	1,449	1,356	47	107	466	608	641
<b>New England</b>	766	708	1,657	7,510	6,385	—	0	0	—	1	1	5	23	33	74
Connecticut	253	220	1,307	2,159	1,413	N	0	0	N	N	—	0	4	4	41
Maine§	47	49	72	522	501	N	0	0	N	N	1	1	6	3	—
Massachusetts	387	328	955	3,892	3,399	N	0	0	N	N	—	2	13	19	17
New Hampshire	3	39	63	165	428	—	0	0	—	1	—	1	4	4	5
Rhode Island§	45	52	208	552	617	—	0	0	—	—	—	0	3	1	1
Vermont§	31	19	53	220	27	N	0	0	N	N	—	1	7	2	10
<b>Mid. Atlantic</b>	2,744	2,832	6,460	27,643	22,800	—	0	0	—	—	6	13	34	75	81
New Jersey	366	410	685	2,839	4,444	N	0	0	N	N	—	0	2	—	7
New York (Upstate)	586	555	4,228	5,090	4,094	N	0	0	N	N	4	5	17	27	14
New York City	1,245	1,106	3,387	12,165	5,943	N	0	0	N	N	—	1	8	13	22
Pennsylvania	547	787	1,074	7,549	8,319	N	0	0	N	N	2	5	15	35	38
<b>E.N. Central</b>	1,215	2,994	3,673	23,738	53,684	—	1	3	5	7	8	26	125	136	147
Illinois	—	645	1,155	5,562	27,959	N	0	0	N	N	—	2	13	5	16
Indiana	371	379	713	3,941	4,124	N	0	0	N	N	1	3	13	12	13
Michigan	635	842	1,225	8,544	8,452	—	0	3	1	4	1	5	13	35	35
Ohio	29	794	1,300	2,854	9,001	—	0	2	4	3	3	6	59	50	39
Wisconsin	180	295	488	2,837	4,148	N	0	0	N	N	3	9	46	34	44
<b>W.N. Central</b>	619	1,290	1,541	11,473	12,644	—	0	2	—	—	7	16	68	70	90
Iowa	—	173	250	1,571	1,698	N	0	0	N	N	2	4	30	12	24
Kansas	122	184	402	1,895	1,705	N	0	0	N	N	4	1	8	11	11
Minnesota	—	269	310	1,669	2,944	—	0	0	—	—	—	4	14	12	23
Missouri	424	490	566	4,973	4,530	—	0	2	—	—	—	3	13	18	10
Nebraska§	—	81	245	614	859	N	0	0	N	N	—	2	8	11	13
North Dakota	6	29	60	148	386	N	0	0	N	N	—	0	2	—	1
South Dakota	67	57	85	603	522	N	0	0	N	N	1	1	9	6	8
<b>S. Atlantic</b>	2,702	3,903	6,326	32,457	36,789	—	0	1	3	1	13	19	47	159	107
Delaware	73	67	151	906	710	—	0	1	1	—	—	0	1	—	3
District of Columbia	—	126	201	858	1,308	—	0	0	—	—	—	0	2	—	2
Florida	1,229	1,372	1,571	14,028	12,712	N	0	0	N	N	8	8	35	58	56
Georgia	2	716	1,274	2,631	6,456	N	0	0	N	N	5	5	13	71	24
Maryland§	358	446	692	4,312	4,034	—	0	1	2	1	—	1	4	4	—
North Carolina	—	0	460	—	2,352	N	0	0	N	N	—	0	16	20	7
South Carolina§	603	479	3,038	4,314	4,351	N	0	0	N	N	—	1	4	3	5
Virginia§	413	618	1,059	4,696	4,175	N	0	0	N	N	—	1	4	2	6
West Virginia	24	62	102	712	691	N	0	0	N	N	—	0	3	1	4
<b>E.S. Central</b>	1,642	1,598	2,097	16,531	15,530	—	0	0	—	—	3	2	9	15	21
Alabama§	—	429	531	3,298	4,921	N	0	0	N	N	—	1	6	3	12
Kentucky	380	245	373	2,584	2,316	N	0	0	N	N	3	0	4	6	3
Mississippi	648	413	764	4,677	3,193	N	0	0	N	N	—	0	2	3	2
Tennessee§	614	540	798	5,972	5,100	N	0	0	N	N	—	1	6	3	4
<b>W.S. Central</b>	522	2,850	3,515	24,596	27,508	—	0	1	—	1	3	8	182	22	28
Arkansas§	337	276	455	3,058	2,689	N	0	0	N	N	—	1	7	2	2
Louisiana	103	421	775	2,617	3,368	—	0	1	—	1	1	1	5	5	6
Oklahoma	82	200	399	1,093	2,105	N	0	0	N	N	2	1	16	7	9
Texas§	—	1,910	2,469	17,828	19,346	N	0	0	N	N	—	4	176	8	11
<b>Mountain</b>	441	1,261	1,952	9,283	14,068	126	89	181	1,032	939	—	8	38	35	40
Arizona	70	456	650	2,436	4,481	126	86	179	1,014	913	—	1	9	3	9
Colorado	95	176	588	1,037	3,465	N	0	0	N	N	—	1	12	6	5
Idaho§	61	67	314	724	796	N	0	0	N	N	—	1	5	5	8
Montana§	17	59	87	532	592	N	0	0	N	N	—	1	3	2	5
Nevada§	114	176	415	2,092	1,974	—	1	6	13	10	—	0	1	4	—
New Mexico§	—	151	455	1,316	1,365	—	0	2	1	9	—	2	24	9	5
Utah	50	107	258	693	1,174	—	0	1	4	7	—	0	6	1	3
Wyoming§	34	33	95	453	221	—	0	1	—	—	—	0	2	5	5
<b>Pacific</b>	1,936	3,695	4,430	34,056	35,830	101	36	172	409	407	6	8	30	63	53
Alaska	105	80	188	816	862	N	0	0	N	N	—	0	1	—	—
California	1,261	2,876	3,300	27,295	27,495	101	36	172	409	407	2	5	14	37	39
Hawaii	—	102	162	892	1,041	N	0	0	N	N	—	0	1	—	—
Oregon§	222	186	631	2,012	1,989	N	0	0	N	N	3	1	4	21	9
Washington	348	393	502	3,041	4,443	N	0	0	N	N	1	1	17	4	5
American Samoa	—	0	14	—	37	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	4	24	—	21	—	0	0	—	—	—	0	0	—	—
Puerto Rico	197	127	333	1,494	888	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	12	23	—	133	—	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 March 14, 2009, and March 8, 2008 (10th week)\***

Reporting area	Hepatitis (viral, acute), by type†										Legionellosis				
	A				B										
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
	Med	Max				Med	Max				Med	Max			
<b>United States</b>	19	44	77	284	503	28	69	121	530	702	17	49	148	272	349
<b>New England</b>	1	2	8	15	30	—	1	3	4	19	1	3	18	10	13
Connecticut	1	0	4	6	3	—	0	2	2	9	1	0	5	5	3
Maine§	—	0	5	—	3	—	0	2	1	2	—	0	2	—	—
Massachusetts	—	1	4	7	16	—	0	1	—	7	—	1	7	3	3
New Hampshire	—	0	2	1	1	—	0	2	1	1	—	0	5	—	4
Rhode Island§	—	0	2	1	7	—	0	1	—	—	—	0	14	1	1
Vermont§	—	0	1	—	—	—	0	1	—	—	—	0	1	1	2
<b>Mid. Atlantic</b>	3	5	10	36	80	2	7	15	41	102	6	14	59	69	80
New Jersey	—	1	3	4	19	—	1	5	2	40	—	1	8	2	8
New York (Upstate)	—	1	4	7	13	1	1	10	15	9	5	5	21	27	15
New York City	2	2	6	12	24	—	2	6	5	14	—	1	12	3	13
Pennsylvania	1	1	4	13	24	1	2	8	19	39	1	6	33	37	44
<b>E.N. Central</b>	1	6	16	41	71	2	8	17	72	93	3	8	41	54	94
Illinois	—	2	10	9	22	—	2	7	7	25	—	1	13	—	16
Indiana	—	0	4	4	3	—	0	7	9	5	—	1	6	4	4
Michigan	—	2	5	13	34	—	3	7	19	33	1	2	16	13	22
Ohio	1	1	4	14	7	2	2	14	37	25	2	3	18	35	50
Wisconsin	—	0	2	1	5	—	0	1	—	5	—	0	3	2	2
<b>W.N. Central</b>	2	3	16	20	59	1	2	10	30	17	—	2	8	2	18
Iowa	—	1	7	—	22	—	0	3	4	5	—	0	2	1	5
Kansas	—	0	3	1	4	—	0	3	—	2	—	0	1	1	1
Minnesota	—	0	12	4	6	1	0	10	5	—	—	0	4	—	1
Missouri	1	1	3	9	10	—	1	5	15	9	—	1	7	—	5
Nebraska§	1	0	5	6	16	—	0	3	6	1	—	0	3	—	5
North Dakota	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
South Dakota	—	0	1	—	1	—	0	0	—	—	—	0	1	—	1
<b>S. Atlantic</b>	6	7	15	74	65	9	18	34	194	185	1	9	22	64	64
Delaware	—	0	1	—	—	—	0	2	2	5	—	0	2	—	1
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	—	2
Florida	2	3	8	43	28	7	6	11	62	63	1	3	7	27	29
Georgia	1	1	4	11	9	—	3	8	25	28	—	1	5	14	4
Maryland§	—	0	4	7	8	—	2	5	17	22	—	2	10	10	14
North Carolina	3	0	9	9	9	2	0	19	77	24	—	0	7	12	5
South Carolina§	—	0	3	2	2	—	1	4	1	18	—	0	2	—	1
Virginia§	—	1	5	2	7	—	2	8	7	14	—	1	5	1	5
West Virginia	—	0	1	—	2	—	1	4	3	11	—	0	3	—	3
<b>E.S. Central</b>	—	1	9	6	7	—	7	13	39	75	1	2	10	16	19
Alabama§	—	0	2	1	1	—	2	6	12	22	—	0	2	2	2
Kentucky	—	0	3	1	3	—	2	7	9	22	1	1	4	6	11
Mississippi	—	0	2	3	—	—	1	3	4	7	—	0	1	—	—
Tennessee§	—	0	6	1	3	—	3	8	14	24	—	0	5	8	6
<b>W.S. Central</b>	—	4	12	7	34	8	12	35	71	122	—	1	16	6	6
Arkansas§	—	0	1	1	—	—	0	4	—	5	—	0	2	—	—
Louisiana	—	0	2	2	2	—	1	4	6	18	—	0	2	1	—
Oklahoma	—	0	5	1	2	6	2	10	15	10	—	0	6	—	—
Texas§	—	4	11	3	30	2	8	24	50	89	—	1	15	5	6
<b>Mountain</b>	1	3	12	20	39	—	4	12	22	31	1	2	8	15	20
Arizona	1	2	11	11	15	—	1	5	8	14	—	0	2	6	5
Colorado	—	0	2	2	11	—	0	3	2	4	—	0	2	—	3
Idaho§	—	0	3	—	6	—	0	2	1	—	—	0	1	—	1
Montana§	—	0	1	2	—	—	0	1	—	—	—	0	2	2	2
Nevada§	—	0	3	2	—	—	0	3	6	7	1	0	2	4	2
New Mexico§	—	0	3	1	3	—	0	2	3	3	—	0	2	—	2
Utah	—	0	2	2	2	—	0	3	2	3	—	0	2	3	5
Wyoming§	—	0	1	—	2	—	0	1	—	—	—	0	0	—	—
<b>Pacific</b>	5	9	25	65	118	6	7	42	57	58	4	4	10	36	35
Alaska	—	0	1	1	—	—	0	2	1	1	—	0	1	2	—
California	5	7	25	55	94	5	5	28	47	44	3	3	8	29	28
Hawaii	—	0	2	1	2	—	0	1	1	2	—	0	1	1	2
Oregon§	—	0	2	5	9	—	1	3	5	7	—	0	2	2	4
Washington	—	0	7	3	13	1	0	14	3	5	—	0	4	2	1
American Samoa	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	1	0	2	2	5	—	0	4	—	12	—	0	1	—	—
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 March 14, 2009, and March 8, 2008 (10th 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		
<b>United States</b>	65	479	1,642	1,036	1,449	11	23	47	144	145	16	18	43	162	293
<b>New England</b>	1	78	529	73	268	—	1	6	7	6	—	0	4	7	11
Connecticut	—	0	0	—	—	—	0	3	—	—	—	0	0	—	1
Maine§	—	3	73	10	24	—	0	0	—	1	—	0	1	1	1
Massachusetts	—	34	357	17	186	—	0	4	6	3	—	0	3	4	9
New Hampshire	1	13	141	29	51	—	0	2	—	1	—	0	1	1	—
Rhode Island§	—	0	1	—	1	—	0	1	—	1	—	0	1	1	—
Vermont§	—	4	41	17	6	—	0	1	1	—	—	0	0	—	—
<b>Mid. Atlantic</b>	58	250	1,275	591	740	1	4	14	28	31	1	2	6	15	29
New Jersey	—	29	211	97	220	—	0	0	—	—	—	0	2	—	4
New Jersey (Upstate)	48	99	1,223	177	80	1	0	10	8	3	1	0	3	1	8
New York City	—	1	7	—	9	—	3	10	15	22	—	0	2	4	2
Pennsylvania	10	96	522	317	431	—	1	3	5	6	—	1	4	10	15
<b>E.N. Central</b>	—	11	147	24	47	1	2	7	16	29	—	3	8	27	53
Illinois	—	1	13	—	2	—	1	5	4	14	—	1	6	2	22
Indiana	—	0	8	—	—	—	0	2	3	1	—	0	4	6	8
Michigan	—	1	10	4	3	1	0	2	2	5	—	0	3	3	9
Ohio	—	0	5	2	3	—	0	2	7	8	—	1	4	13	9
Wisconsin	—	9	129	18	39	—	0	3	—	1	—	0	2	3	5
<b>W.N. Central</b>	—	8	225	10	6	—	1	10	5	3	1	2	6	15	33
Iowa	—	1	8	3	5	—	0	3	1	—	—	0	2	1	8
Kansas	—	0	2	2	1	—	0	2	1	—	—	0	2	2	1
Minnesota	—	5	225	4	—	—	0	8	1	1	—	0	4	4	10
Missouri	—	0	1	—	—	—	0	3	2	1	—	0	2	7	10
Nebraska§	—	0	2	—	—	—	0	2	—	1	1	0	1	1	3
North Dakota	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	1	1	—	—	0	0	—	—	—	0	1	—	1
<b>S. Atlantic</b>	2	70	223	295	351	6	5	15	59	41	6	3	9	31	41
Delaware	—	12	37	58	77	—	0	1	1	—	—	0	1	—	—
District of Columbia	—	2	11	—	14	—	0	2	—	—	—	0	0	—	—
Florida	2	2	10	17	5	1	1	7	16	13	3	1	4	16	14
Georgia	—	0	6	12	—	3	1	5	13	9	—	0	2	4	3
Maryland§	—	27	161	168	216	—	1	7	16	15	—	0	3	1	4
North Carolina	—	0	5	7	2	2	0	7	10	2	3	0	3	8	3
South Carolina§	—	0	2	3	2	—	0	1	1	1	—	0	2	1	9
Virginia§	—	15	53	21	31	—	1	3	2	1	—	0	2	1	8
West Virginia	—	1	11	9	4	—	0	0	—	—	—	0	1	—	—
<b>E.S. Central</b>	—	1	5	3	1	—	0	2	5	2	—	0	6	1	15
Alabama§	—	0	2	—	—	—	0	1	1	1	—	0	2	—	—
Kentucky	—	0	2	—	—	—	0	1	—	1	—	0	1	—	4
Mississippi	—	0	1	—	—	—	0	1	—	—	—	0	2	—	3
Tennessee§	—	0	3	3	1	—	0	2	4	—	—	0	3	1	8
<b>W.S. Central</b>	—	2	17	2	4	—	1	11	—	7	—	2	7	13	33
Arkansas§	—	0	0	—	—	—	0	0	—	—	—	0	2	2	3
Louisiana	—	0	1	—	—	—	0	1	—	—	—	0	3	7	12
Oklahoma	—	0	1	—	—	—	0	2	—	1	—	0	3	1	3
Texas§	—	2	17	2	4	—	1	11	—	6	—	1	6	3	15
<b>Mountain</b>	1	0	16	3	4	—	0	3	1	7	—	1	3	12	17
Arizona	—	0	2	—	2	—	0	2	—	2	—	0	2	3	2
Colorado	—	0	1	1	—	—	0	1	—	2	—	0	1	2	4
Idaho§	—	0	1	1	1	—	0	1	—	—	—	0	1	2	2
Montana§	—	0	16	—	—	—	0	0	—	—	—	0	1	1	1
Nevada§	1	0	2	1	—	—	0	0	—	3	—	0	1	2	1
New Mexico§	—	0	2	—	1	—	0	1	—	—	—	0	1	1	3
Utah	—	0	1	—	—	—	0	1	1	—	—	0	1	1	3
Wyoming§	—	0	1	—	—	—	0	0	—	—	—	0	1	—	1
<b>Pacific</b>	3	4	19	35	28	3	3	11	23	19	8	4	19	41	61
Alaska	1	0	2	1	—	—	0	2	—	—	—	0	2	2	—
California	2	3	8	30	27	2	2	8	17	14	5	2	19	19	48
Hawaii	N	0	0	N	N	1	0	1	1	1	—	0	1	1	—
Oregon§	—	1	3	4	1	—	0	1	2	3	2	1	7	13	7
Washington	—	0	12	—	—	—	0	7	3	1	1	0	5	6	6
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	—	—	0	1	—	1
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 March 14, 2009, and March 8, 2008 (10th week)\*

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	80	197	1,062	1,699	1,475	17	94	162	363	682	7	42	145	119	37
<b>New England</b>	—	17	36	91	225	4	7	21	40	44	—	0	2	1	1
Connecticut	—	0	4	—	20	3	3	17	19	25	—	0	0	—	—
Maine†	—	1	7	20	12	—	1	5	6	3	—	0	1	1	—
Massachusetts	—	13	29	57	176	—	0	0	—	—	—	0	1	—	1
New Hampshire	—	1	4	8	6	—	0	3	1	6	—	0	1	—	—
Rhode Island†	—	1	8	2	6	—	0	3	5	6	—	0	2	—	—
Vermont†	—	0	2	4	5	1	1	6	9	4	—	0	0	—	—
<b>Mid. Atlantic</b>	5	17	52	130	175	6	33	67	65	185	—	1	28	1	5
New Jersey	—	1	6	6	14	—	0	0	—	—	—	0	2	—	2
New York (Upstate)	2	6	41	25	48	6	9	20	45	50	—	0	27	—	—
New York City	—	0	3	—	28	—	0	2	—	5	—	0	2	1	2
Pennsylvania	3	9	34	99	85	—	21	52	20	130	—	0	2	—	1
<b>E.N. Central</b>	25	36	174	445	415	—	3	29	6	2	—	1	15	2	1
Illinois	—	11	45	96	29	—	1	21	1	1	—	1	11	1	1
Indiana	—	2	96	21	3	—	0	2	—	—	—	0	3	—	—
Michigan	4	6	21	111	32	—	1	9	5	—	—	0	1	1	—
Ohio	21	10	57	211	338	—	1	7	—	1	—	0	4	—	—
Wisconsin	—	2	7	6	13	N	0	0	N	N	—	0	1	—	—
<b>W.N. Central</b>	14	23	450	340	115	2	5	15	23	20	—	4	32	3	1
Iowa	—	3	21	16	21	—	0	5	—	2	—	0	2	—	—
Kansas	1	2	13	24	11	1	1	9	15	4	—	0	0	—	—
Minnesota	—	2	421	—	—	—	0	10	5	8	—	0	0	—	—
Missouri	9	9	50	252	70	1	1	8	2	—	—	4	31	3	1
Nebraska†	4	3	32	44	11	—	0	0	—	—	—	0	4	—	—
North Dakota	—	0	1	—	—	—	0	7	—	3	—	0	0	—	—
South Dakota	—	0	7	4	2	—	0	2	1	3	—	0	1	—	—
<b>S. Atlantic</b>	19	19	71	245	120	4	26	77	178	381	7	15	69	105	22
Delaware	—	0	3	4	1	—	0	0	—	—	—	0	5	—	—
District of Columbia	—	0	1	—	2	—	0	0	—	—	—	0	2	—	—
Florida	14	6	20	74	24	—	0	8	30	139	—	0	3	1	1
Georgia	—	1	9	4	7	—	2	47	61	64	—	1	8	3	4
Maryland†	—	2	8	8	17	—	7	17	6	75	—	1	7	5	4
North Carolina	5	0	65	117	35	N	0	4	N	N	7	7	55	88	11
South Carolina†	—	2	11	16	14	—	0	0	—	—	—	1	9	3	—
Virginia†	—	3	24	19	18	—	11	24	72	90	—	2	15	4	—
West Virginia	—	0	2	3	2	4	1	9	9	13	—	0	1	1	2
<b>E.S. Central</b>	3	9	33	104	49	—	3	7	12	19	—	3	23	5	3
Alabama†	—	1	4	9	16	—	0	0	—	—	—	1	8	3	2
Kentucky	3	4	15	69	7	—	1	4	12	3	—	0	1	—	—
Mississippi	—	2	5	14	19	—	0	1	—	1	—	0	3	1	—
Tennessee†	—	2	14	12	7	—	2	6	—	15	—	2	19	1	1
<b>W.S. Central</b>	—	32	264	140	82	—	1	11	4	8	—	2	41	1	3
Arkansas†	—	1	20	1	14	—	0	6	2	7	—	0	14	1	—
Louisiana	—	2	7	13	1	—	0	0	—	—	—	0	1	—	2
Oklahoma	—	0	29	6	1	—	0	10	2	—	—	0	26	—	—
Texas†	—	27	220	120	66	—	0	1	—	1	—	1	6	—	1
<b>Mountain</b>	1	15	32	118	192	—	2	9	16	7	—	1	3	1	1
Arizona	1	3	10	15	49	N	0	0	N	N	—	0	2	—	—
Colorado	—	3	13	34	45	—	0	0	—	—	—	0	1	—	—
Idaho†	—	1	5	12	3	—	0	0	—	—	—	0	1	—	—
Montana†	—	0	10	5	26	—	0	3	5	—	—	0	1	—	—
Nevada†	—	0	7	5	2	—	0	4	—	—	—	0	2	—	—
New Mexico†	—	1	10	17	6	—	0	3	5	6	—	0	1	—	1
Utah	—	4	17	30	57	—	0	6	—	—	—	0	1	1	—
Wyoming†	—	0	2	—	4	—	0	4	6	1	—	0	2	—	—
<b>Pacific</b>	13	25	81	86	102	1	4	13	19	16	—	0	1	—	—
Alaska	1	3	21	17	20	—	0	2	4	8	N	0	0	N	N
California	—	8	23	—	30	1	3	12	15	8	—	0	1	—	—
Hawaii	—	0	3	5	3	—	0	0	—	—	N	0	0	N	N
Oregon†	1	3	16	38	24	—	0	2	—	—	—	0	1	—	—
Washington	11	5	77	26	25	—	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	0	—	—	—	1	5	8	7	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 March 14, 2009, and March 8, 2008 (10th week)\*

Reporting area	Salmonellosis					Shiga toxin-producing <i>E. coli</i> (STEC)†					Shigellosis				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	357	946	1,486	4,903	5,292	23	87	250	344	437	107	441	614	2,388	2,443
<b>New England</b>	1	31	92	231	700	—	4	14	17	71	1	3	10	22	63
Connecticut	—	0	66	66	491	—	0	6	6	47	—	0	3	3	40
Maine§	1	2	8	15	22	—	0	3	—	2	—	0	6	—	—
Massachusetts	—	19	52	105	145	—	2	11	7	17	—	2	9	15	17
New Hampshire	—	2	10	22	16	—	1	3	4	3	—	0	1	1	1
Rhode Island§	—	2	9	15	15	—	0	3	—	—	1	0	1	3	4
Vermont§	—	1	7	8	11	—	0	6	—	2	—	0	2	—	1
<b>Mid. Atlantic</b>	28	90	177	507	627	5	6	192	26	37	7	48	96	374	232
New Jersey	—	9	30	19	133	—	0	3	2	8	—	16	38	120	66
New York (Upstate)	15	27	64	152	139	5	3	188	18	12	5	10	35	25	44
New York City	3	22	54	143	162	—	1	5	4	8	—	13	35	89	100
Pennsylvania	10	28	78	193	193	—	0	8	2	9	2	6	24	140	22
<b>E.N. Central</b>	28	97	194	607	592	3	11	75	45	56	22	82	128	559	554
Illinois	—	27	72	92	190	—	1	10	7	9	—	17	35	76	185
Indiana	—	9	53	20	39	—	1	14	5	3	—	8	39	9	163
Michigan	3	18	38	136	114	—	2	43	10	13	1	4	24	49	10
Ohio	25	27	65	248	153	2	3	17	15	11	21	42	80	360	129
Wisconsin	—	15	50	111	96	1	4	20	8	20	—	7	33	65	67
<b>W.N. Central</b>	61	51	150	414	320	3	12	59	46	44	7	16	40	84	137
Iowa	2	9	16	54	60	—	2	21	9	12	—	4	12	25	11
Kansas	8	7	31	48	31	1	1	7	2	2	3	1	5	25	2
Minnesota	13	11	69	94	92	1	2	21	14	8	1	5	25	12	24
Missouri	9	14	48	76	83	1	2	11	14	18	3	3	14	16	53
Nebraska§	29	5	35	110	35	—	2	30	7	2	—	0	3	5	—
North Dakota	—	0	7	—	6	—	0	1	—	—	—	0	3	—	16
South Dakota	—	3	14	32	13	—	1	4	—	2	—	0	9	1	31
<b>S. Atlantic</b>	89	249	456	1,382	1,322	4	14	51	84	75	24	58	100	380	526
Delaware	—	2	9	5	14	—	0	2	2	—	1	0	1	5	—
District of Columbia	—	1	4	—	10	—	0	1	—	2	—	0	3	—	3
Florida	59	97	174	628	692	1	2	11	32	25	8	13	34	100	203
Georgia	7	43	86	232	144	—	1	7	7	2	6	18	48	103	203
Maryland§	—	13	36	73	96	—	2	9	10	11	—	2	8	38	12
North Carolina	22	24	106	259	125	3	2	21	25	9	9	4	27	68	12
South Carolina§	1	18	55	89	115	—	1	4	2	5	—	8	32	28	80
Virginia§	—	20	74	73	91	—	3	27	5	15	—	4	57	33	12
West Virginia	—	3	8	23	35	—	0	3	1	6	—	0	3	5	1
<b>E.S. Central</b>	5	58	138	253	317	—	5	12	13	44	—	35	67	134	335
Alabama§	—	15	46	76	106	—	1	3	2	23	—	6	18	35	87
Kentucky	5	10	18	69	53	—	1	7	3	7	—	3	24	18	39
Mississippi	—	14	57	39	64	—	0	2	1	1	—	3	18	5	103
Tennessee§	—	14	60	69	94	—	2	7	7	13	—	18	47	76	106
<b>W.S. Central</b>	8	137	402	284	333	—	7	27	8	42	5	98	223	426	294
Arkansas§	—	11	40	53	42	—	1	3	3	4	—	11	27	31	29
Louisiana	1	17	50	46	70	—	0	1	—	1	—	11	26	38	55
Oklahoma	7	15	36	49	41	—	1	19	4	2	1	3	43	28	21
Texas§	—	93	341	136	180	—	5	13	1	35	4	65	196	329	189
<b>Mountain</b>	8	60	110	337	386	2	10	39	56	52	18	23	52	202	115
Arizona	6	20	44	145	126	1	1	5	2	11	13	14	33	146	50
Colorado	—	12	43	54	92	—	4	18	36	10	—	2	11	16	18
Idaho§	1	3	15	24	24	1	2	15	5	17	—	0	2	—	1
Montana§	—	2	8	18	8	—	0	3	1	4	—	0	1	—	—
Nevada§	1	3	9	35	31	—	0	2	1	2	5	4	13	22	32
New Mexico§	—	7	32	18	49	—	1	6	6	7	—	2	12	17	9
Utah	—	6	19	40	41	—	1	9	4	1	—	1	3	1	2
Wyoming§	—	1	4	3	15	—	0	1	1	—	—	0	1	—	3
<b>Pacific</b>	129	111	530	888	695	6	9	60	49	16	23	31	82	207	187
Alaska	—	1	4	9	9	—	0	1	—	—	—	0	1	2	—
California	83	80	516	668	551	4	6	39	40	12	14	27	75	162	164
Hawaii	—	5	15	54	41	—	0	2	1	1	—	1	3	5	7
Oregon§	1	7	20	65	50	—	1	8	—	2	—	1	10	15	9
Washington	45	12	155	92	44	2	2	44	8	1	9	2	28	23	7
American Samoa	—	0	1	—	1	—	0	0	—	—	—	0	2	3	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	—	1	—	0	0	—	—	—	0	3	—	2
Puerto Rico	1	8	29	49	102	—	0	1	—	—	—	0	4	—	3
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 March 14, 2009, and March 8, 2008 (10th week)\*

Reporting area	Streptococcal diseases, invasive, group A				<i>Streptococcus pneumoniae</i> , invasive disease, nondrug resistant†					
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max		
<b>United States</b>	89	94	200	1,056	1,297	12	34	58	306	434
<b>New England</b>	13	5	31	67	79	—	1	12	7	26
Connecticut	12	0	26	23	—	—	0	11	—	—
Maine§	—	0	3	2	8	—	0	1	—	1
Massachusetts	—	3	8	24	56	—	1	3	4	21
New Hampshire	1	0	4	9	9	—	0	1	2	4
Rhode Island§	—	0	8	4	1	—	0	2	—	—
Vermont§	—	0	3	5	5	—	0	1	1	—
<b>Mid. Atlantic</b>	22	17	35	204	276	1	3	19	31	60
New Jersey	—	1	11	1	55	—	1	4	4	16
New York (Upstate)	11	6	23	75	80	1	2	19	27	22
New York City	—	4	12	42	59	—	0	5	—	22
Pennsylvania	11	7	15	86	82	N	0	2	N	N
<b>E.N. Central</b>	14	18	42	229	266	3	6	11	58	82
Illinois	—	5	13	54	78	—	1	5	8	23
Indiana	1	2	19	32	31	—	0	5	4	7
Michigan	1	3	9	34	51	2	1	5	16	25
Ohio	10	5	14	82	71	1	1	5	26	14
Wisconsin	2	1	10	27	35	—	0	2	4	13
<b>W.N. Central</b>	3	5	39	63	87	2	2	11	26	27
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	8	16	15	N	0	0	N	N
Minnesota	—	0	35	—	20	—	0	9	9	8
Missouri	1	1	8	30	31	2	1	3	12	14
Nebraska§	1	1	3	10	12	—	0	1	1	2
North Dakota	—	0	3	—	3	—	0	2	—	1
South Dakota	1	0	2	7	6	—	0	2	4	2
<b>S. Atlantic</b>	20	21	36	243	263	3	6	13	68	86
Delaware	1	0	1	6	5	—	0	0	—	—
District of Columbia	—	0	4	—	6	N	0	0	N	N
Florida	6	5	13	68	66	2	1	3	15	13
Georgia	4	5	14	69	59	1	2	6	28	23
Maryland§	—	3	10	31	51	—	1	3	10	21
North Carolina	7	2	9	27	20	N	0	0	N	N
South Carolina§	—	1	5	14	16	—	1	6	12	13
Virginia§	—	2	9	19	28	—	0	4	—	14
West Virginia	2	0	2	9	12	—	0	2	3	2
<b>E.S. Central</b>	—	4	9	45	42	—	2	6	9	22
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	5	12	10	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	3	—	5
Tennessee§	—	3	7	33	32	—	1	5	9	17
<b>W.S. Central</b>	10	9	54	90	83	—	5	31	48	45
Arkansas§	—	0	2	4	1	—	0	3	7	3
Louisiana	—	0	2	3	6	—	0	3	8	1
Oklahoma	10	2	13	49	29	—	1	7	10	19
Texas§	—	6	41	34	47	—	3	22	23	22
<b>Mountain</b>	4	9	20	93	168	1	4	11	49	72
Arizona	4	3	8	29	49	1	2	9	32	36
Colorado	—	2	10	30	51	—	1	4	7	15
Idaho§	—	0	2	1	6	—	0	1	2	1
Montana§	N	0	0	N	N	N	0	0	N	N
Nevada§	—	0	1	2	3	—	0	1	—	1
New Mexico§	—	1	6	19	43	—	0	2	5	9
Utah	—	1	4	11	16	—	0	3	3	10
Wyoming§	—	0	2	1	—	—	0	1	—	—
<b>Pacific</b>	3	3	8	22	33	2	1	5	10	14
Alaska	1	0	4	3	8	1	0	4	7	9
California	N	0	0	N	N	N	0	0	N	N
Hawaii	2	2	8	19	25	1	0	2	3	5
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	12	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N

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

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

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

† Includes cases of invasive pneumococcal disease, in children aged <5 years, caused by *S. pneumoniae*, which is susceptible or for which susceptibility testing is not available (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 March 14, 2009, and March 8, 2008 (10th week)\*

Reporting area	<i>Streptococcus pneumoniae</i> , invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages					Aged <5 years									
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
	Med	Max				Med	Max				Med	Max			
<b>United States</b>	60	56	100	720	830	9	8	22	99	97	116	243	367	2,059	2,433
<b>New England</b>	—	1	48	15	15	—	0	5	—	1	9	5	14	63	52
Connecticut	—	0	48	—	—	—	0	5	—	—	5	1	3	13	3
Maine§	—	0	2	3	3	—	0	1	—	—	—	0	2	1	1
Massachusetts	—	0	0	—	—	—	0	0	—	—	4	4	11	42	43
New Hampshire	—	0	3	5	—	—	0	0	—	—	—	0	2	7	3
Rhode Island§	—	0	4	4	7	—	0	1	—	—	—	0	5	—	2
Vermont§	—	0	2	3	5	—	0	1	—	1	—	0	2	—	—
<b>Mid. Atlantic</b>	6	4	13	27	69	—	0	2	3	5	39	33	51	353	329
New Jersey	—	0	0	—	—	—	0	0	—	—	8	4	10	41	49
New York (Upstate)	2	1	6	12	11	—	0	1	2	—	3	2	8	16	21
New York City	—	1	6	—	29	—	0	0	—	—	22	23	37	247	193
Pennsylvania	4	1	9	15	29	—	0	2	1	5	6	5	11	49	66
<b>E.N. Central</b>	9	9	40	118	167	2	1	6	15	16	3	16	33	168	386
Illinois	N	0	0	N	N	N	0	0	N	N	—	2	11	29	257
Indiana	—	2	31	13	53	—	0	5	—	4	2	3	10	30	22
Michigan	—	0	3	5	6	—	0	1	—	1	1	3	18	40	29
Ohio	9	7	18	100	108	2	1	4	15	11	—	6	19	59	64
Wisconsin	—	0	0	—	—	—	0	0	—	—	—	1	4	10	14
<b>W.N. Central</b>	1	2	7	21	68	—	0	2	6	3	—	7	14	50	92
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	3	2
Kansas	—	1	4	6	31	—	0	1	4	1	—	0	3	2	6
Minnesota	—	0	0	—	—	—	0	0	—	—	—	2	6	12	25
Missouri	1	1	4	15	36	—	0	1	2	1	—	4	10	31	58
Nebraska§	—	0	0	—	—	—	0	0	—	—	—	0	2	2	1
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	1	—	1	—	0	1	—	1	—	0	1	—	—
<b>S. Atlantic</b>	40	22	51	410	358	6	4	14	60	50	31	58	194	481	381
Delaware	—	0	1	4	—	—	0	0	—	—	1	0	4	7	1
District of Columbia	N	0	0	N	N	N	0	0	N	N	—	2	9	26	25
Florida	29	14	36	262	189	6	3	13	43	25	9	20	37	189	154
Georgia	8	7	23	118	140	—	1	5	17	20	—	13	169	44	31
Maryland§	—	0	2	2	2	—	0	0	—	1	3	8	16	58	56
North Carolina	N	0	0	N	N	N	0	0	N	N	8	6	19	94	55
South Carolina§	—	0	0	—	—	—	0	0	—	—	—	2	6	10	18
Virginia§	N	0	0	N	N	N	0	0	N	N	10	5	16	52	41
West Virginia	3	1	7	24	27	—	0	2	—	4	—	0	1	1	—
<b>E.S. Central</b>	2	5	22	75	96	—	1	4	7	11	13	22	37	213	205
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	17	64	100
Kentucky	2	1	6	22	19	—	0	2	3	3	—	1	10	12	12
Mississippi	—	0	2	—	—	—	0	1	—	—	6	3	18	38	20
Tennessee§	—	3	20	53	77	—	0	3	4	8	7	8	19	99	73
<b>W.S. Central</b>	1	2	7	23	31	—	0	1	4	6	13	43	75	360	389
Arkansas§	—	0	4	11	5	—	0	1	1	2	12	3	35	53	15
Louisiana	1	1	6	12	26	—	0	1	3	4	1	10	33	36	86
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	7	10	20
Texas§	—	0	0	—	—	—	0	0	—	—	—	28	41	261	268
<b>Mountain</b>	1	2	11	29	25	1	0	4	4	4	1	8	17	34	112
Arizona	—	0	0	—	—	—	0	0	—	—	—	3	13	2	58
Colorado	—	0	0	—	—	—	0	0	—	—	1	1	5	3	22
Idaho§	N	0	1	N	N	N	0	1	N	N	—	0	2	1	1
Montana§	—	0	1	—	—	—	0	0	—	—	—	0	7	—	—
Nevada§	1	1	3	13	10	1	0	1	2	1	—	1	7	19	19
New Mexico§	—	0	1	—	—	—	0	0	—	—	—	1	4	9	4
Utah	—	1	10	12	15	—	0	4	2	3	—	0	2	—	8
Wyoming§	—	0	2	4	—	—	0	0	—	—	—	0	1	—	—
<b>Pacific</b>	—	0	1	2	1	—	0	1	—	1	7	45	72	337	487
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
California	N	0	0	N	N	N	0	0	N	N	6	41	66	303	436
Hawaii	—	0	1	2	1	—	0	1	—	1	—	0	3	10	7
Oregon§	N	0	0	N	N	N	0	0	N	N	—	0	3	7	4
Washington	N	0	0	N	N	N	0	0	N	N	1	3	9	17	40
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	—	—	9	3	11	38	21
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 March 14, 2009, and March 8, 2008 (10th week)\*

Reporting area	West Nile virus disease†														
	Varicella (chickenpox)					Neuroinvasive					Nonneuroinvasive§				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
	Med	Max				Med	Max				Med	Max			
<b>United States</b>	225	430	1,010	3,614	6,196	—	1	74	—	2	—	2	77	—	2
<b>New England</b>	2	10	22	67	132	—	0	2	—	—	0	1	—	—	
Connecticut	—	0	0	—	—	—	0	2	—	—	0	1	—	—	
Maine¶	—	0	0	—	—	—	0	0	—	—	0	0	—	—	
Massachusetts	—	0	1	—	—	—	0	1	—	—	0	0	—	—	
New Hampshire	1	4	10	44	76	—	0	0	—	—	0	0	—	—	
Rhode Island¶	—	0	0	—	—	—	0	1	—	—	0	0	—	—	
Vermont¶	1	4	17	23	56	—	0	0	—	—	0	0	—	—	
<b>Mid. Atlantic</b>	26	41	81	362	569	—	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	26	41	81	362	569	—	0	2	—	—	0	1	—	—	
<b>E.N. Central</b>	88	149	312	1,641	1,447	—	0	8	—	—	0	3	—	—	
Illinois	17	39	71	444	64	—	0	4	—	—	0	2	—	—	
Indiana	—	0	5	21	—	—	0	1	—	—	0	1	—	—	
Michigan	25	57	116	509	691	—	0	4	—	—	0	2	—	—	
Ohio	43	46	106	597	666	—	0	3	—	—	0	1	—	—	
Wisconsin	3	6	50	70	26	—	0	2	—	—	0	1	—	—	
<b>W.N. Central</b>	45	18	71	305	353	—	0	6	—	1	—	0	21	—	
Iowa	N	0	0	N	N	—	0	2	—	—	0	1	—	—	
Kansas	12	5	26	70	185	—	0	2	—	1	—	0	3	—	
Minnesota	—	0	0	—	—	—	0	2	—	—	0	4	—	—	
Missouri	33	11	51	235	152	—	0	3	—	—	0	1	—	—	
Nebraska¶	N	0	0	N	N	—	0	1	—	—	0	8	—	—	
North Dakota	—	0	39	—	4	—	0	2	—	—	0	11	—	—	
South Dakota	—	0	2	—	12	—	0	5	—	—	0	6	—	—	
<b>S. Atlantic</b>	55	73	163	444	1,243	—	0	3	—	—	0	4	—	—	
Delaware	—	1	5	1	5	—	0	0	—	—	0	1	—	—	
District of Columbia	—	0	3	—	5	—	0	0	—	—	0	0	—	—	
Florida	44	29	68	327	442	—	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	0	—	—	0	0	—	—	
South Carolina¶	—	11	67	20	167	—	0	0	—	—	0	1	—	—	
Virginia¶	—	18	60	1	441	—	0	0	—	—	0	1	—	—	
West Virginia	11	11	33	95	183	—	0	1	—	—	0	0	—	—	
<b>E.S. Central</b>	—	14	101	16	244	—	0	7	—	—	0	9	—	2	
Alabama¶	—	14	101	16	241	—	0	3	—	—	0	2	—	—	
Kentucky	N	0	0	N	N	—	0	1	—	—	0	0	—	—	
Mississippi	—	0	2	—	3	—	0	4	—	—	0	8	—	1	
Tennessee¶	N	0	0	N	N	—	0	2	—	—	0	3	—	1	
<b>W.S. Central</b>	1	92	435	452	1,673	—	0	8	—	—	0	7	—	—	
Arkansas¶	—	6	61	19	170	—	0	1	—	—	0	1	—	—	
Louisiana	1	1	5	12	29	—	0	3	—	—	0	5	—	—	
Oklahoma	N	0	0	N	N	—	0	1	—	—	0	1	—	—	
Texas¶	—	84	422	421	1,474	—	0	6	—	—	0	4	—	—	
<b>Mountain</b>	8	34	89	293	515	—	0	12	—	1	—	0	22	—	
Arizona	—	0	0	—	—	—	0	10	—	1	—	0	8	—	
Colorado	—	12	44	90	243	—	0	4	—	—	0	10	—	—	
Idaho¶	N	0	0	N	N	—	0	1	—	—	0	6	—	—	
Montana¶	—	5	27	64	51	—	0	0	—	—	0	2	—	—	
Nevada¶	N	0	0	N	N	—	0	2	—	—	0	3	—	—	
New Mexico¶	1	3	17	31	63	—	0	1	—	—	0	1	—	—	
Utah	7	11	55	108	154	—	0	2	—	—	0	5	—	—	
Wyoming¶	—	0	4	—	4	—	0	0	—	—	0	2	—	—	
<b>Pacific</b>	—	3	8	34	20	—	0	38	—	—	0	23	—	—	
Alaska	—	2	6	22	5	—	0	0	—	—	0	0	—	—	
California	—	0	0	—	—	—	0	37	—	—	0	20	—	—	
Hawaii	—	1	5	12	15	—	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	—	2	17	—	11	—	0	0	—	—	0	0	—	—	
Puerto Rico	11	6	20	61	111	—	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 I.

§ 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 March 14, 2009 (10th week)

Reporting area	All causes, by age (years)							Reporting area	All causes, by age (years)						
	All Ages	≥65	45–64	25–44	1–24	<1	P&† Total		All Ages	≥65	45–64	25–44	1–24	<1	P&† Total
<b>New England</b>	507	358	91	33	9	16	68	<b>S. Atlantic</b>	1,335	836	332	85	35	47	92
Boston, MA	149	102	26	14	2	5	20	Atlanta, GA	119	70	33	10	1	5	2
Bridgeport, CT	36	24	9	2	1	—	5	Baltimore, MD	163	96	49	8	5	5	19
Cambridge, MA	16	13	3	—	—	—	1	Charlotte, NC	121	81	26	3	2	9	10
Fall River, MA	13	10	3	—	—	—	—	Jacksonville, FL	155	105	38	9	3	—	10
Hartford, CT	55	38	8	6	2	1	16	Miami, FL	143	91	37	9	5	1	8
Lowell, MA	28	23	2	2	1	—	3	Norfolk, VA	51	36	12	—	2	1	3
Lynn, MA	6	4	2	—	—	—	—	Richmond, VA	85	50	25	7	1	2	4
New Bedford, MA	23	19	3	1	—	—	3	Savannah, GA	83	54	13	6	1	9	9
New Haven, CT	U	U	U	U	U	U	U	St. Petersburg, FL	64	43	9	6	3	3	5
Providence, RI	67	43	18	2	3	1	2	Tampa, FL	247	156	57	15	7	12	14
Somerville, MA	2	2	—	—	—	—	—	Washington, D.C.	84	41	27	11	5	—	4
Springfield, MA	32	21	3	3	—	5	4	Wilmington, DE	20	13	6	1	—	—	4
Waterbury, CT	25	18	5	2	—	—	3	<b>E.S. Central</b>	836	570	190	45	16	15	73
Worcester, MA	55	41	9	1	—	4	11	Birmingham, AL	139	98	28	8	2	3	14
<b>Mid. Atlantic</b>	2,038	1,449	408	119	27	35	97	Chattanooga, TN	79	52	19	5	1	2	3
Albany, NY	54	37	12	3	1	1	3	Chattanooga, TN	103	77	20	5	1	—	9
Allentown, PA	23	22	1	—	—	—	2	Lexington, KY	41	22	12	3	1	3	1
Buffalo, NY	61	44	10	4	1	2	6	Memphis, TN	184	130	39	5	7	3	27
Camden, NJ	28	17	5	3	—	3	1	Mobile, AL	75	49	19	6	1	—	5
Elizabeth, NJ	13	10	2	1	—	—	—	Montgomery, AL	43	28	11	3	—	1	5
Erie, PA	54	47	4	2	1	—	4	Nashville, TN	172	114	42	10	3	3	9
Jersey City, NJ	23	17	2	3	1	—	3	<b>W.S. Central</b>	1,550	979	377	125	31	38	93
New York City, NY	1,151	814	242	69	11	15	46	Austin, TX	104	68	26	5	2	3	5
Newark, NJ	35	18	10	4	1	2	2	Baton Rouge, LA	77	48	15	12	2	—	—
Paterson, NJ	8	6	1	1	—	—	1	Corpus Christi, TX	69	36	23	7	—	3	8
Philadelphia, PA	171	107	44	11	3	6	1	Dallas, TX	191	116	38	21	8	8	11
Pittsburgh, PA <sup>§</sup>	40	30	4	3	2	1	2	El Paso, TX	111	79	23	7	1	1	5
Reading, PA	36	28	4	4	—	—	4	Fort Worth, TX	U	U	U	U	U	U	U
Rochester, NY	123	90	25	4	3	1	8	Houston, TX	429	270	100	35	9	15	22
Schenectady, NY	24	17	6	1	—	—	1	Little Rock, AR	89	54	23	7	3	2	2
Scranton, PA	34	24	7	1	2	—	—	New Orleans, LA	U	U	U	U	U	U	U
Syracuse, NY	93	74	17	—	1	1	7	San Antonio, TX	263	175	64	15	5	4	20
Trenton, NJ	33	19	7	4	—	3	—	Shreveport, LA	61	34	22	5	—	—	10
Utica, NY	14	11	2	1	—	—	3	Tulsa, OK	156	99	43	11	1	2	10
Yonkers, NY	20	17	3	—	—	—	3	<b>Mountain</b>	1,167	809	241	61	31	25	76
<b>E.N. Central</b>	2,169	1,426	537	109	48	47	146	Albuquerque, NM	U	U	U	U	U	U	U
Akron, OH	43	28	13	—	—	2	1	Boise, ID	77	54	16	3	1	3	5
Canton, OH	31	27	3	—	—	1	3	Colorado Springs, CO	61	48	6	5	1	1	2
Chicago, IL	359	213	100	28	9	7	27	Denver, CO	96	66	18	6	3	3	8
Cincinnati, OH	86	53	17	4	8	4	8	Las Vegas, NV	298	206	63	15	10	4	17
Cleveland, OH	254	165	68	8	6	7	16	Ogden, UT	25	16	7	1	—	1	—
Columbus, OH	263	179	58	15	4	7	26	Phoenix, AZ	235	154	55	15	8	3	15
Dayton, OH	137	92	35	6	3	1	7	Pueblo, CO	41	28	11	2	—	—	1
Detroit, MI	185	101	55	17	6	6	13	Salt Lake City, UT	129	76	33	7	5	8	10
Evansville, IN	53	42	11	—	—	—	5	Tucson, AZ	205	161	32	7	3	2	18
Fort Wayne, IN	78	59	17	—	2	—	7	<b>Pacific</b>	1,779	1,256	354	109	38	22	159
Gary, IN	10	4	6	—	—	—	—	Berkeley, CA	13	9	3	1	—	—	1
Grand Rapids, MI	53	36	12	4	1	—	4	Fresno, CA	136	90	30	11	3	2	17
Indianapolis, IN	201	120	61	12	4	4	14	Glendale, CA	26	24	2	—	—	—	6
Lansing, MI	29	20	9	—	—	—	1	Honolulu, HI	74	63	7	3	1	—	6
Milwaukee, WI	113	66	34	7	2	4	6	Long Beach, CA	67	47	10	6	4	—	11
Peoria, IL	45	35	5	2	—	3	3	Los Angeles, CA	276	172	73	18	10	3	29
Rockford, IL	40	29	10	1	—	—	—	Pasadena, CA	16	11	4	1	—	—	—
South Bend, IN	39	31	7	1	—	—	1	Portland, OR	138	99	27	10	1	1	11
Toledo, OH	99	81	11	3	3	1	4	Sacramento, CA	204	143	48	9	2	2	22
Youngstown, OH	51	45	5	1	—	—	—	San Diego, CA	176	134	29	8	3	2	16
<b>W.N. Central</b>	605	404	140	31	19	11	37	San Francisco, CA	138	90	33	11	1	3	11
Des Moines, IA	59	46	9	3	—	1	—	San Jose, CA	178	129	30	9	6	4	9
Duluth, MN	35	20	13	1	—	1	—	Santa Cruz, CA	29	23	5	1	—	—	3
Kansas City, KS	19	9	8	2	—	—	1	Seattle, WA	111	75	23	7	4	2	8
Kansas City, MO	95	62	26	5	2	—	7	Spokane, WA	75	62	8	3	—	2	5
Lincoln, NE	47	40	6	—	—	1	5	Tacoma, WA	122	85	22	11	3	1	4
Minneapolis, MN	85	46	22	6	7	4	11	<b>Total¶</b>	<b>11,986</b>	<b>8,087</b>	<b>2,670</b>	<b>717</b>	<b>254</b>	<b>256</b>	<b>841</b>
Omaha, NE	79	53	15	6	5	—	6								
St. Louis, MO	75	45	21	6	2	1	3								
St. Paul, MN	48	41	5	—	—	2	3								
Wichita, KS	63	42	15	2	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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