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Discordant Results from Reverse Sequence Syphilis Screening — Five Laboratories, United States, 2006–2010

CDC recommends syphilis serologic screening with a nontreponemal test, such as the rapid plasma reagin (RPR) or Venereal Disease Research Laboratory (VDRL) test, to identify persons with possible untreated infection; this screening is followed by confirmation using one of several treponemal tests. Recently, the availability of automatable treponemal enzyme and chemiluminescence immunoassays (EIA/CIA) has led some laboratories to adopt a reverse sequence of screening in which a treponemal EIA/CIA is performed first, followed by testing of reactive sera with a nontreponemal test. To better understand the performance of reverse sequence screening for syphilis, CDC analyzed data from five laboratories that used reverse sequence screening during 2006–2010. This report describes the results of that analysis, which indicated that among sera reactive on initial screening with a treponemal EIA/CIA, 56.7% had a nonreactive RPR test. Among these discordant sera, 31.6% also were nonreactive by treponemal testing using *Treponema pallidum* particle agglutination (TP-PA) or fluorescent treponemal antibody absorbed (FTA-ABS) tests. Among discordant sera, the rate of nonreactive confirmatory treponemal tests was 2.9 times higher in a population with low prevalence of syphilis, suggesting that the low-prevalence population had a higher percentage of false-positive test results. Although CDC continues to recommend the traditional algorithm with reactive nontreponemal tests confirmed by treponemal testing, in this report CDC offers additional recommendations if reverse sequence syphilis screening is used.

Treponema pallidum, the bacterium that causes syphilis, cannot be cultured. As a result, serologic testing is the method most often used to diagnose syphilis in patients with suspected disease. Because syphilis can be asymptomatic, serologic screening is recommended for 1) persons at high risk, to detect latent infections; 2) pregnant women, to prevent congenital syphilis; and 3) blood donors, to prevent transmission through transfusion. Serodiagnosis of syphilis involves the detection of two distinct types of antibodies: 1) nontreponemal antibodies directed against lipoidal antigens released from damaged host cells and possibly from the treponemes themselves and 2) treponemal antibodies directed against *T. pallidum* proteins. Nontreponemal antibody tests can be nonreactive early in the course of infection and in late stages of disease, and often become nonreactive (serorevert) after treatment of early infection (*1*). Treponemal antibodies appear earlier than nontreponemal antibodies and usually remain detectable for life, even after successful treatment.

To reduce the time and labor required for syphilis screening, some laboratories have adopted reverse sequence screening in which sera are tested first by a treponemal EIA/CIA that permits automation for high throughput testing, followed by nontreponemal testing of reactive specimens. This reverse sequence can result in identification of discordant sera that are reactive with a treponemal test but nonreactive with a nontreponemal test. This result does not occur with the traditional algorithm because only nontreponemal-reactive sera are tested with a treponemal test. Discordant testing results could be caused by 1) previous syphilis infection, treated or untreated, with persistence of treponemal antibodies but seroreversion of nontreponemal antibodies, 2) a false-positive treponemal test result, or 3) early primary syphilis in a person who has yet to develop nontreponemal antibodies.

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In 2008, a CDC report found that among 6,548 sera that were reactive with a screening EIA, 3,664 (56.0%) were nonreactive by reflex nontreponemal testing (*2*). Among the 3,664 discordant sera, 2,512 were tested with a TP-PA or FTA-ABS, of which 433 (17.2%) were nonreactive, suggesting false-positive EIA treponemal test results. In that analysis, results from four different laboratories using two different commercial EIAs and different testing protocols were combined without subanalyses. The report recommended a confirmatory treponemal test for discordant sera (using a test other than EIA or CIA) to identify persons who might require treatment (*2*).

Since the 2008 CDC report, confusion has persisted among clinicians, laboratorians, and public health practitioners regarding testing and treatment decisions and partner notification when using the reverse sequence for syphilis screening (*3*). Management decisions for patients with discordant sera and nonreactive confirmatory treponemal tests are especially difficult. To evaluate reverse sequence screening in populations with high and low syphilis prevalence and to evaluate the use of TP-PA and FTA-ABS tests for identifying false-positive EIA/CIA screening tests, CDC analyzed syphilis screening data from five clinical laboratories. Three sites served patient populations with low prevalence of syphilis (large managed-care organizations), and two sites served patient populations with high prevalence (including men who have sex with men and patients with human immunodeficiency virus infection).

A total of 140,176 sera screened with a treponemal EIA/CIA were included in the analyses (*4–7;* SM Novak-Weekley, Southern California Permanente Group Regional Reference Laboratories, personal communication, 2010). Data from sera with equivocal test results were not included as reactive tests. For each site and overall, the following percentages were calculated: 1) reactive EIA/CIAs among all sera, 2) discordant sera among those with reactive EIA/CIAs (i.e., those with negative nontreponemal test results), and 3) nonreactive confirmatory TP-PA or FTA-ABS tests among discordant sera. The same calculations were performed for the populations with low prevalence and high prevalence of syphilis.

Among the 140,176 specimens screened with an EIA/CIA, 4,834 (3.4%) had a reactive test result (Table). Among these 4,834 EIA/CIA-reactive sera, 2,743 (56.7%) were RPR-nonreactive, of which 866 (31.6%) were nonreactive by TP-PA or FTA-ABS testing, suggesting that the initial EIA/CIA result was a false-positive. The percentage of reactive EIA/CIAs was 6.3 times higher (14.5%) in the population with high prevalence of syphilis than the population with low prevalence (2.3%). The percentage with discordant results was higher in the low-prevalence population than in the high-prevalence population (60.6% versus 50.6%), but among the discordant sera, the percentage with nonreactive TP-PA or FTA-ABS tests was 2.9 times greater in the low-prevalence population than the high-prevalence population (40.8% versus 14.1%).

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TABLE. Results of reverse sequence syphilis screening (treponemal test screening followed by nontreponemal test confirmation) — five laboratories, United States, 2006–2010

Population type/Laboratory	Treponemal test used	Conjugate type (anti-antibody or antigen)	Total no. of specimens	Reactive EIA/CIA treponemal test		Nonreactive reflex nontreponemal RPR test		Nonreactive TP-PA or FTA-ABS confirmatory treponemal test	
				No. of specimens	(% of total)	No. of specimens	(% of reactive treponemal tests)	No. of specimens	(% of nonreactive reflex RPR tests)
Overall			**140,176**	**4,834**	**(3.4)**	**2,743**	**(56.7)**	**866**	**(31.6)**
Low-prevalence population*			**127,402**	**2,984**	**(2.3)**	**1,807**	**(60.6)**	**737**	**(40.8)**
Southern California†	Trep-Chek	Anti-antibody	47,952	1,278	(2.7)	765	(59.9)	459§	(60.0)
Northern California¶	Liaison	Antigen	21,623	438	(2.0)	287	(65.5)	88§	(30.7)
Southern California**	Trep-Sure	Antigen	57,827	1,268	(2.2)	755	(59.5)	190§	(25.2)
High-prevalence population††			**12,774**	**1,850**	**(14.5)**	**936**	**(50.6)**	**129**	**(14.1)**
New York City§§	Trep-Chek	Anti-antibody	7,607	1,165	(15.3)	639	(54.8)	78¶¶	(12.2)
Chicago***	Trep-Sure	Antigen	5,167	685	(13.3)	297	(43.4)	51¶¶	(18.6)†††

Abbreviations: EIA/CIA = enzyme immunoassay/chemiluminescence immunoassay; RPR = rapid plasma reagin; TP-PA = *Treponema pallidum* particle agglutination; FTA-ABS = fluorescent treponemal antibody absorbed.

* Persons enrolled in large managed-care organizations, including pregnant women.

† Borenstein LA, Spotkov JM, Cox DL, Novak-Weekley SM. High throughput laboratory experience using the Trep-Chek EIA as a screening test for syphilis [C-097]. Presented at the American Society for Microbiology 106th General Meeting. Orlando, FL; May 21–25, 2006.

§ TP-PA test was used as the confirmatory treponemal test.

¶ Park IU, Schapiro JM, Chow JM, Stanley M, Shieh J, Bolan G. Treponemal immunoassays for syphilis testing: how should we manage patients with discrepant serology [P2.110]? Presented at the International Society for STD Research. London, England; June 30, 2009.

** SM Novak-Weekley, Southern California Permanente Group Regional Reference Laboratories, personal communication, 2010.

†† Including men who have sex with men and persons with human immunodeficiency virus infection.

§§ Philips-Rodriguez D, Perlman D, Schillinger J. Past and current syphilis diagnoses among *Treponema pallidum* EIA+/RPR- patients with a high rate of HIV infection; findings from medical record review, New York City, 2008–2009 [LBe]. Presented at the 2010 National STD Prevention Conference. Atlanta, GA; March 10, 2010.

¶¶ FTA-ABS test was used as the confirmatory treponemal test.

*** Pohl D, Hotton A, Gratzer B, et al. Discordant syphilis EIA test results: are newer tests better [D4a]? Presented at the 2010 National STD Prevention Conference. Atlanta, GA; March 11, 2010.

††† Out of 274 specimens with nonreactive reflex RPR tests.

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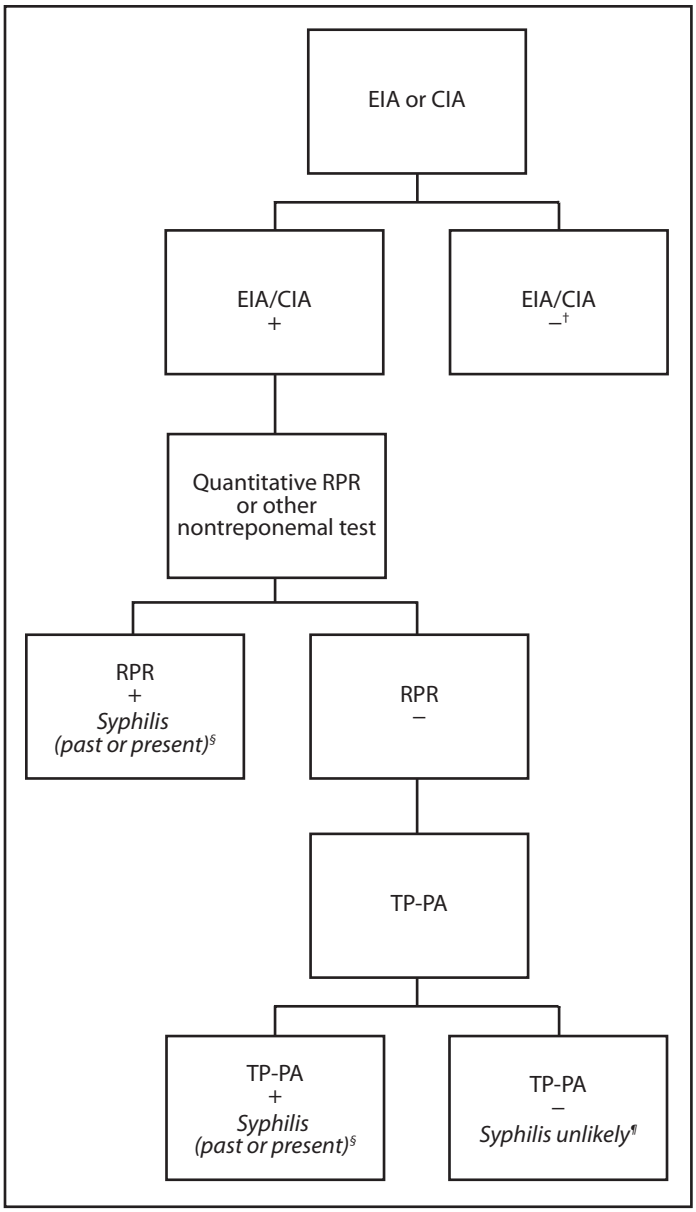
Editorial Note

For this report, data from five studies of reverse sequence syphilis screening were analyzed to determine whether CDC should provide additional recommendations for serologic testing and patient management when reverse screening is used. The finding that 56.7% of specimens with a reactive EIA/CIA screening test had a nonreactive nontreponemal (RPR) test corroborated the high percentage of discordance described in the 2008 CDC report (*2*). In addition, an even higher overall percentage of nonreactive confirmatory treponemal tests (31.6%) was found in this analysis, compared with the earlier report (17.2%). That the percentage of patients with nonreactive screening treponemal tests in the low-prevalence population was 2.9 times that of the high-prevalence population suggests that these EIA/CIAs were false-positive results.

CDC continues to recommend that nontreponemal tests be used to screen for syphilis and that treponemal testing be used to confirm syphilis as the cause of nontreponemal reactivity. The traditional algorithm performs well in identifying persons with active infection who require further evaluation and treatment, while minimizing false-positive results in low prevalence populations (*8*).

However, if reverse sequence screening is used, CDC recommends that a specimen with reactive EIA/CIA results be tested reflexively with a quantitative nontreponemal test (e.g., RPR or VDRL) (Figure). If test results are discordant, the specimen should be tested reflexively using the TP-PA test as a confirmatory treponemal test. Results from all serologic testing should be reported promptly and concurrently to the clinician and public health department. Patients with discordant serologic results by EIA/CIA and RPR/VDRL testing whose sera are reactive by TP-PA testing are considered to have past or present syphilis; if sera is TP-PA nonreactive, syphilis is unlikely (Figure).

FIGURE. CDC-recommended algorithm for reverse sequence syphilis screening (treponemal test screening followed by nontreponemal test confirmation)*



Abbreviations: EIA/CIA = enzyme immunoassay/chemiluminescence immunoassay; RPR = rapid plasma reagin; TP-PA = *Treponema pallidum* particle agglutination.

* Despite these recommendations for reverse sequence screening, CDC continues to recommend the traditional algorithm with reactive nontreponemal tests confirmed by treponemal testing.

† If incubating or primary syphilis is suspected, treat with benzathine penicillin G 2.4 million units intramuscularly in a single dose.

§ Evaluate clinically, determine whether treated for syphilis in the past, assess risk for infection, and administer therapy according to CDC's *2010 STD Treatment Guidelines* (available at http://www.cdc.gov/std/treatment/2010).

¶ If at risk for syphilis, repeat RPR in several weeks.

What is already known on this topic?

Reverse sequence syphilis screening identifies a large proportion of patients with reactive treponemal enzyme or chemiluminescence immunoassays (EIA/CIA) and nonreactive nontreponemal (e.g., rapid plasma reagin [RPR] or Venereal Disease Research Laboratory [VDRL]) test results, causing uncertainty about patient management.

What is added by this report?

Data from five laboratories that tested 140,176 serum specimens with reverse sequence syphilis screening indicated that, among patients with reactive EIA/CIA results, 56.7% had nonreactive nontreponemal test results and among these discordant sera, 12.2%–60.0% were nonreactive with a second treponemal test, suggesting they were false-positive results.

What are the implications for public health practice?

CDC continues to recommend traditional screening using a nontreponemal test followed by testing of reactive sera with a treponemal test. When reverse sequence screening is used, CDC recommends reflexively testing all sera that produce reactive EIA/CIA results with a quantitative nontreponemal test and reflexively testing sera with discordant results (i.e., reactive EIA/CIA and nonreactive RPR/VDRL test) with a confirmatory *Treponema pallidum* particle agglutination assay (TP-PA); all test results should be reported promptly and concurrently to the clinician and public health department.

Traditionally, the FTA-ABS test has been considered the gold standard treponemal test and still is used by some laboratories. However, the FTA-ABS test has lower specificity than other treponemal tests and probably lower sensitivity (*9*). In addition to inherent subjectivity, the FTA-ABS test also requires trained personnel and a dedicated fluorescence microscope. For these reasons, CDC recommends that the FTA-ABS test not be used to confirm discordant treponemal screening results. Based on published sensitivity and specificity data, the TP-PA test currently is considered to be the most suitable confirmatory treponemal test (*10*).

When making management decisions, clinicians always should consider data other than the results of serodiagnostic tests. An assessment is needed of the patient's sexual risk factors and medical history, especially history of previous treatment for syphilis. A physical examination also should be performed to assess for evidence of syphilis, especially primary disease (e.g., ulcerative genital or anal lesions). If the traditional algorithm is used and the initial nontreponemal test is nonreactive, patients with suspected primary syphilis should be treated and then retested with a nontreponemal test in several weeks. Previously untreated patients with discordant sera and a reactive TP-PA should be treated according to CDC's *2010 STD Treatment Guidelines.**

* Available at http://www.cdc.gov/std/treatment/2010.

The findings in this report are subject to at least one limitation. The specimens were tested in five different laboratories and were not assessed using the same screening immunoassay or the same confirmatory treponemal test. CDC plans to conduct studies to compare head-to-head the performances of EIAs, CIAs, the TP-PA test, the FTA-ABS test, and a new treponemal test that utilizes an alternative format (i.e., microbead immunoassay), using specimens from well-defined patient populations whose clinical histories and syphilis risk are known.

Additional studies are expected to provide a better understanding of serologic syphilis testing practices. Studies are planned by CDC to characterize discordant sera with nonreactive confirmatory treponemal tests by immunoblotting to define their reactivities with *T. pallidum* antigens and identify the causes of unconfirmed reactive treponemal tests. Comparative studies are of particular importance in populations with a low prevalence of syphilis, including pregnant women who are screened as part of routine prenatal care, to guide clinical management of women and infants born to mothers with discordant sera. Additionally, based on the finding that immunoglobulin M (IgM) antibodies are produced within 2 weeks of infection (*3*), the utility of IgM treponemal testing for diagnosis of primary syphilis and evaluation of infection in asymptomatic, seropositive, untreated persons should be investigated.

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Decrease in Smoking Prevalence — Minnesota, 1999–2010

Following the landmark 1998 settlement of the lawsuit, *State of Minnesota versus Philip Morris, Inc., et al.*, Minnesota implemented a series of tobacco control efforts to limit the harm caused by tobacco use. In 2001, quitline services for tobacco users without health insurance coverage for cessation services were introduced and statewide mass media campaigns publicizing them were initiated. In 2005, Minnesota imposed a $0.75 per pack tax on cigarettes, followed in 2009 by a $0.62 per pack increase in federal excise tax, contributing in large part to a more than $2 increase in the average price of cigarettes (*1*). In 2007, a comprehensive, statewide smoke-free law was passed. Using surveillance data from the Minnesota Adult Tobacco Survey (MATS) and cigarette pack sales data, this report examines the effects of these tobacco-related public health efforts. Compared with a 15% decline in national adult smoking prevalence since 1999, adult smoking prevalence in Minnesota decreased 27.1%, from 22.1% in 1999 to 16.1% in 2010. During the same period, per capita cigarette sales in Minnesota decreased 40%. In addition, in 2010 compared with 1999, a higher percentage of adults reported that smoking was restricted in their homes (87.2% versus 64.5%), and adults were less likely to report exposure to secondhand smoke (45.6% versus 67.2%). In the past decade, Minnesota has benefited from sustained tobacco control. Future progress in decreasing adult smoking and reducing exposure to secondhand smoke will depend on a concerted effort across the public health community to keep tobacco control a priority.

MATS is a telephone survey designed to collect data about tobacco use and attitudes from a representative sample of the entire civilian, noninstitutionalized adult population in Minnesota.* MATS was implemented in 1999 to measure the effects of tobacco-related policies and programs by monitoring trends in the use of tobacco products in the state. The fourth survey in this ongoing surveillance initiative was completed in 2010. Prior surveys were conducted in 1999, 2003, and 2007.

MATS uses rigorous survey methods, including computer-assisted telephone interviewing, consistent core questions, random-digit–dialing (RDD) sampling, and survey weighting based on available characteristics of the adult Minnesota population. MATS 2010 used a list-assisted RDD sampling method based on two statewide sample frames: all possible landline telephone numbers and all possible cellular telephone numbers. The sample design called for an adult to be selected at random from each household identified through the RDD screening process.

Several communications methods were used before and during data collection for the MATS 2010 sample. These included letters, an informational website, and contact numbers that potential respondents could call for information. These tools were designed to improve response rates and provide information about the survey. Consistent with other large-scale, telephone-based surveys, MATS telephone interviewers made a second attempt to secure cooperation by recontacting persons who initially declined to participate in the survey.

For the 2010 survey, 5,555 landline and 1,502 cellular telephone interviews were completed, for a total sample of 7,057 interviews. Based on American Association for Public Opinion Research methodology, the weighted landline and cellular telephone response rates were 45.0% and 44.5%, respectively, which reflect net response rates across both the prescreening eligibility questionnaire and MATS questionnaire. The Minnesota Department of Health Institutional Review Board reviewed and approved the MATS questionnaire, data collection, and data security procedures.

For the surveys, an adult current smoker was defined as a person aged ≥18 years who had smoked ≥100 cigarettes and currently smoked every day or some days. Those smokers were asked to estimate how many cigarettes they smoked. Heavy smoking was defined as ≥25 cigarettes per day, moderate smoking as 16–24 cigarettes per day, and light smoking as ≤15 cigarettes per day. To assess exposure to secondhand smoke, participants were asked several questions to determine whether, in the past 7 days, anyone had smoked near them in their workplace, car, home, or another location. In addition, MATS participants were asked to choose the statement that best described rules they follow about smoking inside their home. Smoking was either allowed anywhere, allowed in some places, or not allowed. Cigarette sales data were obtained from an annual compendium on tobacco revenue and statistics (*1*). Per capita consumption was calculated for both Minnesota and nationally for the years 1999 to 2009 by dividing the annual number of packs sold by the total population of Minnesota and the national population. National consumption calculations excluded cigarette sales in Minnesota. National smoking prevalence estimates were from the National Health Interview Survey (*2*).†

* MATS 2010 methods are fully described in the *Minnesota Adult Tobacco Survey 2010 Methodology Report*, available at http://www.mnadulttobaccosurvey.org. Reports from other years also are available at that site.

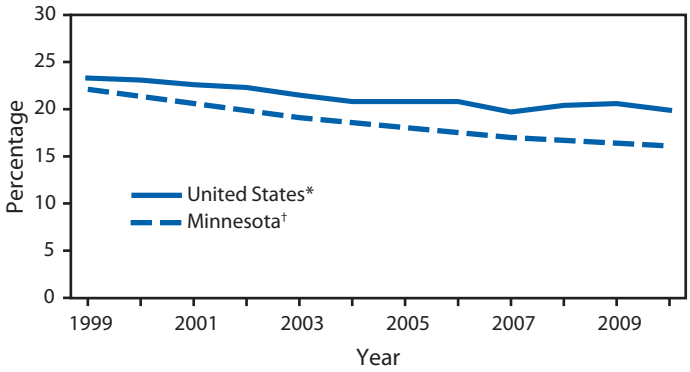
† Additional information available at http://www.cdc.gov/nchs/nhis.htm.

Based on MATS data, Minnesota adult smoking prevalence declined steadily from 22.1% in 1999 to 16.1% in 2010, a 27.1% decrease (Figure 1). The rate of decline was greatest during 1999–2003. During 2007–2010, smoking prevalence declined from 17.0% to 16.1%. By comparison, cigarette smoking declined nationally from 23.3% in 1999 to 19.9% in 2010. However, the national rate remained essentially unchanged from 2004 to 2010 (*2*).

Significant ($p<0.05$) changes in smoking behavior also occurred in Minnesota during the past decade, based on *t* tests and chi-square tests. The daily average number of cigarettes smoked by current smokers decreased from 14.3 in 1999 to 12.2 in 2010. In addition, the proportion of current smokers who smoked ≥25 cigarettes per day decreased steadily, from 14.3% in 1999 to 6.3% in 2010 (Figure 2). From 2007 to 2010, the proportion of current smokers who smoked ≤15 cigarettes per day increased from 54.1% to 63.2%.

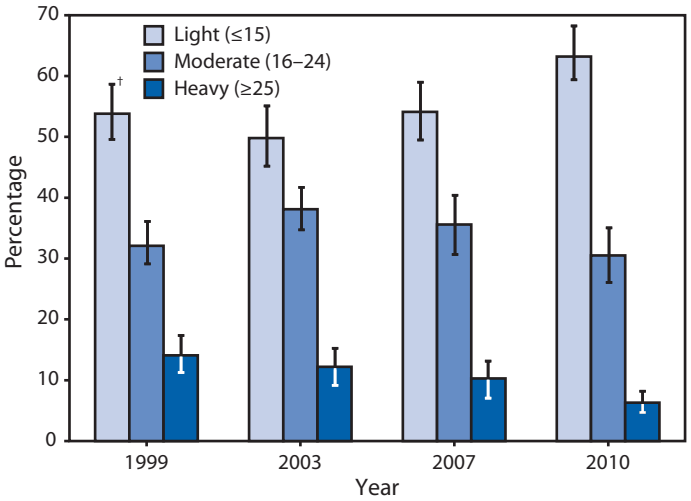
The decrease in both smoking prevalence and cigarettes smoked per day corresponds with a decrease in sales of cigarettes. Per capita cigarette pack sales in Minnesota decreased 40% from 1999 to 2009 (Figure 3). Nationally, per capita cigarette pack sales have fallen steadily and, as of 2009, were 35% lower than in 1999. In addition, the percentage of Minnesota residents who reported that someone had smoked near them in the past 7 days in any location dropped steadily from 67.2% in 2003, before any large municipalities banned indoor smoking, to 56.7% just before the statewide ban, to 45.6% in 2010. In addition to the increase in smoke-free workplaces brought about by the statewide ban, more Minnesota residents reported smoke-free rules in their homes. In 2010, 87.2% reported that smoking was not allowed anywhere inside their home. This is a significant increase from 64.5% in 1999, and follows previous increases documented in 2003 (74.8%) and 2007 (83.2%).

FIGURE 1. Prevalence of smoking among adults — Minnesota and the United States, 1999–2010



* Based on early release estimate (January–June 2010) of National Health Interview Survey data.
† Based on data from the Minnesota Adult Tobacco Survey, conducted in 1999, 2003, 2007, and 2010.

FIGURE 2. Percentage of current light, moderate, and heavy smokers, based on number of cigarettes smoked per day — Minnesota, 1999–2010*



* Based on data from the Minnesota Adult Tobacco Survey, conducted in 1999, 2003, 2007, and 2010.
† 95% confidence interval.

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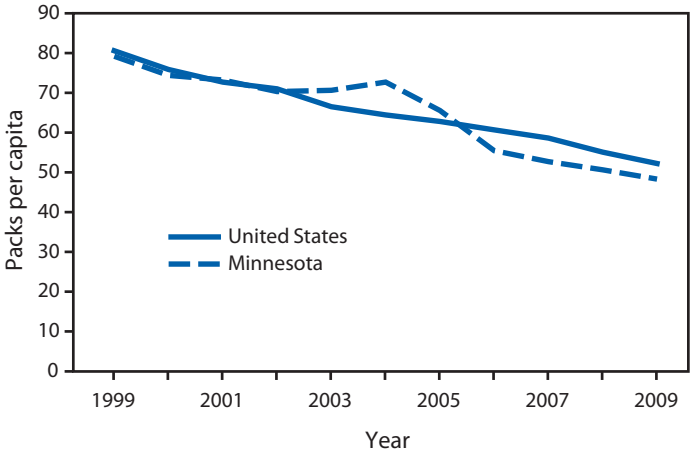
Editorial Note

The decline in the percentage of adult Minnesota residents who smoke, the reduction in number of cigarettes smoked, the reported reduction in exposure to secondhand smoke, and the increase in smoke-free homes collectively suggest a favorable shift in the tobacco use behaviors and practices of Minnesota adults. These encouraging trends occurred during a decade of tobacco control policy advances in Minnesota. These policies included enactment of local smoke-free ordinances and a comprehensive statewide smoke-free law, cigarette tax increases, mass media campaigns to promote cessation, and statewide provision of cessation services. In 2000, Moose Lake became the first city in Minnesota to adopt a smoke-free restaurant ordinance, followed by Duluth (*3*). By the end of 2006, the movement to ban indoor smoking had resulted in five counties and 10 cities in Minnesota enacting smoke-free ordinances,[§] covering 38% of the state population. In May

[§] Beltrami, Hennepin, McLeod, Olmsted, and Ramsey counties; Bloomington, Cloquet, Duluth, Golden Valley, International Falls, Mankato, Minneapolis, Moorhead, Moose Lake, and St. Paul.

FIGURE 3. Packs of cigarettes sold per capita each year — Minnesota and the United States,* 1999–2009



Source: Orzechowski W, Walker RC. The tax burden on tobacco: historical compilation, vol. 44, 2009. Arlington, VA: Orzechowski and Walker; 2009.
* U.S. cigarette packs per capita excludes Minnesota data.

2007, passage of the comprehensive, statewide Freedom to Breathe Act strengthened the Minnesota Clean Indoor Air Act.¶ The Freedom to Breathe Act required public places and workplaces, including bars and restaurants, to be smoke-free (*4*). Since 2004, the average price per pack of cigarettes in Minnesota has increased by more than $2.00, from $3.51 to $5.67 (*1*). This change in price included a state $0.75 health impact fee imposed in 2005 on every pack of cigarettes sold in Minnesota and a $0.62 per pack increase in the federal excise tax on cigarettes in 2009.

These policies have been supported by a decade-long mass media campaign designed to educate Minnesota residents about the dangers of tobacco use and to promote cessation. Minnesota smokers also have benefited from universal access to tobacco cessation services. ClearWay Minnesota, the nonprofit organization formed from Minnesota's settlement with the tobacco industry in 1998, developed a partnership with Minnesota's major health plans to provide quitline services to all Minnesota residents (*5*). As part of this partnership, health plans in Minnesota provide cessation services to their members and patients, and ClearWay Minnesota serves the underinsured and uninsured through the QUITPLAN Helpline. The telephone helpline was launched in 2001, and free pharmacotherapy was added in 2002. ClearWay Minnesota also began providing other cessation services in 2003, including face-to-face, worksite, and web-based programs.

¶ Minn. Stat. Sect. 144.411 to 144.417 – Minnesota Clean Indoor Air Act, of which Freedom to Breathe was an amendment, available at http://www.health.state.mn.us/freedomtobreathe, and supported by Minn. Stat. Sect. 256.9658 & 16A.725 – $0.75 health impact fee, available at https://www.revisor.mn.gov/statutes.

What is already known on this topic?

Following a landmark lawsuit settlement in 1998, Minnesota implemented a series of tobacco control efforts.

What is added by this report?

Over the past decade, Minnesota experienced a decline in the percentage of adults who smoke, a reduction in the number of cigarettes smoked, fewer cigarettes sold, less reported exposure to secondhand smoke, and an increase in smoke-free homes.

What are the implications for public health practice?

As overall smoking prevalence declines, shifts in smoking behaviors need to be monitored to track the impact of policy efforts and to appropriately direct tobacco control prevention and treatment programs.

Consistent with the recommendations outlined in CDC's *Best Practices for Comprehensive Tobacco Control Programs* (*6*), this combination of policies and programs has fostered a favorable shift in the behaviors and practices of Minnesota adults on cigarette smoking and exposure to secondhand smoke. The 27.1% decrease in adult smoking prevalence in Minnesota since 1999 represents an average annual decrease of 2.5%. This decline is similar to those seen in Maryland (2.5% annually during 1999–2009), California (3.1% annually during 1999–2009), and Massachusetts (2.2% annually during 1999–2009) after similar policies were implemented, but is less than New York City's 5.0% average annual decrease from 2002 to 2006 (*7,8*). Although Minnesota experienced a nonsignificant decline in prevalence from 2007 to 2010, the proportion of heavy smokers decreased significantly, indicating that the profile of smoking in Minnesota has shifted. The shift away from heavy smoking and toward light smoking has implications for tobacco-dependence treatment programs.

The findings in this report are subject to at least two limitations. First, the data rely on self-reported behaviors that might be subject to social desirability bias. Second, although the cigarette pack consumption data are based on reported state sales data, they do not take into account the proportion of smokers who purchase cigarettes over the Internet or from neighboring states.

In the past decade, Minnesota has benefited from a sustained tobacco control program and has experienced decreasing trends in adult cigarette smoking and reduced exposure to secondhand smoke. Future progress in reducing cigarette smoking and exposure to secondhand smoke will require a concerted effort across the public health community to continue to make the case that reduced tobacco consumption has broad benefits for society.

References

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Errata

Vol. 60, No. 1

In "Errata: Vol. 60, No. RR-12," on page 18, the title should read "**Vol. 59**," No. RR-12.

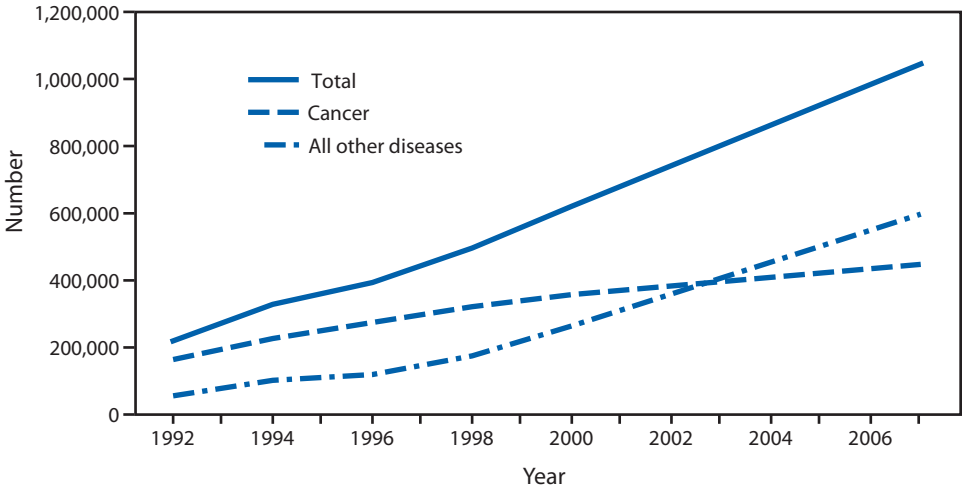
Vol. 60, No. 2

In "CDC Grand Rounds: Childhood Obesity in the United States," on page 45, the last sentence before the Summary should read "Other key programs include those instituted by the Convergence Partnership and programs initiated by CDC with funds from the American Recovery and **Reinvestment** Act of 2009."

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Annual Number of Patients Discharged from Hospice Care, by Primary Diagnosis (Cancer Versus All Other Diseases)* — United States, National Home and Hospice Care Survey, 1992–2007



* Primary diagnosis is assessed on admission for hospice-care services. Estimates are based on the number of discharged patients, the majority of whom leave hospice care at death. Some patients might discontinue care while living, some might reenter care, and some might have more than one episode of care in a 12-month period.

Use of hospice care increased from approximately 219,300 discharged hospice-care patients in 1992 to 1,045,100 in 2007. In 1992, three out of four patients (approximately 163,600) had a primary diagnosis of cancer, compared with 55,500 patients with all other diseases. In 2007, less than half of patients (42%) had a primary diagnosis of cancer, for a total of 447,600 cancer patients, compared with 597,500 patients with all other diseases.

Source: CDC. National Home and Hospice Care Survey data, 1992, 1994, 1996, 1998, 2000, 2002, 2004, and 2007. Additional information available at http://www.cdc.gov/nchs/nhhcs.htm.

Notifiable Diseases and Mortality Tables

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending February 5, 2011 (5th week)*

Disease	Current week	Cum 2011	5-year weekly average†	Total cases reported for previous years 2010	2009	2008	2007	2006	States reporting cases during current week (No.)
Anthrax	—	—	—	—	1	—	1	1	
Arboviral diseases§,¶:									
California serogroup virus disease	—	—	0	72	55	62	55	67	
Eastern equine encephalitis virus disease	—	—	—	10	4	4	4	8	
Powassan virus disease	—	—	—	7	6	2	7	1	
St. Louis encephalitis virus disease	—	—	0	8	12	13	9	10	
Western equine encephalitis virus disease	—	—	—	—	—	—	—	—	
Babesiosis	—	—	—	NN	NN	NN	NN	NN	
Botulism, total	—	2	2	108	118	145	144	165	
foodborne	—	—	0	7	10	17	32	20	
infant	—	1	2	76	83	109	85	97	
other (wound and unspecified)	—	1	0	25	25	19	27	48	
Brucellosis	—	3	1	127	115	80	131	121	
Chancroid	1	3	1	35	28	25	23	33	KS (1)
Cholera	—	3	0	12	10	5	7	9	
Cyclosporiasis§	3	7	2	172	141	139	93	137	FL (3)
Diphtheria	—	—	—	—	—	—	—	—	
Haemophilus influenzae,** invasive disease (age <5 yrs):									
serotype b	—	—	1	17	35	30	22	29	
nonserotype b	—	3	5	154	236	244	199	175	
unknown serotype	2	19	4	266	178	163	180	179	NY (1), PA (1)
Hansen disease§	1	3	2	65	103	80	101	66	CA (1)
Hantavirus pulmonary syndrome§	—	—	0	17	20	18	32	40	
Hemolytic uremic syndrome, postdiarrheal§	—	5	2	229	242	330	292	288	
Influenza-associated pediatric mortality§,††	11	26	3	61	358	90	77	43	AZ (1), CO (1), IL (2), IN (2), MI (1), NC (2), OK (1), VA (1)
Listeriosis	5	29	10	773	851	759	808	884	SC (1), WA (1), CA (3)
Measles§§	1	6	1	60	71	140	43	55	NY (1)
Meningococcal disease, invasive¶¶:									
A, C, Y, and W-135	—	7	6	243	301	330	325	318	
serogroup B	3	8	4	110	174	188	167	193	NY (1), OK (1), WA (1)
other serogroup	—	—	1	9	23	38	35	32	
unknown serogroup	17	46	12	420	482	616	550	651	OH (1), MO (1), NE (1), MD (1), NC (1), FL (2), ID (1), CA (9)
Novel influenza A virus infections***	—	1	0	4	43,774	2	4	NN	
Plague	—	—	—	2	8	3	7	17	
Poliomyelitis, paralytic	—	—	—	—	1	—	—	—	
Polio virus Infection, nonparalytic§	—	—	—	—	—	—	—	NN	
Psittacosis§	—	—	0	4	9	8	12	21	
Q fever, total§	—	4	2	122	113	120	171	169	
acute	—	3	1	93	93	106	—	—	
chronic	—	1	0	29	20	14	—	—	
Rabies, human	—	—	—	1	4	2	1	3	
Rubella†††	—	—	0	6	3	16	12	11	
Rubella, congenital syndrome	—	—	0	—	2	—	—	1	
SARS-CoV§	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	1	9	3	167	161	157	132	125	NY (1)
Syphilis, congenital (age <1 yr)§§§	—	4	8	239	423	431	430	349	
Tetanus	—	—	0	10	18	19	28	41	
Toxic-shock syndrome (staphylococcal)§	1	6	2	77	74	71	92	101	CA (1)
Trichinellosis	—	2	0	4	13	39	5	15	
Tularemia	—	—	0	110	93	123	137	95	
Typhoid fever	5	13	8	422	397	449	434	353	NY (2), CA (3)
Vancomycin-intermediate *Staphylococcus aureus*§	—	4	1	91	78	63	37	6	
Vancomycin-resistant *Staphylococcus aureus*§	—	—	—	1	1	—	2	1	
Vibriosis (noncholera *Vibrio* species infections)§	5	13	2	778	789	588	549	NN	NC (1), GA (1), FL (1), WA (1), CA (1)
Viral hemorrhagic fever¶¶¶	—	—	0	1	NN	NN	NN	NN	
Yellow fever	—	—	—	—	—	—	—	—	

See Table 1 footnotes on next page.

TABLE I. (*Continued*) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending February 5, 2011 (5th week)*

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

* Case counts for reporting years 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/ncphi/disss/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf.

† 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/ncphi/disss/nndss/phs/files/5yearweeklyaverage.pdf.

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

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

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

†† Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Since October 3, 2010, 30 influenza-associated pediatric deaths occurred during the 2010-11 influenza season have been reported.

§§ The one measles case reported for the current week was imported.

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

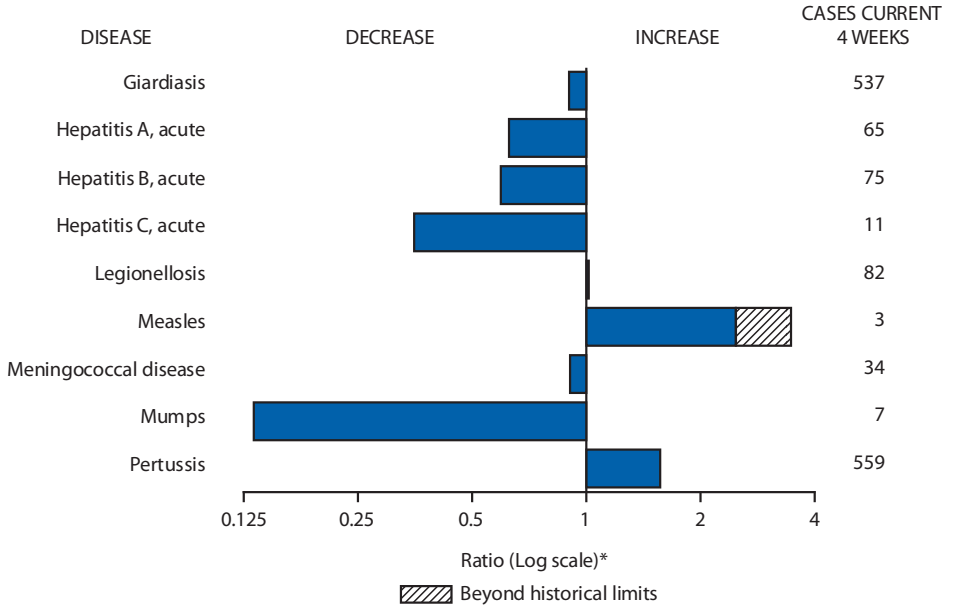
*** CDC discontinued reporting of individual confirmed and probable cases of 2009 pandemic influenza A (H1N1) virus infections on July 24, 2009. During 2009, four cases of human infection with novel influenza A viruses, different from the 2009 pandemic influenza A (H1N1) strain, were reported to CDC. The four cases of novel influenza A virus infection reported to CDC during 2010 and the one case reported in 2011 were identified as swine influenza A (H3N2) virus and are unrelated to the 2009 pandemic influenza A (H1N1) virus. Total case counts for 2009 were provided by the Influenza Division, National Center for Immunization and Respiratory Diseases (NCIRD).

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

§§§ Updated weekly from reports to the Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention.

¶¶¶ There was one case of viral hemorrhagic fever reported during week 12 of 2010. The one case report was confirmed as lassa fever. See Table II for dengue hemorrhagic fever.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals February 5, 2011, with historical data



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

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TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending February 5, 2011, and February 6, 2010 (5th week)*

Reporting area	*Chlamydia trachomatis* infection					Coccidioidomycosis					Cryptosporidiosis				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2011	Cum 2010	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2011	Cum 2010	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2011	Cum 2010
United States	11,345	23,684	26,019	83,509	116,012	114	0	372	1,193	NN	34	120	352	294	575
New England	487	406	1,544	2,743	1,217	—	0	0	—	NN	—	7	19	4	106
Connecticut	19	177	1,322	87	345	N	0	0	N	NN	—	0	2	2	71
Maine†	—	50	100	—	249	N	0	0	N	NN	—	1	7	—	9
Massachusetts	333	2	473	1,970	8	N	0	0	N	NN	—	3	9	—	14
New Hampshire	—	51	113	221	199	—	0	0	—	NN	—	1	5	—	5
Rhode Island†	135	66	121	360	315	—	0	0	—	NN	—	0	2	—	1
Vermont†	—	23	51	105	101	N	0	0	N	NN	—	1	5	2	6
Mid. Atlantic	1,715	3,356	5,198	9,281	15,710	—	0	0	—	NN	5	15	38	37	49
New Jersey	419	510	709	2,233	2,380	N	0	0	N	NN	—	0	4	—	3
New York (Upstate)	738	698	1,644	2,796	2,351	N	0	0	N	NN	3	4	13	9	6
New York City	—	1,222	2,769	—	6,376	N	0	0	N	NN	1	2	6	4	3
Pennsylvania	558	943	1,178	4,252	4,603	N	0	0	N	NN	1	8	26	24	37
E.N. Central	792	3,553	4,005	11,726	18,599	—	0	3	3	NN	3	29	127	75	140
Illinois	6	802	1,053	1,779	5,045	N	0	0	N	NN	—	4	21	3	25
Indiana	—	390	798	1,040	1,135	N	0	0	N	NN	—	3	10	4	20
Michigan	435	951	1,417	4,251	5,034	—	0	0	—	NN	1	5	18	19	31
Ohio	260	972	1,109	3,081	5,154	—	0	3	3	NN	2	8	24	42	28
Wisconsin	91	428	516	1,575	2,231	N	0	0	N	NN	—	10	63	7	36
W.N. Central	208	1,378	1,533	3,954	7,150	—	0	0	—	NN	4	21	83	32	42
Iowa	3	202	237	684	1,105	N	0	0	N	NN	—	4	24	5	14
Kansas	7	189	235	611	961	N	0	0	N	NN	—	2	9	1	7
Minnesota	—	286	349	688	1,570	—	0	0	—	NN	—	0	16	—	3
Missouri	100	501	619	1,346	2,440	—	0	0	—	NN	3	4	30	10	8
Nebraska†	77	92	184	309	568	N	0	0	N	NN	1	3	26	13	7
North Dakota	—	28	79	—	180	N	0	0	N	NN	—	0	9	—	—
South Dakota	21	62	88	316	326	N	0	0	N	NN	—	1	6	3	3
S. Atlantic	2,889	4,750	5,452	21,057	22,741	—	0	0	—	NN	9	19	51	67	99
Delaware	89	83	220	351	402	—	0	0	—	NN	—	0	1	1	1
District of Columbia	—	91	161	265	505	—	0	0	—	NN	—	0	1	—	1
Florida	804	1,456	1,705	6,014	6,910	N	0	0	N	NN	—	7	19	26	35
Georgia	614	659	1,220	3,267	2,374	N	0	0	N	NN	3	5	31	17	47
Maryland†	483	479	994	1,575	1,655	—	0	0	—	NN	—	1	3	4	1
North Carolina	—	750	1,436	3,323	5,292	N	0	0	N	NN	3	0	12	3	3
South Carolina†	—	530	847	1,892	2,481	N	0	0	N	NN	3	2	8	14	4
Virginia†	838	608	882	3,925	2,768	N	0	0	N	NN	—	2	8	2	5
West Virginia	61	75	123	445	354	N	0	0	N	NN	—	0	3	—	2
E.S. Central	1,604	1,751	2,415	7,225	7,663	—	0	0	—	NN	—	4	19	8	20
Alabama†	457	535	779	2,434	2,196	N	0	0	N	NN	—	3	13	4	5
Kentucky	434	267	614	855	897	N	0	0	N	NN	—	1	6	3	6
Mississippi	393	370	780	1,622	1,952	N	0	0	N	NN	—	0	2	—	4
Tennessee†	320	574	799	2,314	2,618	N	0	0	N	NN	—	1	5	1	5
W.S. Central	341	2,995	4,141	8,582	18,553	—	0	0	—	NN	4	7	29	12	10
Arkansas†	200	275	391	1,377	1,369	N	0	0	N	NN	—	0	3	—	4
Louisiana	131	313	777	1,988	3,362	—	0	0	—	NN	1	1	6	1	1
Oklahoma	10	251	1,374	617	2,267	N	0	0	N	NN	—	1	8	—	1
Texas†	—	2,272	3,064	4,600	11,555	N	0	0	N	NN	3	4	22	11	4
Mountain	1,372	1,436	1,915	5,715	6,707	57	0	317	927	NN	5	10	30	32	55
Arizona	343	502	706	1,399	2,052	57	0	314	919	NN	—	1	3	3	3
Colorado	555	332	560	1,702	1,746	N	0	0	N	NN	4	2	6	14	14
Idaho†	103	68	199	242	377	N	0	0	N	NN	1	2	7	6	11
Montana†	52	62	82	301	276	N	0	0	N	NN	—	1	4	2	6
Nevada†	134	175	329	912	884	—	0	3	7	NN	—	0	7	—	1
New Mexico†	139	162	274	688	497	—	0	0	—	NN	—	2	12	6	11
Utah	46	118	155	471	654	—	0	0	—	NN	—	1	5	—	5
Wyoming†	—	38	90	—	221	—	0	1	1	NN	—	0	2	1	4
Pacific	1,937	3,684	4,580	13,226	17,672	57	0	82	263	NN	4	12	29	27	54
Alaska	—	109	148	444	622	N	0	0	N	NN	—	0	1	—	2
California	1,518	2,809	3,707	10,290	13,176	57	0	82	263	NN	2	6	18	15	28
Hawaii	—	110	158	—	616	N	0	0	N	NN	—	0	0	—	1
Oregon	107	213	496	966	1,184	N	0	0	N	NN	1	3	13	10	18
Washington	312	403	505	1,526	2,074	N	0	0	N	NN	1	1	6	2	5
Territories															
American Samoa	—	0	0	—	—	N	0	0	N	NN	N	0	0	N	NN
C.N.M.I.	—	—	—	—	—	—	—	—	—	NN	—	—	—	—	—
Guam	—	8	31	—	3	—	0	0	—	NN	—	0	0	—	—
Puerto Rico	83	93	265	476	522	N	0	0	N	NN	N	0	0	N	NN
U.S. Virgin Islands	—	12	29	—	49	—	0	0	—	NN	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/ncphi/disss/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 5, 2011, and February 6, 2010 (5th week)*

Reporting area	Dengue Virus Infection									
	Dengue Fever†					Dengue Hemorrhagic Fever§				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max		
United States	—	6	40	—	32	—	0	2	—	—
New England	—	0	3	—	1	—	0	0	—	—
Connecticut	—	0	0	—	—	—	0	0	—	—
Maine¶	—	0	2	—	1	—	0	0	—	—
Massachusetts	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	1	—	—	—	0	0	—	—
Vermont¶	—	0	1	—	—	—	0	0	—	—
Mid. Atlantic	—	1	15	—	13	—	0	1	—	—
New Jersey	—	0	0	—	—	—	0	0	—	—
New York (Upstate)	—	0	0	—	—	—	0	0	—	—
New York City	—	1	15	—	10	—	0	1	—	—
Pennsylvania	—	0	3	—	3	—	0	0	—	—
E.N. Central	—	1	7	—	5	—	0	1	—	—
Illinois	—	0	2	—	1	—	0	0	—	—
Indiana	—	0	2	—	—	—	0	0	—	—
Michigan	—	0	2	—	—	—	0	0	—	—
Ohio	—	0	2	—	4	—	0	0	—	—
Wisconsin	—	0	2	—	—	—	0	1	—	—
W.N. Central	—	0	6	—	2	—	0	1	—	—
Iowa	—	0	1	—	—	—	0	0	—	—
Kansas	—	0	1	—	—	—	0	0	—	—
Minnesota	—	0	2	—	2	—	0	0	—	—
Missouri	—	0	0	—	—	—	0	0	—	—
Nebraska¶	—	0	6	—	—	—	0	0	—	—
North Dakota	—	0	1	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	1	—	—
S. Atlantic	—	2	17	—	6	—	0	1	—	—
Delaware	—	0	0	—	—	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	0	—	—
Florida	—	2	14	—	5	—	0	1	—	—
Georgia	—	0	2	—	1	—	0	0	—	—
Maryland¶	—	0	0	—	—	—	0	0	—	—
North Carolina	—	0	1	—	—	—	0	0	—	—
South Carolina¶	—	0	3	—	—	—	0	0	—	—
Virginia¶	—	0	3	—	—	—	0	0	—	—
West Virginia	—	0	1	—	—	—	0	0	—	—
E.S. Central	—	0	2	—	—	—	0	0	—	—
Alabama¶	—	0	2	—	—	—	0	0	—	—
Kentucky	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	0	—	—	—	0	0	—	—
Tennessee¶	—	0	1	—	—	—	0	0	—	—
W.S. Central	—	0	1	—	—	—	0	1	—	—
Arkansas¶	—	0	0	—	—	—	0	1	—	—
Louisiana	—	0	0	—	—	—	0	0	—	—
Oklahoma	—	0	1	—	—	—	0	0	—	—
Texas¶	—	0	1	—	—	—	0	0	—	—
Mountain	—	0	2	—	2	—	0	0	—	—
Arizona	—	0	1	—	—	—	0	0	—	—
Colorado	—	0	0	—	—	—	0	0	—	—
Idaho¶	—	0	1	—	—	—	0	0	—	—
Montana¶	—	0	1	—	—	—	0	0	—	—
Nevada¶	—	0	1	—	1	—	0	0	—	—
New Mexico¶	—	0	1	—	1	—	0	0	—	—
Utah	—	0	0	—	—	—	0	0	—	—
Wyoming¶	—	0	0	—	—	—	0	0	—	—
Pacific	—	0	6	—	3	—	0	0	—	—
Alaska	—	0	1	—	—	—	0	0	—	—
California	—	0	5	—	1	—	0	0	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—
Washington	—	0	2	—	2	—	0	0	—	—
Territories										
American Samoa	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	108	526	—	425	—	1	14	—	9
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/ncphi/disss/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.
† Dengue Fever includes cases that meet criteria for Dengue Fever with hemorrhage, other clinical and unknown case classifications.
§ DHF includes cases that meet criteria for dengue shock syndrome (DSS), a more severe form of DHF.
¶ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 5, 2011, and February 6, 2010 (5th week)*

Reporting area	Ehrlichiosis/Anaplasmosis†														
	Ehrlichia chaffeensis					*Anaplasma phagocytophilum*					Undetermined				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	1	8	47	5	11	1	12	57	4	8	—	1	10	1	—
New England	—	0	1	—	1	—	1	8	1	4	—	0	2	—	—
Connecticut	—	0	0	—	—	—	0	5	—	—	—	0	2	—	—
Maine§	—	0	1	—	1	—	0	2	1	2	—	0	0	—	—
Massachusetts	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	0	1	—	—	—	0	3	—	—	—	0	1	—	—
Rhode Island§	—	0	0	—	—	—	0	5	—	2	—	0	0	—	—
Vermont§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	—	1	6	—	1	1	4	15	2	—	—	0	1	—	—
New Jersey	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
New York (Upstate)	—	0	6	—	—	1	4	15	2	—	—	0	1	—	—
New York City	—	0	3	—	—	—	0	1	—	—	—	0	0	—	—
Pennsylvania	—	0	1	—	1	—	0	0	—	—	—	0	0	—	—
E.N. Central	—	0	4	1	1	—	4	40	—	2	—	1	7	1	—
Illinois	—	0	2	—	—	—	0	2	—	—	—	0	2	—	—
Indiana	—	0	0	—	—	—	0	0	—	—	—	0	3	1	—
Michigan	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
Ohio	—	0	3	1	—	—	0	1	—	—	—	0	0	—	—
Wisconsin	—	0	1	—	1	—	4	40	—	2	—	0	4	—	—
W.N. Central	—	1	13	—	—	—	0	3	—	—	—	0	3	—	—
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Minnesota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Missouri	—	1	13	—	—	—	0	3	—	—	—	0	3	—	—
Nebraska§	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
S. Atlantic	1	4	19	4	8	—	1	7	1	2	—	0	2	—	—
Delaware	—	0	3	—	1	—	0	1	—	—	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Florida	—	0	2	1	1	—	0	1	—	—	—	0	0	—	—
Georgia	—	0	4	1	2	—	0	1	—	1	—	0	1	—	—
Maryland§	1	0	3	1	3	—	0	2	—	1	—	0	2	—	—
North Carolina	—	1	13	1	1	—	0	4	1	—	—	0	0	—	—
South Carolina§	—	0	2	—	—	—	0	1	—	—	—	0	0	—	—
Virginia§	—	1	8	—	—	—	0	2	—	—	—	0	1	—	—
West Virginia	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
E.S. Central	—	1	10	—	—	—	0	2	—	—	—	0	1	—	—
Alabama§	—	0	3	—	—	—	0	2	—	—	—	0	0	—	—
Kentucky	—	0	2	—	—	—	0	0	—	—	—	0	0	—	—
Mississippi	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
Tennessee§	—	0	6	—	—	—	0	2	—	—	—	0	1	—	—
W.S. Central	—	0	5	—	—	—	0	2	—	—	—	0	1	—	—
Arkansas§	—	0	5	—	—	—	0	2	—	—	—	0	0	—	—
Louisiana	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Oklahoma	—	0	5	—	—	—	0	1	—	—	—	0	0	—	—
Texas§	—	0	1	—	—	—	0	1	—	—	—	0	1	—	—
Mountain	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Arizona	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Colorado	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Idaho§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Montana§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Nevada§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
New Mexico§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Utah	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Wyoming§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Pacific	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
California	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Washington	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/ncphi/disss/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.
† Cumulative total *E. ewingii* cases reported for year 2010 = 10 and 1 case reports for 2011.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 5, 2011, and February 6, 2010 (5th week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive† All ages, all serotypes				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	164	338	502	884	1,569	2,593	5,558	6,369	20,340	28,281	26	57	77	250	347
New England	2	32	54	13	140	86	55	175	365	224	—	3	9	6	20
Connecticut	—	5	13	—	33	47	39	169	141	136	—	0	6	—	—
Maine§	2	4	12	7	15	—	3	9	—	35	—	0	2	4	1
Massachusetts	—	13	25	—	65	27	1	54	200	1	—	2	5	—	13
New Hampshire	—	2	8	2	14	—	3	7	7	17	—	0	1	1	4
Rhode Island§	—	0	7	—	2	12	4	15	15	30	—	0	2	—	2
Vermont§	—	4	10	4	11	—	0	17	2	5	—	0	3	1	—
Mid. Atlantic	33	61	106	191	283	394	693	1,169	2,180	3,296	5	11	23	52	78
New Jersey	—	5	18	—	39	102	116	175	652	536	—	2	5	8	7
New York (Upstate)	26	22	54	66	88	110	108	212	426	384	3	3	14	11	17
New York City	2	17	33	64	81	—	232	534	—	1,277	—	2	6	6	13
Pennsylvania	5	14	27	61	75	182	256	366	1,102	1,099	2	4	11	27	41
E.N. Central	8	56	90	125	299	219	967	1,200	3,269	5,215	5	10	20	37	59
Illinois	—	13	32	9	64	4	196	250	462	1,190	—	3	7	2	14
Indiana	—	5	13	2	42	—	100	222	294	356	—	1	6	2	10
Michigan	1	12	25	33	63	118	257	471	1,260	1,492	—	1	3	6	—
Ohio	7	17	29	62	78	77	310	381	925	1,687	5	2	6	22	18
Wisconsin	—	9	33	19	52	20	93	156	328	490	—	1	5	5	17
W.N. Central	11	24	101	78	110	61	287	354	814	1,352	1	3	14	9	12
Iowa	2	5	11	19	28	—	33	57	110	161	—	0	1	—	—
Kansas	1	3	10	12	23	1	38	62	95	181	—	0	2	—	2
Minnesota	—	0	75	—	—	—	37	61	92	232	—	0	9	—	—
Missouri	4	7	26	26	34	41	141	181	397	607	1	2	4	4	7
Nebraska§	4	4	9	17	17	18	21	50	87	117	—	0	3	5	1
North Dakota	—	0	5	—	—	—	1	8	—	12	—	0	2	—	2
South Dakota	—	1	7	4	8	1	7	20	33	42	—	0	0	—	—
S. Atlantic	51	76	108	210	303	711	1,341	1,798	5,725	6,974	11	14	26	78	80
Delaware	—	0	5	1	3	16	18	48	81	92	—	0	1	—	—
District of Columbia	—	1	5	—	3	—	35	66	94	196	—	0	1	—	—
Florida	24	41	75	132	152	201	387	486	1,636	1,962	4	4	9	30	15
Georgia	17	13	51	36	60	199	220	392	1,012	776	2	3	7	16	31
Maryland§	6	5	11	19	28	131	137	224	463	491	3	1	5	9	5
North Carolina	N	0	0	N	N	—	242	596	1,128	1,827	2	2	9	6	9
South Carolina§	—	2	9	5	9	—	152	262	566	773	—	1	5	4	14
Virginia§	4	9	22	17	44	151	145	223	649	815	—	2	6	13	5
West Virginia	—	0	6	—	4	13	12	26	96	42	—	0	3	—	1
E.S. Central	—	5	12	6	24	464	476	697	2,086	2,230	1	3	10	17	22
Alabama§	—	4	11	5	11	140	158	236	791	660	—	0	4	6	1
Kentucky	N	0	0	N	N	124	72	160	226	271	1	1	3	4	4
Mississippi	N	0	0	N	N	129	109	216	481	589	—	0	2	—	2
Tennessee§	—	0	6	1	13	71	137	195	588	710	—	2	5	7	15
W.S. Central	2	6	14	8	39	113	830	1,137	2,347	5,268	2	2	10	16	10
Arkansas§	—	2	7	1	11	55	80	133	419	436	1	0	3	1	1
Louisiana	2	3	8	7	17	57	90	217	579	1,081	—	0	4	7	4
Oklahoma	—	0	5	—	11	1	75	332	208	611	1	1	7	8	5
Texas§	N	0	0	N	N	—	601	869	1,141	3,140	—	0	1	—	—
Mountain	9	31	51	73	143	179	178	235	817	815	1	5	15	20	53
Arizona	—	3	8	6	16	50	59	87	237	260	—	2	7	3	19
Colorado	7	13	27	41	52	91	54	84	248	265	1	1	5	9	11
Idaho§	2	4	9	18	20	—	2	14	1	15	—	0	2	2	2
Montana§	—	2	7	1	6	2	2	6	9	8	—	0	1	1	—
Nevada§	—	1	11	4	6	12	29	94	162	170	—	0	1	1	3
New Mexico§	—	2	5	2	6	23	22	35	144	64	—	1	3	4	9
Utah	—	4	11	—	25	1	5	15	16	30	—	0	3	—	5
Wyoming§	—	0	3	1	12	—	0	4	—	3	—	0	1	—	4
Pacific	48	53	104	180	228	366	610	815	2,737	2,907	—	2	21	15	13
Alaska	—	2	6	5	7	—	23	37	78	131	—	0	2	2	4
California	33	33	57	128	155	320	509	691	2,371	2,371	—	0	18	4	—
Hawaii	—	1	4	—	6	—	14	26	—	74	—	0	2	—	3
Oregon	7	9	20	33	45	9	20	34	95	98	—	1	5	9	4
Washington	8	8	57	14	15	37	53	86	193	233	—	0	2	—	2
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	1	—	—	—	0	5	—	—	—	0	0	—	—
Puerto Rico	—	1	8	2	3	6	5	14	22	21	—	0	1	—	1
U.S. Virgin Islands	—	0	0	—	—	—	3	7	—	9	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
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† Data for H. influenzae (age <5 yrs for serotype b, nonserotype b, and unknown serotype) are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 5, 2011, and February 6, 2010 (5th week)*

Reporting area	Hepatitis (viral, acute), by type														
	A					B					C				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	18	30	44	90	151	24	62	90	144	266	4	14	26	42	53
New England	—	1	5	1	16	—	1	5	1	9	—	1	4	—	7
Connecticut	—	0	3	—	5	—	0	2	—	3	—	0	4	—	3
Maine†	—	0	1	—	—	—	0	2	—	2	—	0	0	—	—
Massachusetts	—	0	5	—	11	—	0	2	—	4	—	0	1	—	4
New Hampshire	—	0	1	—	—	—	0	2	1	—	N	0	0	N	N
Rhode Island†	—	0	4	—	—	U	0	0	U	U	U	0	0	U	U
Vermont†	—	0	1	1	—	—	0	1	—	—	—	0	1	—	—
Mid. Atlantic	2	4	10	15	18	2	5	10	13	24	—	2	6	2	5
New Jersey	—	0	2	—	2	—	1	5	—	5	—	0	2	—	—
New York (Upstate)	1	1	4	3	2	1	1	7	6	4	—	1	4	2	4
New York City	1	1	7	6	8	—	1	4	1	8	—	0	1	—	—
Pennsylvania	—	1	3	6	6	1	1	5	6	7	—	0	3	—	1
E.N. Central	2	4	9	12	29	—	9	18	24	57	—	2	7	10	7
Illinois	—	1	3	—	4	—	2	6	2	11	—	0	1	—	—
Indiana	—	0	2	—	—	—	1	5	1	10	—	0	3	5	2
Michigan	—	1	5	3	8	—	2	6	5	17	—	1	6	5	5
Ohio	2	1	5	8	7	—	2	15	16	10	—	0	1	—	—
Wisconsin	—	0	2	1	10	—	2	8	—	9	—	0	2	—	—
W.N. Central	1	1	13	2	7	—	2	7	9	11	—	0	8	—	—
Iowa	—	0	3	1	4	—	0	1	—	3	—	0	0	—	—
Kansas	—	0	2	—	1	—	0	2	1	—	—	0	1	—	—
Minnesota	—	0	12	—	—	—	0	4	—	—	—	0	6	—	—
Missouri	1	0	2	1	1	—	1	3	5	6	—	0	2	—	—
Nebraska†	—	0	4	—	1	—	0	3	3	2	—	0	1	—	—
North Dakota	—	0	3	—	—	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
S. Atlantic	5	6	14	21	23	13	16	32	48	76	2	2	6	7	6
Delaware	—	0	1	1	—	—	0	2	—	2	U	0	0	U	U
District of Columbia	—	0	0	—	1	—	0	1	—	—	—	0	1	—	1
Florida	3	3	7	7	8	7	5	11	24	31	—	0	0	—	—
Georgia	1	1	3	5	4	5	3	6	10	22	—	0	2	—	—
Maryland†	—	0	3	3	1	—	1	6	3	3	—	0	3	3	2
North Carolina	1	1	5	2	—	1	1	16	6	8	2	1	3	3	3
South Carolina†	—	0	3	1	7	—	1	4	2	1	—	0	1	—	—
Virginia†	—	1	6	2	2	—	1	6	3	7	—	0	2	1	—
West Virginia	—	0	5	—	—	—	0	12	—	2	—	0	5	—	—
E.S. Central	—	0	5	1	5	7	7	13	29	42	2	3	8	8	12
Alabama†	—	0	2	—	2	1	1	4	4	12	—	0	1	—	1
Kentucky	—	0	5	1	1	4	2	8	15	15	2	2	6	6	10
Mississippi	—	0	1	—	—	—	0	3	1	1	U	0	0	U	U
Tennessee†	—	0	2	—	2	2	2	8	9	14	—	1	4	2	1
W.S. Central	—	2	7	1	7	1	9	29	10	18	—	1	5	8	2
Arkansas†	—	0	1	—	—	—	0	4	—	—	—	0	0	—	—
Louisiana	—	0	2	—	2	—	1	3	5	7	—	0	2	4	—
Oklahoma	—	0	1	—	—	—	2	6	—	1	—	0	3	3	—
Texas†	—	2	7	1	5	1	5	25	5	10	—	0	3	1	2
Mountain	2	2	8	8	17	—	3	8	6	10	—	1	5	3	3
Arizona	—	1	4	2	10	—	0	2	—	2	U	0	0	U	U
Colorado	2	1	2	4	5	—	0	5	—	2	—	0	2	1	2
Idaho†	—	0	2	—	—	—	0	1	1	—	—	0	2	2	—
Montana†	—	0	1	1	1	—	0	0	—	—	—	0	1	—	—
Nevada†	—	0	2	—	—	—	1	3	5	4	—	0	1	—	—
New Mexico†	—	0	1	1	—	—	0	1	—	—	—	0	2	—	—
Utah	—	0	1	—	1	—	0	1	—	2	—	0	2	—	1
Wyoming†	—	0	3	—	—	—	0	1	—	—	—	0	0	—	—
Pacific	6	5	17	29	29	1	6	17	4	19	—	1	6	4	11
Alaska	—	0	1	—	—	—	0	1	—	1	U	0	0	U	U
California	5	4	16	25	23	—	4	16	1	13	—	0	2	—	6
Hawaii	—	0	1	—	3	—	0	1	—	1	U	0	0	U	U
Oregon	1	0	2	3	2	1	1	3	3	4	—	0	3	3	5
Washington	—	0	2	1	1	—	1	5	—	—	—	0	4	1	—
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	6	—	—	—	1	6	—	5	—	0	7	—	2
Puerto Rico	—	0	2	—	2	—	0	2	—	1	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
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† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 5, 2011, and February 6, 2010 (5th week)*

Reporting area	Legionellosis					Lyme disease					Malaria				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	21	53	116	129	208	33	397	1,673	341	1,252	10	27	80	82	122
New England	—	4	15	1	12	—	126	504	11	381	—	1	5	1	7
Connecticut	—	1	6	—	3	—	47	213	—	172	—	0	1	—	—
Maine†	—	0	4	—	—	—	12	65	5	6	—	0	1	—	—
Massachusetts	—	2	10	—	6	—	41	223	—	127	—	1	4	—	7
New Hampshire	—	0	5	—	1	—	24	68	4	65	—	0	2	—	—
Rhode Island†	—	0	4	—	1	—	1	40	—	1	—	0	1	—	—
Vermont†	—	0	2	1	1	—	4	27	2	10	—	0	1	1	—
Mid. Atlantic	3	14	47	31	53	17	172	738	226	580	1	7	17	20	40
New Jersey	—	1	11	—	8	—	49	220	—	166	—	0	1	—	—
New York (Upstate)	3	5	19	12	16	7	38	200	27	46	—	1	6	2	8
New York City	—	2	17	7	10	—	2	7	—	14	—	4	14	15	23
Pennsylvania	—	6	18	12	19	10	86	387	199	354	1	1	3	3	9
E.N. Central	3	12	44	24	38	—	26	324	2	51	1	3	9	7	10
Illinois	—	2	15	—	7	—	1	17	—	3	—	1	7	—	6
Indiana	—	2	7	3	3	—	1	7	—	4	—	0	2	—	—
Michigan	—	3	20	5	9	—	1	14	—	—	—	0	4	—	2
Ohio	3	4	15	16	16	—	0	9	1	3	1	1	5	6	2
Wisconsin	—	1	11	—	3	—	21	297	1	41	—	0	1	1	—
W.N. Central	—	2	9	2	2	—	1	11	—	2	—	1	4	—	9
Iowa	—	0	2	—	—	—	0	10	—	2	—	0	2	—	2
Kansas	—	0	2	—	—	—	0	1	—	—	—	0	2	—	2
Minnesota	—	0	8	—	—	—	0	0	—	—	—	0	3	—	—
Missouri	—	1	4	2	1	—	0	1	—	—	—	0	3	—	2
Nebraska†	—	0	2	—	1	—	0	2	—	—	—	0	1	—	3
North Dakota	—	0	1	—	—	—	0	5	—	—	—	0	1	—	—
South Dakota	—	0	2	—	—	—	0	1	—	—	—	0	2	—	—
S. Atlantic	4	9	28	19	41	12	57	176	91	220	6	7	44	37	37
Delaware	—	0	3	—	3	2	10	33	20	58	—	0	1	—	—
District of Columbia	—	0	4	—	—	—	0	4	—	1	—	0	2	—	—
Florida	3	3	9	11	16	—	2	10	4	4	2	2	7	10	15
Georgia	—	1	4	—	4	—	0	2	—	1	1	0	6	7	2
Maryland†	—	2	6	3	11	4	24	105	31	105	2	1	24	8	10
North Carolina	1	0	7	2	2	—	1	9	5	4	—	0	13	4	2
South Carolina†	—	0	2	—	—	—	0	3	—	1	—	0	1	—	—
Virginia†	—	1	10	3	4	6	18	82	31	44	1	1	5	8	8
West Virginia	—	0	3	—	1	—	0	29	—	2	—	0	1	—	—
E.S. Central	2	2	10	6	13	—	0	4	—	5	—	0	3	1	3
Alabama†	—	0	2	1	2	—	0	1	—	—	—	0	1	—	1
Kentucky	2	0	4	3	3	—	0	1	—	1	—	0	1	—	2
Mississippi	—	0	3	1	2	—	0	0	—	—	—	0	2	—	—
Tennessee†	—	1	6	1	6	—	0	4	—	4	—	0	2	1	—
W.S. Central	1	3	8	5	4	—	2	9	—	1	—	1	10	—	8
Arkansas†	—	0	2	—	—	—	0	0	—	—	—	0	1	—	1
Louisiana	—	0	2	—	1	—	0	1	—	—	—	0	1	—	1
Oklahoma	1	0	3	1	—	—	0	0	—	—	—	0	1	—	1
Texas†	—	2	7	4	3	—	2	9	—	1	—	1	10	—	5
Mountain	—	3	10	3	13	—	0	3	—	2	—	1	4	6	3
Arizona	—	1	7	2	3	—	0	1	—	—	—	0	3	2	1
Colorado	—	0	2	—	5	—	0	1	—	—	—	0	3	2	—
Idaho†	—	0	1	—	—	—	0	2	—	1	—	0	1	—	—
Montana†	—	0	1	—	—	—	0	1	—	—	—	0	1	—	—
Nevada†	—	0	2	1	3	—	0	1	—	—	—	0	2	2	—
New Mexico†	—	0	2	—	1	—	0	2	—	—	—	0	1	—	—
Utah	—	0	2	—	1	—	0	1	—	1	—	0	1	—	2
Wyoming†	—	0	2	—	—	—	0	0	—	—	—	0	0	—	—
Pacific	8	5	15	38	32	4	4	10	11	10	2	4	10	10	5
Alaska	—	0	2	—	—	—	0	1	—	1	—	0	1	—	—
California	6	4	14	35	32	4	3	8	10	6	2	2	9	6	4
Hawaii	—	0	1	—	—	N	0	0	N	N	—	0	1	—	—
Oregon	—	0	3	1	—	—	1	4	1	3	—	0	3	2	—
Washington	2	0	5	2	—	—	0	3	—	—	—	0	5	2	1
Territories															
American Samoa	—	0	0	—	—	N	0	0	N	N	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	N	0	0	N	N	—	0	2	—	1
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 5, 2011, and February 6, 2010 (5th week)*

Reporting area	Meningococcal disease, invasive† All serogroups					Mumps					Pertussis				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	20	15	26	61	91	—	19	221	15	370	184	471	822	1,008	1,003
New England	—	0	3	1	1	—	0	2	—	9	—	9	24	3	23
Connecticut	—	0	1	1	—	—	0	2	—	4	—	1	8	—	5
Maine§	—	0	1	—	—	—	0	1	—	1	—	1	5	1	1
Massachusetts	—	0	2	—	1	—	0	2	—	4	—	5	13	—	14
New Hampshire	—	0	0	—	—	—	0	1	—	—	—	0	2	2	1
Rhode Island§	—	0	0	—	—	—	0	0	—	—	—	0	9	—	—
Vermont§	—	0	1	—	—	—	0	0	—	—	—	0	4	—	2
Mid. Atlantic	1	1	5	9	9	—	8	209	1	342	18	38	123	127	47
New Jersey	—	0	2	—	2	—	3	22	1	99	—	3	9	1	9
New York (Upstate)	1	0	2	1	2	—	2	75	—	241	7	12	84	44	5
New York City	—	0	3	6	3	—	0	201	—	2	—	0	10	—	—
Pennsylvania	—	0	2	2	2	—	0	16	—	—	11	15	70	82	33
E.N. Central	1	2	9	4	17	—	1	7	7	9	39	112	190	290	314
Illinois	—	0	3	—	3	—	0	2	1	3	—	21	51	35	44
Indiana	—	0	2	1	6	—	0	1	—	1	—	12	26	3	29
Michigan	—	0	4	—	2	—	0	2	1	3	3	29	57	61	89
Ohio	1	0	2	3	3	—	0	5	5	—	36	33	80	166	116
Wisconsin	—	0	3	—	3	—	0	2	—	2	—	9	22	25	36
W.N. Central	2	1	5	9	4	—	1	14	3	2	6	35	193	56	87
Iowa	—	0	3	1	1	—	0	7	—	1	—	12	34	8	19
Kansas	—	0	2	1	—	—	0	1	1	—	3	3	9	5	19
Minnesota	—	0	1	—	—	—	0	1	—	—	—	0	143	—	—
Missouri	1	0	4	4	2	—	0	2	1	1	3	8	44	32	33
Nebraska§	1	0	2	3	1	—	0	10	1	—	—	4	13	10	8
North Dakota	—	0	1	—	—	—	0	1	—	—	—	0	30	—	—
South Dakota	—	0	0	—	—	—	0	1	—	—	—	0	5	1	8
S. Atlantic	4	2	7	9	24	—	0	4	—	6	54	29	77	181	123
Delaware	—	0	1	—	1	—	0	0	—	—	—	0	4	3	—
District of Columbia	—	0	0	—	—	—	0	1	—	—	—	0	2	—	—
Florida	2	1	5	4	10	—	0	3	—	1	12	6	28	32	20
Georgia	—	0	2	—	3	—	0	1	—	—	2	4	18	21	16
Maryland§	1	0	1	1	—	—	0	1	—	2	—	3	8	8	22
North Carolina	1	0	2	3	3	—	0	0	—	—	36	0	30	60	44
South Carolina§	—	0	1	1	2	—	0	2	—	1	1	6	24	21	14
Virginia§	—	0	2	—	5	—	0	2	—	1	3	6	38	36	6
West Virginia	—	0	1	—	—	—	0	1	—	1	—	1	21	—	1
E.S. Central	—	1	3	2	4	—	0	2	1	—	1	16	35	51	73
Alabama§	—	0	1	2	1	—	0	2	1	—	—	4	8	8	17
Kentucky	—	0	2	—	2	—	0	1	—	—	—	5	16	30	26
Mississippi	—	0	1	—	1	—	0	0	—	—	—	1	8	—	6
Tennessee§	—	0	2	—	—	—	0	1	—	—	1	4	11	13	24
W.S. Central	1	1	9	4	10	—	2	11	1	—	6	57	117	35	143
Arkansas§	—	0	1	1	2	—	0	1	—	—	—	2	14	—	10
Louisiana	—	0	2	1	6	—	0	2	—	—	—	1	3	1	6
Oklahoma	1	0	7	1	1	—	0	0	—	—	—	0	23	—	—
Texas§	—	1	7	1	1	—	1	11	1	—	6	49	114	34	127
Mountain	1	1	6	4	4	—	0	4	1	—	36	30	102	157	106
Arizona	—	0	2	2	2	—	0	1	—	—	2	8	25	21	33
Colorado	—	0	4	—	—	—	0	1	—	—	26	7	76	98	13
Idaho§	1	0	1	2	—	—	0	1	—	—	3	2	15	14	25
Montana§	—	0	1	—	—	—	0	0	—	—	5	1	16	14	2
Nevada§	—	0	1	—	1	—	0	1	—	—	—	0	7	3	—
New Mexico§	—	0	1	—	1	—	0	2	1	—	—	2	11	—	18
Utah	—	0	1	—	—	—	0	1	—	—	—	5	13	7	15
Wyoming§	—	0	1	—	—	—	0	1	—	—	—	0	2	—	—
Pacific	10	3	10	19	18	—	0	18	1	2	24	103	286	108	87
Alaska	—	0	1	—	—	—	0	1	—	—	—	0	6	8	2
California	9	2	9	14	13	—	0	18	—	—	9	85	254	75	44
Hawaii	—	0	1	—	—	—	0	1	—	1	—	1	6	—	6
Oregon	—	1	2	3	5	—	0	1	1	1	—	6	15	10	34
Washington	1	0	4	2	—	—	0	2	—	—	15	6	112	15	1
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	1	15	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	1	—	—	—	0	1	1	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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† 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 February 5, 2011, and February 6, 2010 (5th week)*

Reporting area	Rabies, animal					Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	16	61	143	97	268	245	890	1,744	1,711	3,191	31	91	214	176	249
New England	—	4	13	6	19	2	31	68	28	584	—	2	13	3	66
Connecticut	—	0	9	—	5	—	0	12	12	480	—	0	2	2	57
Maine§	—	1	4	1	7	2	2	7	8	4	—	0	3	—	—
Massachusetts	—	0	0	—	—	—	23	52	—	77	—	1	9	—	7
New Hampshire	—	0	5	1	2	—	3	12	5	10	—	0	2	1	2
Rhode Island§	—	0	4	—	—	—	1	17	—	11	—	0	1	—	—
Vermont§	—	1	3	4	5	—	2	5	3	2	—	0	2	—	—
Mid. Atlantic	5	19	41	24	63	18	95	218	166	349	3	9	32	22	20
New Jersey	—	0	0	—	—	—	16	57	8	65	—	1	9	—	5
New York (Upstate)	5	9	19	24	31	12	25	63	43	67	2	4	13	12	5
New York City	—	1	12	—	12	—	23	56	50	94	—	1	7	1	4
Pennsylvania	—	8	24	—	20	6	31	81	65	123	1	3	13	9	6
E.N. Central	—	2	27	4	4	25	91	243	141	322	1	13	43	9	39
Illinois	—	1	11	3	—	—	33	114	17	114	—	2	9	—	12
Indiana	—	0	0	—	—	—	13	62	4	39	—	2	10	—	3
Michigan	—	1	5	1	2	2	16	49	34	59	—	2	16	—	8
Ohio	—	0	12	—	2	23	24	47	79	78	1	2	11	5	4
Wisconsin	—	0	0	—	—	—	10	47	7	32	—	3	17	4	12
W.N. Central	—	4	14	1	11	14	46	97	86	136	3	11	39	12	27
Iowa	—	0	3	—	—	2	9	34	14	13	—	2	16	1	4
Kansas	—	1	4	1	6	3	7	18	17	19	—	1	5	2	3
Minnesota	—	0	4	—	2	—	0	32	—	25	—	0	7	—	5
Missouri	—	1	6	—	1	6	13	44	44	54	3	4	27	5	10
Nebraska§	—	1	4	—	2	3	4	13	8	14	—	1	6	4	4
North Dakota	—	0	3	—	—	—	0	13	—	2	—	0	10	—	—
South Dakota	—	0	0	—	—	—	2	17	3	9	—	0	4	—	1
S. Atlantic	10	20	104	53	150	105	261	615	631	933	12	14	30	60	35
Delaware	—	0	0	—	—	1	3	11	9	6	—	0	2	—	—
District of Columbia	—	0	0	—	—	—	1	6	—	5	—	0	1	—	1
Florida	3	0	96	5	96	60	108	226	282	392	3	5	23	25	10
Georgia	—	0	0	—	—	18	44	133	101	170	—	2	15	6	6
Maryland§	—	6	14	3	23	8	18	55	47	56	4	2	9	11	8
North Carolina	—	0	0	—	—	8	29	240	82	183	4	1	10	9	1
South Carolina§	—	0	0	—	—	2	25	99	48	54	—	0	2	—	1
Virginia§	7	12	25	45	25	8	20	57	62	56	1	2	9	9	8
West Virginia	—	1	7	—	6	—	2	13	—	11	—	0	3	—	—
E.S. Central	1	3	7	5	7	11	55	177	130	156	1	5	22	12	6
Alabama§	1	1	4	4	—	1	19	52	45	50	—	1	4	2	5
Kentucky	—	0	4	1	—	6	11	32	21	31	—	1	6	1	—
Mississippi	—	0	1	—	—	—	18	67	21	25	—	0	12	—	1
Tennessee§	—	1	4	—	7	4	17	53	43	50	1	2	7	9	—
W.S. Central	—	0	30	—	—	18	123	267	125	152	2	6	20	7	10
Arkansas§	—	0	7	—	—	2	12	43	13	11	—	0	5	1	2
Louisiana	—	0	0	—	—	1	20	49	26	54	—	0	2	—	2
Oklahoma	—	0	30	—	—	6	12	39	21	17	—	0	8	2	1
Texas§	—	0	0	—	—	9	77	213	65	70	2	4	20	4	5
Mountain	—	1	7	1	3	8	48	108	118	223	3	11	34	12	27
Arizona	—	0	0	—	—	—	16	42	24	87	—	1	13	2	4
Colorado	—	0	0	—	—	5	10	24	45	45	3	3	21	4	8
Idaho§	—	0	2	—	—	3	3	9	17	18	—	2	7	4	5
Montana§	—	0	3	1	—	—	1	5	2	17	—	1	5	1	1
Nevada§	—	0	2	—	—	—	5	22	13	13	—	0	5	1	1
New Mexico§	—	0	2	—	—	—	6	19	8	20	—	1	6	—	4
Utah	—	0	2	—	—	—	5	17	9	17	—	1	7	—	4
Wyoming§	—	0	4	—	3	—	1	8	—	6	—	0	3	—	—
Pacific	—	2	12	3	11	44	116	252	286	336	6	12	40	39	19
Alaska	—	0	2	1	4	—	1	5	6	9	—	0	1	—	1
California	—	1	12	—	4	36	79	217	244	264	6	6	23	33	12
Hawaii	—	0	0	—	—	—	6	14	—	22	—	0	4	—	3
Oregon	—	0	2	2	3	—	8	48	23	33	—	2	12	4	3
Washington	—	0	0	—	—	8	14	67	13	8	—	3	17	2	—
Territories															
American Samoa	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	2	—	—	—	0	0	—	—
Puerto Rico	—	1	3	2	5	—	10	21	4	50	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/ncphi/disss/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.
† 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 February 5, 2011, and February 6, 2010 (5th week)*

Reporting area	Shigellosis					Spotted Fever Rickettsiosis (including RMSF)†									
						Confirmed					Probable				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2011	Cum 2010	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2011	Cum 2010	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2011	Cum 2010
United States	98	276	453	615	1,152	1	2	11	8	5	3	24	91	22	23
New England	—	4	17	3	87	—	0	0	—	—	—	0	1	—	—
Connecticut	—	0	1	1	63	—	0	0	—	—	—	0	0	—	—
Maine§	—	0	1	1	1	—	0	0	—	—	—	0	1	—	—
Massachusetts	—	3	16	—	20	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	0	2	—	2	—	0	0	—	—	—	0	1	—	—
Rhode Island§	—	0	2	—	1	—	0	0	—	—	—	0	1	—	—
Vermont§	—	0	1	1	—	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	5	30	69	45	202	—	0	1	—	—	—	1	4	1	—
New Jersey	—	5	16	5	26	—	0	0	—	—	—	0	0	—	—
New York (Upstate)	3	3	15	13	12	—	0	1	—	—	—	0	3	—	—
New York City	1	5	14	17	34	—	0	1	—	—	—	0	4	1	—
Pennsylvania	1	11	55	10	130	—	0	0	—	—	—	0	3	—	—
E.N. Central	7	25	239	41	134	—	0	1	—	—	—	1	10	2	1
Illinois	—	9	229	4	52	—	0	1	—	—	—	0	5	—	—
Indiana§	—	1	4	1	2	—	0	1	—	—	—	0	5	—	1
Michigan	—	5	10	8	18	—	0	0	—	—	—	0	1	1	—
Ohio	7	5	18	28	37	—	0	0	—	—	—	0	2	1	—
Wisconsin	—	4	21	—	25	—	0	0	—	—	—	0	1	—	—
W.N. Central	5	30	81	50	280	—	0	4	—	—	—	4	21	1	1
Iowa	—	1	4	2	7	—	0	0	—	—	—	0	1	—	—
Kansas§	1	5	13	12	13	—	0	1	—	—	—	0	0	—	—
Minnesota	—	0	3	—	3	—	0	0	—	—	—	0	0	—	—
Missouri	4	18	66	34	256	—	0	4	—	—	—	4	20	1	1
Nebraska§	—	1	10	1	1	—	0	1	—	—	—	0	1	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	2	1	—	—	0	0	—	—	—	0	0	—	—
S. Atlantic	35	53	134	230	163	1	1	9	4	4	2	7	60	8	19
Delaware§	—	0	4	—	16	—	0	1	—	—	—	0	3	—	—
District of Columbia	—	0	4	—	2	—	0	1	—	—	—	0	0	—	—
Florida§	22	25	53	157	46	—	0	1	1	—	1	0	2	2	—
Georgia	5	14	39	36	61	1	0	6	1	4	—	0	0	—	—
Maryland§	1	2	8	6	9	—	0	1	1	—	1	0	5	1	1
North Carolina	5	3	36	22	18	—	0	3	1	—	—	2	48	4	17
South Carolina§	—	1	5	3	7	—	0	1	—	—	—	0	3	1	1
Virginia§	2	3	8	6	4	—	0	2	—	—	—	2	12	—	—
West Virginia	—	0	66	—	—	—	0	0	—	—	—	0	0	—	—
E.S. Central	—	14	40	27	38	—	0	3	—	—	1	5	29	3	—
Alabama§	—	4	14	14	9	—	0	1	—	—	1	1	8	2	—
Kentucky	—	3	28	2	16	—	0	2	—	—	—	0	0	—	—
Mississippi	—	1	4	1	2	—	0	0	—	—	—	0	3	—	—
Tennessee§	—	5	14	10	11	—	0	2	—	—	—	4	20	1	—
W.S. Central	19	52	113	88	98	—	0	3	—	—	—	1	18	—	1
Arkansas§	—	1	6	1	6	—	0	2	—	—	—	0	17	—	—
Louisiana	—	6	13	10	8	—	0	0	—	—	—	0	1	—	—
Oklahoma	2	5	13	6	11	—	0	3	—	—	—	0	6	—	—
Texas§	17	43	92	71	73	—	0	1	—	—	—	0	3	—	1
Mountain	2	15	32	42	66	—	0	5	4	—	—	0	3	7	1
Arizona	—	8	18	17	40	—	0	5	4	—	—	0	3	7	—
Colorado§	1	2	8	14	12	—	0	1	—	—	—	0	1	—	—
Idaho§	1	0	3	3	1	—	0	0	—	—	—	0	1	—	—
Montana§	—	0	1	1	1	—	0	1	—	—	—	0	1	—	—
Nevada§	—	0	6	1	2	—	0	0	—	—	—	0	0	—	—
New Mexico§	—	3	10	6	7	—	0	0	—	—	—	0	0	—	1
Utah	—	1	4	—	3	—	0	0	—	—	—	0	1	—	—
Wyoming§	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Pacific	25	21	67	89	84	—	0	2	—	1	—	0	0	—	—
Alaska	—	0	1	—	—	N	0	0	N	N	N	0	0	N	N
California	23	18	54	83	74	—	0	2	—	1	—	0	0	—	—
Hawaii	—	1	4	—	4	N	0	0	N	N	N	0	0	N	N
Oregon	—	1	4	4	4	—	0	1	—	—	—	0	0	—	—
Washington	2	1	17	2	2	—	0	0	—	—	—	0	0	—	—
Territories															
American Samoa	—	1	1	1	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	1	—	—	N	0	0	N	N	N	0	0	N	N
Puerto Rico	—	0	1	—	—	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
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† Illnesses with similar clinical presentation that result from Spotted fever group rickettsia infections are reported as Spotted fever rickettsioses. Rocky Mountain spotted fever (RMSF) caused by Rickettsia rickettsii, is the most common and well-known spotted fever.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 5, 2011, and February 6, 2010 (5th week)*

Reporting area	*Streptococcus pneumoniae*,† invasive disease										Syphilis, primary and secondary				
	All ages					Age <5									
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	208	271	626	1,505	1,675	16	37	84	108	243	66	240	317	541	1,111
New England	8	9	99	22	50	—	1	14	—	8	1	3	11	20	8
Connecticut	—	0	91	—	—	—	0	12	—	—	—	1	8	1	1
Maine§	8	2	10	18	9	—	0	1	—	2	—	0	3	—	3
Massachusetts	—	1	5	—	9	—	0	4	—	4	1	0	7	12	—
New Hampshire	—	0	7	—	21	—	0	1	—	2	—	0	2	2	1
Rhode Island§	—	0	36	—	—	—	0	3	—	—	—	1	4	5	3
Vermont§	—	1	6	4	11	—	0	1	—	—	—	0	2	—	—
Mid. Atlantic	25	29	56	184	132	2	7	19	10	36	12	32	45	55	160
New Jersey	—	1	8	3	14	—	1	5	3	9	6	4	12	17	18
New York (Upstate)	3	3	11	9	20	1	2	9	4	12	2	2	11	12	4
New York City	4	13	32	88	39	—	2	14	—	5	—	18	31	—	98
Pennsylvania	18	11	22	84	59	1	1	5	3	10	4	7	16	26	40
E.N. Central	38	62	100	277	370	3	6	18	21	42	—	27	48	21	168
Illinois	—	2	7	3	8	—	2	5	3	8	—	7	26	1	83
Indiana	—	10	24	17	78	—	1	6	—	9	—	3	14	4	—
Michigan	1	14	29	51	79	—	1	6	5	10	—	4	9	5	37
Ohio	36	25	45	168	161	3	2	6	10	7	—	9	19	10	44
Wisconsin	1	7	22	38	44	—	0	4	3	8	—	1	3	1	4
W.N. Central	4	10	61	43	55	—	1	12	7	13	1	6	18	15	20
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	3	—	1
Kansas	—	2	7	9	4	—	0	2	—	1	—	0	3	—	—
Minnesota	—	0	46	—	13	—	0	8	—	4	—	2	9	8	3
Missouri	2	2	10	19	18	—	1	4	6	5	1	3	9	7	16
Nebraska§	2	2	9	15	17	—	0	2	1	2	—	0	2	—	—
North Dakota	—	0	11	—	—	—	0	1	—	—	—	0	0	—	—
South Dakota	—	0	3	—	3	—	0	2	—	1	—	0	1	—	—
S. Atlantic	72	62	144	477	457	6	9	27	37	62	23	55	103	177	230
Delaware	1	1	4	10	2	—	0	1	—	—	1	0	4	3	—
District of Columbia	—	0	3	1	5	—	0	2	—	2	—	2	20	9	11
Florida	40	26	89	254	185	3	3	18	16	17	3	22	44	67	86
Georgia	12	10	26	61	87	2	2	9	10	19	4	9	27	17	16
Maryland§	13	8	31	78	72	—	1	6	4	6	11	6	15	32	10
North Carolina	—	0	0	—	—	—	0	0	—	—	—	5	22	17	62
South Carolina§	5	8	24	68	84	—	1	4	2	10	—	3	10	13	15
Virginia§	1	1	4	5	7	1	1	4	5	6	4	5	22	19	28
West Virginia	—	1	9	—	15	—	0	4	—	2	—	0	2	—	2
E.S. Central	19	25	48	133	163	2	2	7	12	18	6	16	39	35	62
Alabama§	—	0	0	—	—	—	0	0	—	—	1	5	11	11	24
Kentucky	3	4	16	30	9	—	0	3	4	2	1	2	12	11	10
Mississippi	—	1	8	1	11	—	0	2	—	3	3	4	16	5	2
Tennessee§	16	20	43	102	143	2	2	6	8	13	1	5	17	8	26
W.S. Central	14	35	246	132	146	2	5	21	9	29	2	37	65	76	192
Arkansas§	—	3	19	13	12	—	0	3	1	4	1	3	10	10	33
Louisiana	1	2	7	18	20	—	0	3	—	8	1	7	30	7	45
Oklahoma	1	1	5	4	6	1	1	5	4	6	—	2	7	1	8
Texas§	12	27	225	97	108	1	3	17	4	11	—	23	33	58	106
Mountain	25	35	72	209	274	1	4	12	11	29	4	10	26	24	42
Arizona	17	13	38	116	145	1	1	7	5	15	—	3	8	2	14
Colorado	7	11	22	50	68	—	1	4	1	5	—	2	8	4	16
Idaho§	—	0	2	2	1	—	0	2	1	1	—	0	2	2	1
Montana§	—	0	2	1	1	—	0	1	—	—	—	0	2	1	—
Nevada§	—	2	4	7	10	—	0	1	1	2	3	2	9	11	6
New Mexico§	—	3	11	18	19	—	0	4	1	2	—	1	4	2	3
Utah	1	4	9	12	28	—	0	3	2	4	1	1	5	2	2
Wyoming§	—	0	15	3	2	—	0	1	—	—	—	0	0	—	—
Pacific	3	5	18	28	28	—	0	7	1	6	17	46	63	118	229
Alaska	—	2	9	8	16	—	0	5	—	4	—	0	1	—	—
California	3	3	17	20	12	—	0	5	1	2	13	39	52	106	194
Hawaii	—	0	3	—	—	—	0	0	—	—	—	0	5	—	2
Oregon	—	0	0	—	—	—	0	0	—	—	1	1	7	1	5
Washington	—	0	0	—	—	—	0	0	—	—	3	4	11	11	28
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	—	3	15	8	16
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
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† Includes drug resistant and susceptible cases of invasive Streptococcus pneumoniae disease among children <5 years and among all ages. Case definition: Isolation of S. pneumoniae from a normally sterile body site (e.g., blood or cerebrospinal fluid).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 5, 2011, and February 6, 2010 (5th week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive§				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2011	Cum 2010	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2011	Cum 2010	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2011	Cum 2010
United States	83	274	563	804	1,409	—	0	71	—	1	—	1	53	—	—
New England	—	20	44	38	103	—	0	3	—	—	—	0	2	—	—
Connecticut	—	5	20	—	21	—	0	2	—	—	—	0	2	—	—
Maine¶	—	4	15	15	31	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	4	12	—	23	—	0	2	—	—	—	0	1	—	—
New Hampshire	—	2	9	4	18	—	0	1	—	—	—	0	0	—	—
Rhode Island¶	—	0	3	1	1	—	0	0	—	—	—	0	0	—	—
Vermont¶	—	0	10	18	9	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	17	30	62	69	180	—	0	19	—	—	—	0	13	—	—
New Jersey	—	7	30	4	54	—	0	3	—	—	—	0	6	—	—
New York (Upstate)	N	0	0	N	N	—	0	9	—	—	—	0	7	—	—
New York City	—	0	1	—	—	—	0	7	—	—	—	0	4	—	—
Pennsylvania	17	20	41	65	126	—	0	3	—	—	—	0	3	—	—
E.N. Central	39	96	176	321	550	—	0	15	—	—	—	0	8	—	—
Illinois	2	20	45	52	137	—	0	10	—	—	—	0	5	—	—
Indiana¶	5	5	30	23	60	—	0	2	—	—	—	0	2	—	—
Michigan	7	30	62	94	179	—	0	6	—	—	—	0	1	—	—
Ohio	25	27	58	152	147	—	0	1	—	—	—	0	1	—	—
Wisconsin	—	7	22	—	27	—	0	0	—	—	—	0	1	—	—
W.N. Central	—	15	32	23	78	—	0	7	—	—	—	0	11	—	—
Iowa	N	0	0	N	N	—	0	1	—	—	—	0	2	—	—
Kansas¶	—	3	22	12	34	—	0	1	—	—	—	0	3	—	—
Minnesota	—	0	0	—	—	—	0	1	—	—	—	0	3	—	—
Missouri	—	8	23	10	36	—	0	1	—	—	—	0	0	—	—
Nebraska¶	N	0	0	N	N	—	0	3	—	—	—	0	7	—	—
North Dakota	—	0	10	—	7	—	0	2	—	—	—	0	2	—	—
South Dakota	—	1	7	1	1	—	0	2	—	—	—	0	3	—	—
S. Atlantic	5	35	100	85	156	—	0	4	—	—	—	0	4	—	—
Delaware¶	—	0	3	1	—	—	0	0	—	—	—	0	0	—	—
District of Columbia	—	0	4	1	—	—	0	1	—	—	—	0	1	—	—
Florida¶	—	16	57	61	82	—	0	3	—	—	—	0	1	—	—
Georgia	N	0	0	N	N	—	0	1	—	—	—	0	3	—	—
Maryland¶	N	0	0	N	N	—	0	3	—	—	—	0	2	—	—
North Carolina	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
South Carolina¶	—	0	35	—	2	—	0	1	—	—	—	0	0	—	—
Virginia¶	5	10	29	22	32	—	0	1	—	—	—	0	1	—	—
West Virginia	—	7	26	—	40	—	0	0	—	—	—	0	0	—	—
E.S. Central	3	5	22	23	21	—	0	1	—	1	—	0	3	—	—
Alabama¶	3	5	22	23	21	—	0	1	—	—	—	0	1	—	—
Kentucky	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
Mississippi	—	0	2	—	—	—	0	1	—	1	—	0	2	—	—
Tennessee¶	N	0	0	N	N	—	0	1	—	—	—	0	2	—	—
W.S. Central	19	43	177	114	161	—	0	16	—	—	—	0	3	—	—
Arkansas¶	—	2	32	—	12	—	0	3	—	—	—	0	1	—	—
Louisiana	—	2	4	3	12	—	0	3	—	—	—	0	1	—	—
Oklahoma	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Texas¶	19	39	171	111	137	—	0	15	—	—	—	0	2	—	—
Mountain	—	20	48	124	156	—	0	18	—	—	—	0	15	—	—
Arizona	—	0	0	—	—	—	0	13	—	—	—	0	9	—	—
Colorado¶	—	8	31	61	59	—	0	5	—	—	—	0	11	—	—
Idaho¶	N	0	0	N	N	—	0	0	—	—	—	0	1	—	—
Montana¶	—	3	28	46	27	—	0	0	—	—	—	0	0	—	—
Nevada¶	N	0	0	N	N	—	0	0	—	—	—	0	1	—	—
New Mexico¶	—	1	8	5	13	—	0	5	—	—	—	0	2	—	—
Utah	—	4	17	12	57	—	0	1	—	—	—	0	1	—	—
Wyoming¶	—	0	3	—	—	—	0	1	—	—	—	0	1	—	—
Pacific	—	1	7	7	4	—	0	7	—	—	—	0	6	—	—
Alaska	—	1	5	7	3	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	7	—	—	—	0	6	—	—
Hawaii	—	0	7	—	1	—	0	0	—	—	—	0	0	—	—
Oregon	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
Washington	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
Territories															
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	—	1	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	9	30	15	31	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/ncphi/disss/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.
† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for California serogroup, eastern equine, Powassan, St. Louis, and western equine diseases are available in Table I.
§ Not reportable in all states. Data from states where the condition is not reportable are excluded from this table, except starting in 2007 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/ncphi/disss/nndss/phs/infdis.htm.
¶ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE III. Deaths in 122 U.S. cities,* week ending February 5, 2011 (5th week)

Reporting area	All causes, by age (years)						P&I†
	All Ages	≥65	45–64	25–44	1–24	<1	Total
New England	552	384	123	23	4	17	69
Boston, MA	112	68	31	5	1	7	11
Bridgeport, CT	31	18	8	2	1	2	6
Cambridge, MA	16	16	—	—	—	—	3
Fall River, MA	31	22	5	3	—	1	8
Hartford, CT	60	37	20	—	—	3	6
Lowell, MA	27	23	3	1	—	—	2
Lynn, MA	3	3	—	—	—	—	—
New Bedford, MA	24	22	1	1	—	—	5
New Haven, CT	37	27	7	3	—	—	8
Providence, RI	64	46	14	1	1	2	5
Somerville, MA	2	1	1	—	—	—	—
Springfield, MA	53	36	11	5	1	—	4
Waterbury, CT	38	25	12	—	—	—	4
Worcester, MA	54	40	10	2	—	2	7
Mid. Atlantic	2,569	1,766	602	136	34	30	133
Albany, NY	46	38	6	2	—	—	3
Allentown, PA	27	23	4	—	—	—	3
Buffalo, NY	83	60	17	3	3	—	6
Camden, NJ	38	21	11	2	—	4	—
Elizabeth, NJ	27	18	8	1	—	—	4
Erie, PA	57	39	15	3	—	—	3
Jersey City, NJ	23	16	5	2	—	—	4
New York City, NY	1,151	791	290	44	13	12	58
Newark, NJ	38	24	9	4	—	1	—
Paterson, NJ	17	9	6	—	2	—	—
Philadelphia, PA	738	472	177	64	14	11	31
Pittsburgh, PA§	37	28	9	—	—	—	4
Reading, PA	41	33	5	2	1	—	2
Rochester, NY	80	61	16	3	—	—	4
Schenectady, NY	21	16	5	—	—	—	—
Scranton, PA	28	22	4	1	—	1	1
Syracuse, NY	60	51	5	4	—	—	3
Trenton, NJ	22	14	7	—	—	1	1
Utica, NY	9	7	1	—	1	—	—
Yonkers, NY	26	23	2	1	—	—	6
E.N. Central	1,878	1,275	438	93	32	40	153
Akron, OH	108	81	24	1	2	—	12
Canton, OH	46	32	11	2	—	1	1
Chicago, IL	232	168	45	15	4	—	19
Cincinnati, OH	93	58	20	8	3	4	8
Cleveland, OH	252	174	59	11	4	4	16
Columbus, OH	179	108	53	11	2	5	19
Dayton, OH	136	94	32	5	2	3	11
Detroit, MI	159	79	49	17	7	7	13
Evansville, IN	51	37	13	1	—	—	1
Fort Wayne, IN	53	36	10	3	1	3	3
Gary, IN	10	6	3	1	—	—	—
Grand Rapids, MI	40	32	8	—	—	—	4
Indianapolis, IN	149	91	45	6	3	4	15
Lansing, MI	54	31	18	3	2	—	4
Milwaukee, WI	64	46	11	4	—	3	6
Peoria, IL	38	28	7	1	—	2	5
Rockford, IL	55	46	6	1	1	1	2
South Bend, IN	36	28	7	1	—	—	3
Toledo, OH	68	55	8	2	1	2	4
Youngstown, OH	55	45	9	—	—	1	7
W.N. Central	540	389	122	16	5	8	38
Des Moines, IA	70	58	10	—	2	—	4
Duluth, MN	39	29	8	—	1	1	4
Kansas City, KS	16	13	2	1	—	—	2
Kansas City, MO	62	45	17	—	—	—	3
Lincoln, NE	49	42	4	2	—	1	3
Minneapolis, MN	55	39	12	4	—	—	4
Omaha, NE	94	67	22	3	—	2	12
St. Louis, MO	2	1	1	—	—	—	—
St. Paul, MN	58	32	20	4	1	1	2
Wichita, KS	95	63	26	2	1	3	4
S. Atlantic	1,450	941	356	98	35	20	130
Atlanta, GA	193	117	55	13	7	1	14
Baltimore, MD	180	116	50	8	4	2	17
Charlotte, NC	97	75	16	3	1	2	19
Jacksonville, FL	166	111	38	11	2	4	19
Miami, FL	218	151	44	13	7	3	21
Norfolk, VA	47	27	14	1	2	3	1
Richmond, VA	63	32	22	9	—	—	2
Savannah, GA	59	36	16	3	3	1	6
St. Petersburg, FL	51	29	15	4	3	—	2
Tampa, FL	248	171	50	21	3	3	14
Washington, D.C.	116	68	33	11	3	1	14
Wilmington, DE	12	8	3	1	—	—	1
E.S. Central	1,049	685	255	61	19	29	92
Birmingham, AL	202	135	46	10	4	7	17
Chattanooga, TN	106	71	22	6	1	6	8
Knoxville, TN	102	69	25	6	2	—	13
Lexington, KY	99	68	24	4	—	3	9
Memphis, TN	198	132	49	11	3	3	24
Mobile, AL	139	84	32	16	5	2	9
Montgomery, AL	40	26	11	2	—	1	3
Nashville, TN	163	100	46	6	4	7	9
W.S. Central	866	583	201	47	20	14	43
Austin, TX	89	53	28	5	2	1	6
Baton Rouge, LA	58	43	15	—	—	—	—
Corpus Christi, TX	35	28	7	—	—	—	5
Dallas, TX	132	77	40	10	1	3	8
El Paso, TX	74	53	11	3	5	2	1
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	66	48	11	4	1	2	1
Little Rock, AR	83	57	19	3	3	1	—
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	263	177	60	16	7	3	20
Shreveport, LA	45	34	5	4	—	2	1
Tulsa, OK	21	13	5	2	1	—	1
Mountain	997	687	215	59	14	21	78
Albuquerque, NM	138	94	26	13	—	5	17
Boise, ID	57	42	12	2	1	—	5
Colorado Springs, CO	77	54	16	4	2	1	2
Denver, CO	89	59	17	8	1	4	5
Las Vegas, NV	272	187	65	13	2	5	16
Ogden, UT	34	20	12	2	—	—	4
Phoenix, AZ	U	U	U	U	U	U	U
Pueblo, CO	32	21	7	3	1	—	4
Salt Lake City, UT	121	79	24	7	6	5	13
Tucson, AZ	177	131	36	7	1	1	12
Pacific	1,735	1,259	339	69	38	29	198
Berkeley, CA	12	10	2	—	—	—	—
Fresno, CA	130	98	23	5	1	3	15
Glendale, CA	30	25	5	—	—	—	4
Honolulu, HI	81	52	19	5	4	1	17
Long Beach, CA	73	52	16	—	3	2	16
Los Angeles, CA	258	170	56	17	9	6	31
Pasadena, CA	27	20	5	1	—	1	2
Portland, OR	115	85	20	6	4	—	8
Sacramento, CA	182	132	37	5	4	4	20
San Diego, CA	172	126	29	8	5	3	21
San Francisco, CA	98	66	23	5	2	2	18
San Jose, CA	212	153	46	6	4	3	18
Santa Cruz, CA	39	32	5	1	—	1	3
Seattle, WA	116	97	15	3	—	1	6
Spokane, WA	66	47	17	2	—	—	10
Tacoma, WA	124	94	21	5	2	2	9
Total¶	**11,636**	**7,969**	**2,651**	**602**	**201**	**208**	**934**

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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Recommended Immunization Schedules for Persons Aged 0 Through 18 Years — United States, 2011

Each year, the Advisory Committee on Immunization Practices (ACIP) publishes immunization schedules for persons aged 0 through 18 years. These schedules summarize recommendations for currently licensed vaccines for children aged 18 years and younger and include recommendations in effect as of December 21, 2010. Changes to the previous schedules (*1*) include the following:

- Guidance has been added for the hepatitis B vaccine schedule for children who did not receive a birth dose (*2*).
- Information on use of 13-valent pneumococcal conjugate vaccine has been added (*3*).
- Guidance has been added for administration of 1 or 2 doses of seasonal influenza vaccine based upon the child's history of monovalent 2009 H1N1 vaccination (*4*).
- Use of tetanus and diphtheria toxoids, and acellular pertussis (Tdap) vaccine among children aged 7 through 10 years who are incompletely vaccinated against pertussis is addressed, and reference to a specified interval between tetanus and diphtheria toxoids (Td) and Tdap vaccination has been removed (*5*).
- Footnotes for the use of human papillomavirus (HPV) vaccine have been condensed.
- A routine 2-dose schedule of quadrivalent meningococcal conjugate vaccine (MCV4) for certain persons at high risk for meningococcal disease, and recommendations for a booster dose of MCV4 have been added (*6*).
- Guidance for use of *Haemophilus influenzae* type b (Hib) vaccine in persons aged 5 years and older in the catch-up schedule has been condensed.

The National Childhood Vaccine Injury Act requires that health-care providers provide parents or patients with copies of Vaccine Information Statements before administering each dose of the vaccines listed in the schedules. Additional information is available from state health departments and from CDC at http://www.cdc.gov/vaccines/pubs/vis/default.htm.

The recommended immunization schedules for persons aged 0 through 18 years and the catch-up immunization schedule for 2011 have been approved by the Advisory Committee on Immunization Practices, the American Academy of Pediatrics, and the American Academy of Family Physicians.

Suggested citation: Centers for Disease Control and Prevention. Recommended immunization schedules for persons aged 0–18 years—United States, 2011. MMWR 2011;60(5).

Detailed recommendations for using vaccines are available from ACIP statements (available at http://www.cdc.gov/vaccines/pubs/acip-list.htm) and the 2009 Red Book (*7*). Guidance regarding the Vaccine Adverse Event Reporting System form is available online (http://www.vaers.hhs.gov) or by telephone (800-822-7967).

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FIGURE 1. Recommended immunization schedule for persons aged 0 through 6 years — United States, 2011 (for those who fall behind or start late, see the catch-up schedule [Table])

Vaccine ▼ Age ▶	Birth	1 month	2 months	4 months	6 months	12 months	15 months	18 months	19–23 months	2–3 years	4–6 years
Hepatitis B[1]	HepB	HepB			HepB						
Rotavirus[2]			RV	RV	RV[2]						
Diphtheria, Tetanus, Pertussis[3]			DTaP	DTaP	DTaP	see footnote[3]	DTaP				DTaP
Haemophilus influenzae type b[4]			Hib	Hib	Hib[4]	Hib					
Pneumococcal[5]			PCV	PCV	PCV	PCV				PPSV	
Inactivated Poliovirus[6]			IPV	IPV	IPV						IPV
Influenza[7]					Influenza (Yearly)						
Measles, Mumps, Rubella[8]						MMR		see footnote[8]			MMR
Varicella[9]						Varicella		see footnote[9]			Varicella
Hepatitis A[10]						HepA (2 doses)				HepA Series	
Meningococcal[11]										MCV4	

Range of recommended ages for all children

Range of recommended ages for certain high-risk groups

This schedule includes recommendations in effect as of December 21, 2010. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Considerations should include provider assessment, patient preference, and the potential for adverse events. Providers should consult the relevant Advisory Committee on Immunization Practices statement for detailed recommendations: http://www.cdc.gov/vaccines/pubs/acip-list.htm. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS) at http://www.vaers.hhs.gov or by telephone, 800-822-7967.

1. **Hepatitis B vaccine (HepB).** (Minimum age: birth)
   At birth:
   - Administer monovalent HepB to all newborns before hospital discharge.
   - If mother is hepatitis B surface antigen (HBsAg)-positive, administer HepB and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth.
   - If mother's HBsAg status is unknown, administer HepB within 12 hours of birth. Determine mother's HBsAg status as soon as possible and, if HBsAg-positive, administer HBIG (no later than age 1 week).

   Doses following the birth dose:
   - The second dose should be administered at age 1 or 2 months. Monovalent HepB should be used for doses administered before age 6 weeks.
   - Infants born to HBsAg-positive mothers should be tested for HBsAg and antibody to HBsAg 1 to 2 months after completion of at least 3 doses of the HepB series, at age 9 through 18 months (generally at the next well-child visit).
   - Administration of 4 doses of HepB to infants is permissible when a combination vaccine containing HepB is administered after the birth dose.
   - Infants who did not receive a birth dose should receive 3 doses of HepB on a schedule of 0, 1, and 6 months.
   - The final (3rd or 4th) dose in the HepB series should be administered no earlier than age 24 weeks.
2. **Rotavirus vaccine (RV).** (Minimum age: 6 weeks)
   - Administer the first dose at age 6 through 14 weeks (maximum age: 14 weeks 6 days). Vaccination should not be initiated for infants aged 15 weeks 0 days or older.
   - The maximum age for the final dose in the series is 8 months 0 days
   - If Rotarix is administered at ages 2 and 4 months, a dose at 6 months is not indicated.
3. **Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP).** (Minimum age: 6 weeks)
   - The fourth dose may be administered as early as age 12 months, provided at least 6 months have elapsed since the third dose.
4. ***Haemophilus influenzae* type b conjugate vaccine (Hib).** (Minimum age: 6 weeks)
   - If PRP-OMP (PedvaxHIB or Comvax [HepB-Hib]) is administered at ages 2 and 4 months, a dose at age 6 months is not indicated.
   - Hiberix should not be used for doses at ages 2, 4, or 6 months for the primary series but can be used as the final dose in children aged 12 months through 4 years.
5. **Pneumococcal vaccine.** (Minimum age: 6 weeks for pneumococcal conjugate vaccine [PCV]; 2 years for pneumococcal polysaccharide vaccine [PPSV])
   - PCV is recommended for all children aged younger than 5 years. Administer 1 dose of PCV to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.
   - A PCV series begun with 7-valent PCV (PCV7) should be completed with 13-valent PCV (PCV13).
   - A single supplemental dose of PCV13 is recommended for all children aged 14 through 59 months who have received an age-appropriate series of PCV7.
   - A single supplemental dose of PCV13 is recommended for all children aged 60 through 71 months with underlying medical conditions who have received an age-appropriate series of PCV7.
   - The supplemental dose of PCV13 should be administered at least 8 weeks after the previous dose of PCV7. See MMWR 2010:59(No. RR-11).
   - Administer PPSV at least 8 weeks after last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant.
6. **Inactivated poliovirus vaccine (IPV).** (Minimum age: 6 weeks)
   - If 4 or more doses are administered prior to age 4 years an additional dose should be administered at age 4 through 6 years.
   - The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.
7. **Influenza vaccine (seasonal).** (Minimum age: 6 months for trivalent inactivated influenza vaccine [TIV]; 2 years for live, attenuated influenza vaccine [LAIV])
   - For healthy children aged 2 years and older (i.e., those who do not have underlying medical conditions that predispose them to influenza complications), either LAIV or TIV may be used, except LAIV should not be given to children aged 2 through 4 years who have had wheezing in the past 12 months.
   - Administer 2 doses (separated by at least 4 weeks) to children aged 6 months through 8 years who are receiving seasonal influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.
   - Children aged 6 months through 8 years who received no doses of monovalent 2009 H1N1 vaccine should receive 2 doses of 2010–2011 seasonal influenza vaccine. See MMWR 2010;59(No. RR-8):33–34.
8. **Measles, mumps, and rubella vaccine (MMR).** (Minimum age: 12 months)
   - The second dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the first dose.
9. **Varicella vaccine.** (Minimum age: 12 months)
   - The second dose may be administered before age 4 years, provided at least 3 months have elapsed since the first dose.
   - For children aged 12 months through 12 years the recommended minimum interval between doses is 3 months. However, if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.
10. **Hepatitis A vaccine (HepA).** (Minimum age: 12 months)
    - Administer 2 doses at least 6 months apart.
    - HepA is recommended for children aged older than 23 months who live in areas where vaccination programs target older children, who are at increased risk for infection, or for whom immunity against hepatitis A is desired.
11. **Meningococcal conjugate vaccine, quadrivalent (MCV4).** (Minimum age: 2 years)
    - Administer 2 doses of MCV4 at least 8 weeks apart to children aged 2 through 10 years with persistent complement component deficiency and anatomic or functional asplenia, and 1 dose every 5 years thereafter.
    - Persons with human immunodeficiency virus (HIV) infection who are vaccinated with MCV4 should receive 2 doses at least 8 weeks apart.
    - Administer 1 dose of MCV4 to children aged 2 through 10 years who travel to countries with highly endemic or epidemic disease and during outbreaks caused by a vaccine serogroup.
    - Administer MCV4 to children at continued risk for meningococcal disease who were previously vaccinated with MCV4 or meningococcal polysaccharide vaccine after 3 years if the first dose was administered at age 2 through 6 years.

The Recommended Immunization Schedules for Persons Aged 0 Through 18 Years are approved by the Advisory Committee on Immunization Practices (http://www.cdc.gov/vaccines/recs/acip), the American Academy of Pediatrics (http://www.aap.org), and the American Academy of Family Physicians (http://www.aafp.org).
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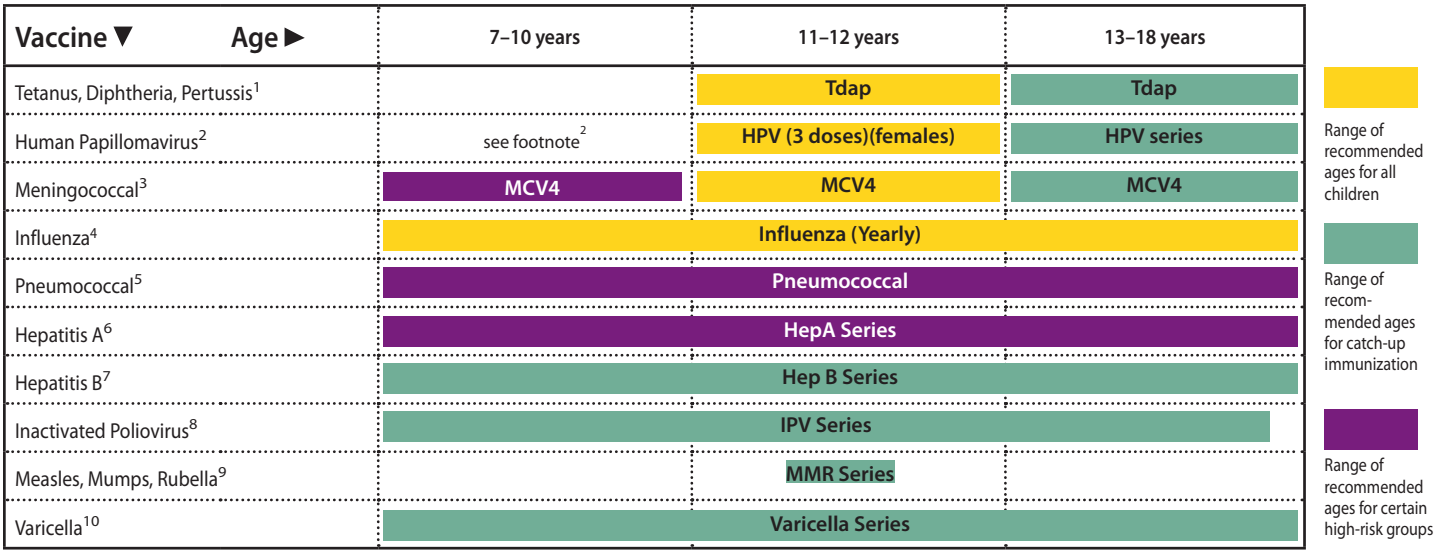
FIGURE 2. Recommended immunization schedule for persons aged 7 through 18 years — United States, 2011 (for those who fall behind or start late, see the schedule below and the catch-up schedule [Table])



This schedule includes recommendations in effect as of December 21, 2010. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Considerations should include provider assessment, patient preference, and the potential for adverse events. Providers should consult the relevant Advisory Committee on Immunization Practices statement for detailed recommendations: http://www.cdc.gov/vaccines/pubs/acip-list.htm. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS) at http://www.vaers.hhs.gov or by telephone, 800-822-7967.

1. **Tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap).** (Minimum age: 10 years for Boostrix and 11 years for Adacel)
   - Persons aged 11 through 18 years who have not received Tdap should receive a dose followed by Td booster doses every 10 years thereafter.
   - Persons aged 7 through 10 years who are not fully immunized against pertussis (including those never vaccinated or with unknown pertussis vaccination status) should receive a single dose of Tdap. Refer to the catch-up schedule if additional doses of tetanus and diphtheria toxoid–containing vaccine are needed.
   - Tdap can be administered regardless of the interval since the last tetanus and diphtheria toxoid–containing vaccine.
2. **Human papillomavirus vaccine (HPV).** (Minimum age: 9 years)
   - Quadrivalent HPV vaccine (HPV4) or bivalent HPV vaccine (HPV2) is recommended for the prevention of cervical precancers and cancers in females.
   - HPV4 is recommended for prevention of cervical precancers, cancers, and genital warts in females.
   - HPV4 may be administered in a 3-dose series to males aged 9 through 18 years to reduce their likelihood of genital warts.
   - Administer the second dose 1 to 2 months after the first dose and the third dose 6 months after the first dose (at least 24 weeks after the first dose).
3. **Meningococcal conjugate vaccine, quadrivalent (MCV4).** (Minimum age: 2 years)
   - Administer MCV4 at age 11 through 12 years with a booster dose at age 16 years.
   - Administer 1 dose at age 13 through 18 years if not previously vaccinated.
   - Persons who received their first dose at age 13 through 15 years should receive a booster dose at age 16 through 18 years.
   - Administer 1 dose to previously unvaccinated college freshmen living in a dormitory.
   - Administer 2 doses at least 8 weeks apart to children aged 2 through 10 years with persistent complement component deficiency and anatomic or functional asplenia, and 1 dose every 5 years thereafter.
   - Persons with HIV infection who are vaccinated with MCV4 should receive 2 doses at least 8 weeks apart.
   - Administer 1 dose of MCV4 to children aged 2 through 10 years who travel to countries with highly endemic or epidemic disease and during outbreaks caused by a vaccine serogroup.
   - Administer MCV4 to children at continued risk for meningococcal disease who were previously vaccinated with MCV4 or meningococcal polysaccharide vaccine after 3 years (if first dose administered at age 2 through 6 years) or after 5 years (if first dose administered at age 7 years or older).
4. **Influenza vaccine (seasonal).**
   - For healthy nonpregnant persons aged 7 through 18 years (i.e., those who do not have underlying medical conditions that predispose them to influenza complications), either LAIV or TIV may be used.
   - Administer 2 doses (separated by at least 4 weeks) to children aged 6 months through 8 years who are receiving seasonal influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.
   - Children 6 months through 8 years of age who received no doses of monovalent 2009 H1N1 vaccine should receive 2 doses of 2010-2011 seasonal influenza vaccine. See MMWR 2010;59(No. RR-8):33–34.
5. **Pneumococcal vaccines.**
   - A single dose of 13-valent pneumococcal conjugate vaccine (PCV13) may be administered to children aged 6 through 18 years who have functional or anatomic asplenia, HIV infection or other immunocompromising condition, cochlear implant or CSF leak. See MMWR 2010;59(No. RR-11).
   - The dose of PCV13 should be administered at least 8 weeks after the previous dose of PCV7.
   - Administer pneumococcal polysaccharide vaccine at least 8 weeks after the last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant. A single revaccination should be administered after 5 years to children with functional or anatomic asplenia or an immunocompromising condition.
6. **Hepatitis A vaccine (HepA).**
   - Administer 2 doses at least 6 months apart.
   - HepA is recommended for children aged older than 23 months who live in areas where vaccination programs target older children, or who are at increased risk for infection, or for whom immunity against hepatitis A is desired.
7. **Hepatitis B vaccine (HepB).**
   - Administer the 3-dose series to those not previously vaccinated. For those with incomplete vaccination, follow the catch-up recommendations (Table).
   - A 2-dose series (separated by at least 4 months) of adult formulation Recombivax HB is licensed for children aged 11 through 15 years.
8. **Inactivated poliovirus vaccine (IPV).**
   - The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.
   - If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age.
9. **Measles, mumps, and rubella vaccine (MMR).**
   - The minimum interval between the 2 doses of MMR is 4 weeks.
10. **Varicella vaccine.**
    - For persons aged 7 through 18 years without evidence of immunity (see MMWR 2007;56[No. RR-4]), administer 2 doses if not previously vaccinated or the second dose if only 1 dose has been administered.
    - For persons aged 7 through 12 years, the recommended minimum interval between doses is 3 months. However, if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.
    - For persons aged 13 years and older, the minimum interval between doses is 4 weeks.

The Recommended Immunization Schedules for Persons Aged 0 Through 18 Years are approved by the Advisory Committee on Immunization Practices (http://www.cdc.gov/vaccines/recs/acip), the American Academy of Pediatrics (http://www.aap.org), and the American Academy of Family Physicians (http://www.aafp.org).
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TABLE. Catch-up immunization schedule for persons aged 4 months through 18 years who start late or who are more than 1 month behind — United States, 2011

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age.

Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
PERSONS AGED 4 MONTHS THROUGH 6 YEARS					
Hepatitis B[1]	Birth	4 weeks	8 weeks (and at least 16 weeks after first dose)		
Rotavirus[2]	6 wks	4 weeks	4 weeks[2]		
Diphtheria, Tetanus, Pertussis[3]	6 wks	4 weeks	4 weeks	6 months	6 months[3]
Haemophilus influenzae type b[4]	6 wks	4 weeks if first dose administered at younger than age 12 months; 8 weeks (as final dose) if first dose administered at age 12–14 months; No further doses needed if first dose administered at age 15 months or older	4 weeks[4] if current age is younger than 12 months; 8 weeks (as final dose)[4] if current age is 12 months or older and first dose administered at younger than age 12 months and second dose administered at younger than 15 months; No further doses needed if previous dose administered at age 15 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months	
Pneumococcal[5]	6 wks	4 weeks if first dose administered at younger than age 12 months; 8 weeks (as final dose for healthy children) if first dose administered at age 12 months or older or current age 24 through 59 months; No further doses needed for healthy children if first dose administered at age 24 months or older	4 weeks if current age is younger than 12 months; 8 weeks (as final dose for healthy children) if current age is 12 months or older; No further doses needed for healthy children if previous dose administered at age 24 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age	
Inactivated Poliovirus[6]	6 wks	4 weeks	4 weeks	6 months[6]	
Measles, Mumps, Rubella[7]	12 mos	4 weeks			
Varicella[8]	12 mos	3 months			
Hepatitis A[9]	12 mos	6 months			
PERSONS AGED 7 THROUGH 18 YEARS					
Tetanus,Diphtheria/ Tetanus,Diphtheria,Pertussis[10]	7 yrs[10]	4 weeks	4 weeks if first dose administered at younger than age 12 months; 6 months if first dose administered at 12 months or older	6 months if first dose administered at younger than age 12 months	
Human Papillomavirus[11]	9 yrs	Routine dosing intervals are recommended (females)[11]			
Hepatitis A[9]	12 mos	6 months			
Hepatitis B[1]	Birth	4 weeks	8 weeks (and at least 16 weeks after first dose)		
Inactivated Poliovirus[6]	6 wks	4 weeks	4 weeks[6]	6 months[6]	
Measles, Mumps, Rubella[7]	12 mos	4 weeks			
Varicella[8]	12 mos	3 months if person is younger than age 13 years; 4 weeks if person is aged 13 years or older			

1. **Hepatitis B vaccine (HepB).**
   - Administer the 3-dose series to those not previously vaccinated.
   - The minimum age for the third dose of HepB is 24 weeks.
   - A 2-dose series (separated by at least 4 months) of adult formulation Recombivax HB is licensed for children aged 11 through 15 years.
2. **Rotavirus vaccine (RV).**
   - The maximum age for the first dose is 14 weeks 6 days. Vaccination should not be initiated for infants aged 15 weeks 0 days or older.
   - The maximum age for the final dose in the series is 8 months 0 days.
   - If Rotarix was administered for the first and second doses, a third dose is not indicated.
3. **Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP).**
   - The fifth dose is not necessary if the fourth dose was administered at age 4 years or older.
4. ***Haemophilus influenzae* type b conjugate vaccine (Hib).**
   - 1 dose of Hib vaccine should be considered for unvaccinated persons aged 5 years or older who have sickle cell disease, leukemia, or HIV infection, or who have had a splenectomy.
   - If the first 2 doses were PRP-OMP (PedvaxHIB or Comvax), and administered at age 11 months or younger, the third (and final) dose should be administered at age 12 through 15 months and at least 8 weeks after the second dose.
   - If the first dose was administered at age 7 through 11 months, administer the second dose at least 4 weeks later and a final dose at age 12 through 15 months.
5. **Pneumococcal vaccine.**
   - Administer 1 dose of 13-valent pneumococcal conjugate vaccine (PCV13) to all healthy children aged 24 through 59 months with any incomplete PCV schedule (PCV7 or PCV13).
   - For children aged 24 through 71 months with underlying medical conditions, administer 1 dose of PCV13 if 3 doses of PCV were received previously or administer 2 doses of PCV13 at least 8 weeks apart if fewer than 3 doses of PCV were received previously.
   - A single dose of PCV13 is recommended for certain children with underlying medical conditions through 18 years of age. See age-specific schedules for details.
   - Administer pneumococcal polysaccharide vaccine (PPSV) to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant, at least 8 weeks after the last dose of PCV. A single revaccination should be administered after 5 years to children with functional or anatomic asplenia or an immunocompromising condition. See MMWR 2010;59(No. RR-11).
6. **Inactivated poliovirus vaccine (IPV).**
   - The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.
   - A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months following the previous dose.
   - In the first 6 months of life, minimum age and minimum intervals are only recommended if the person is at risk for imminent exposure to circulating poliovirus (i.e., travel to a polio-endemic region or during an outbreak).
7. **Measles, mumps, and rubella vaccine (MMR).**
   - Administer the second dose routinely at age 4 through 6 years. The minimum interval between the 2 doses of MMR is 4 weeks.
8. **Varicella vaccine.**
   - Administer the second dose routinely at age 4 through 6 years.
   - If the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.
9. **Hepatitis A vaccine (HepA).**
   - HepA is recommended for children aged older than age 23 months who live in areas where vaccination programs target older children, or who are at increased risk for infection, or for whom immunity against hepatitis A is desired.
10. **Tetanus and diphtheria toxoids (Td) and tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap).**
    - Doses of DTaP are counted as part of the Td/Tdap series.
    - Tdap should be substituted for a single dose of Td in the catch-up series for children aged 7 through 10 years or as a booster for children aged 11 through 18 years; use Td for other doses.
11. **Human papillomavirus vaccine (HPV).**
    - Administer the series to females at age 13 through 18 years if not previously vaccinated or have not completed the vaccine series.
    - Quadrivalent HPV vaccine (HPV4) may be administered in a 3-dose series to males aged 9 through 18 years to reduce their likelihood of genital warts.
    - Use recommended routine dosing intervals for series catch-up (i.e., the second and third doses should be administered at 1 to 2 and 6 months after the first dose). The minimum interval between the first and second doses is 4 weeks. The minimum interval between the second and third doses is 12 weeks, and the third dose should be administered at least 24 weeks after the first dose.

Information about reporting reactions after immunization is available online at http://www.vaers.hhs.gov or by telephone, 800-822-7967. Suspected cases of vaccine-preventable diseases should be reported to the state or local health department. Additional information, including precautions and contraindications for immunization, is available from the National Center for Immunization and Respiratory Diseases at http://www.cdc.gov/vaccines or telephone, 800-CDC-INFO (800-232-4636).

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