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National Birth Defects Prevention Month and Folic Acid Awareness Week

January is National Birth Defects Prevention Month. Birth defects affect approximately one in 33 newborns and are a leading cause of infant mortality in the United States (*1*). Lifetime care for all infants born in a single year with one or more of 17 severe birth defects has been estimated at $6 billion (*2*).

This year, the focus is on obesity prevention and weight management before, during, and after pregnancy. Maternal obesity has been linked to certain birth defects (e.g., neural tube defects) (*3*). Health-care professionals should encourage women to reach a healthy weight before pregnancy to reduce their infant's risk for birth defects.

January 5–11 is National Folic Acid Awareness Week. Consuming 400 μg of folic acid daily, before and during early pregnancy, will help reduce a woman's risk for pregnancy affected by a neural tube defect (*4*). Health-care professionals should encourage women who can become pregnant to consume folic acid daily through a vitamin supplement or enriched foods. Additional information regarding prevention of birth defects is available at http://www.cdc.gov/ncbddd.

References

1. Hoyert DL, Mathews TJ, Menacker F, et al. Annual summary of vital statistics: 2004. Pediatrics 2006;117:168–83.
2. CDC. Economic costs of birth defects and cerebral palsy—United States, 1992. MMWR 1995;44:694–9.
3. Rasmussen SA, Chu SY, Kim SY, Schmid CH, Lau J. Maternal obesity and risk of neural tube defects: a metaanalysis. Am J Obstet Gynecol 2008;198:611–9.
4. CDC. Recommendations for the use of folic acid to reduce the number of cases of spina bifida and other neural tube defects. MMWR 1992;41(No. RR-14).

Racial/Ethnic Differences in the Birth Prevalence of Spina Bifida — United States, 1995–2005

In 1992, the U.S. Public Health Service recommended that all women of childbearing age consume 400 μg of folic acid daily to help prevent pregnancies affected by neural tube defects (NTDs) such as spina bifida (*1*). Subsequently, the Food and Drug Administration mandated adding folic acid to all enriched cereal grain products by January 1998 (*2*). During October 1998–December 1999, the birth prevalence of spina bifida in the United States decreased 22.9% compared with 1995–1996 (*3*); however, by 2003–2004, no further decrease had been observed (*4*). Notably, the prevalence of NTD-affected pregnancies remained higher among Hispanic women than among women in other racial/ethnic populations (*4*,*5*). To update previously reported data and assess racial/ethnic differences, CDC analyzed birth certificate data for four periods during 1995–2005. This report summarizes the results of that analysis, which indicated that from the early postfortification period, 1999–2000, to the most recent period of analysis, 2003–2005, the prevalence of spina bifida declined 6.9%, from 2.04 to 1.90 per 10,000 live births (prevalence

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ratio [PR] = 0.93; 95% confidence interval [CI] = 0.87–1.00). Among infants with non-Hispanic black mothers, prevalence fell 19.8%, from 2.17 to 1.74 per 10,000 live births (PR = 0.80; CI = 0.67–0.96), while prevalence among infants with non-Hispanic white and Hispanic mothers remained nearly constant. Additional public health efforts targeting women with known risk factors (e.g., obesity and certain genetic factors) likely are needed to further reduce the prevalence of spina bifida in the United States.

Birth certificate data in the United States are collected routinely by state vital statistics programs, and data on selected birth defects have been available since 1989 from the National Vital Statistics System. The U.S. Census Bureau has estimated that more than 99% of all births in the United States are registered on birth certificates.* Race and Hispanic ethnicity of the mother are reported independently on birth certificates. Although 1997 revised standards require federal data collection programs to allow respondents to select more than one race category, these revisions have not been implemented for birth registration in all states. Therefore, to facilitate comparison of birth data in this analysis, mothers who reported multiple race categories were assigned to one of the following four classifications: non-Hispanic white, non-Hispanic black, Hispanic, or all other (*6*). Small sample sizes precluded calculation of prevalence estimates for mothers in the "other" group. Data were included from 46 states and the District of Columbia, representing approximately 90% of live births in the United States during the periods examined. Births in Maryland, New Mexico, New York, and Oklahoma were excluded because information on spina bifida from those states was not reported on birth certificates for at least 1 year or was recorded as "not stated" for >25% of all births for multiple years; however, exclusion of the four states was found to have a negligible impact on prevalence estimates.

The analysis described in this report compared the number of cases of spina bifida per 10,000 live births during four periods, relative to the January 1998 folic acid mandate: prefortification (1995–1996), early postfortification (1999–2000), mid-postfortification (2001–2002), and recent postfortification (2003–2005). Births during 1997–1998 were excluded because most conceptions corresponding to births during that period occurred before folic acid fortification was mandated in the United States. To evaluate postfortification trends in the prevalence of spina bifida and update previous analyses (*3,4*), the early postfortification period (1999–2000) was selected as the referent period for PR calculations. PRs were

* US Census Bureau. 1970 census of population and housing. Series PHC(E). Evaluation and research program: No. 2, test of birth registration completeness, 1964 to 1968. Washington, DC: US Department of Commerce, US Census Bureau; 1973.

calculated by dividing birth prevalence during the prefortification, mid-postfortification, and recent postfortification periods by birth prevalence during the early postfortification period (1999–2000); CIs were calculated by Poisson regression.

During the four comparison periods combined, infants with non-Hispanic white, Hispanic, and non-Hispanic black mothers accounted for 58.7%, 21.0%, and 14.1% of all births, respectively. An average of 767 cases of spina bifida were reported each year among all racial/ethnic populations. The prevalence of spina bifida reported on birth certificates during 2003–2005 was 2.00 per 10,000 live births among infants with non-Hispanic white mothers, 1.96 among infants with Hispanic mothers, and 1.74 among infants with non-Hispanic black mothers (Table, Figure).

From the early postfortification period of 1999–2000 to the recent postfortification period of 2003–2005, the birth prevalence of spina bifida among infants born to mothers of all racial/ethnic populations decreased 6.9%, from 2.04 to 1.90 cases per 10,000 live births (PR = 0.93) (Table). Among non-Hispanic black mothers, the prevalence decreased 19.8%, from 2.17 to 1.74 cases per 10,000 live births (PR = 0.80). No significant decrease was noted for infants with non-Hispanic white and Hispanic mothers when the same two periods were compared. In contrast to previous reports (*5*), spina bifida prevalence was similar for infants born to Hispanic and non-Hispanic white mothers.

Reported by: *SL Boulet, DrPH, D Gambrell, MSHS, M Shin, DrPH, MA Honein, PhD, National Center on Birth Defects and Developmental Disabilities; TJ Mathews, MS, National Center for Health Statistics, CDC.*

Editorial Note: This report updates and expands upon a previously published study (*3*) and provides additional information on racial/ethnic differences in the birth prevalence of spina bifida in the United States. The previous study revealed that from October 1995–December 1996 (before the folic acid fortification mandate) to October 1998–December 1999 (after the January 2008 mandate deadline), the prevalence of spina bifida decreased from 2.62 to 2.02 per 10,000 live births, a decrease of 22.9% (*3*). The analysis in this report indicates that from the early postfortification period, 1999–2000, to the most recent surveillance period, 2003–2005, the prevalence of spina bifida in the United States decreased 6.9%. The analysis also showed significant decreases in prevalence among infants with non-Hispanic black mothers, but not among infants with non-Hispanic white mothers or Hispanic mothers.

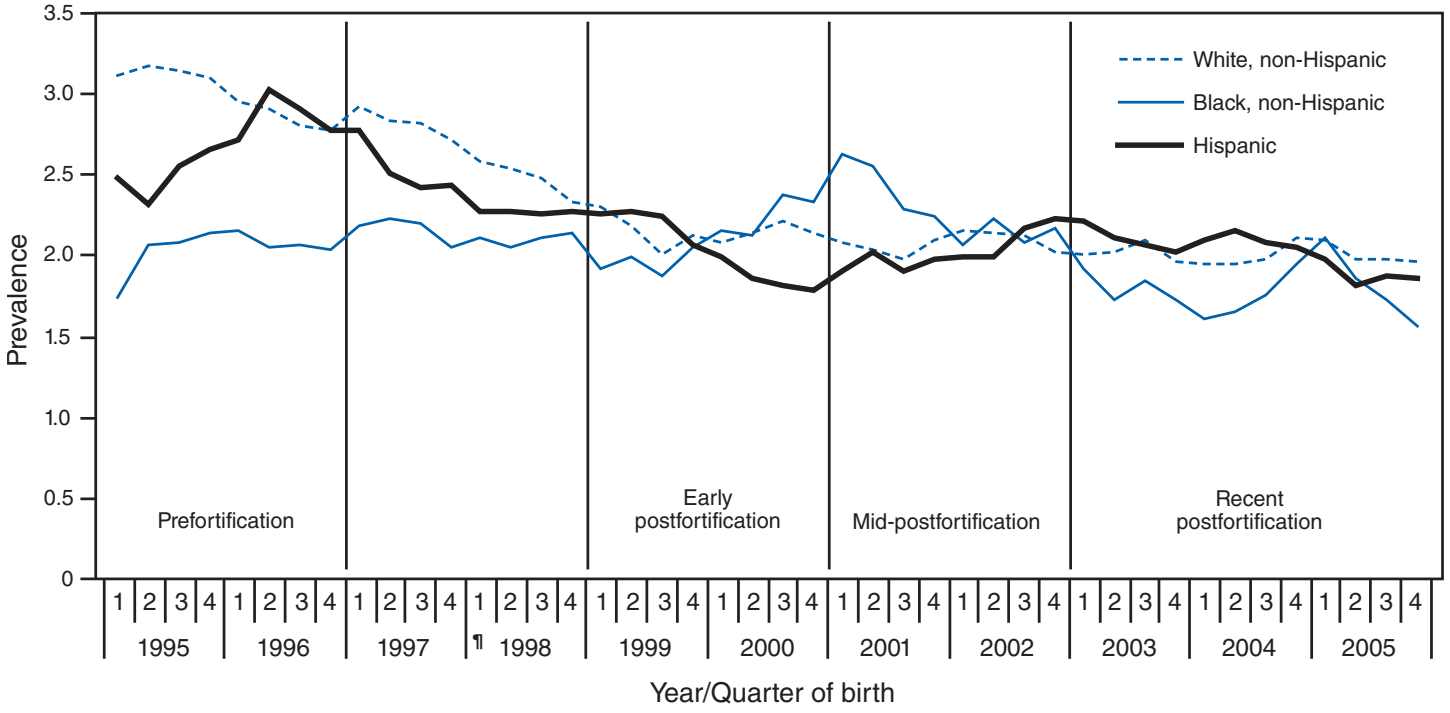
These findings generally are consistent with those from a previous study that used population-based data from 21 birth defects surveillance systems and reported a 3% decline in spina bifida from 1999–2000 to 2003–2004 for the total

TABLE. Birth prevalence of spina bifida,* by race/ethnicity of mother and selected folic acid fortification mandate periods† — National Vital Statistics System, United States,§ 1995–1996, 1999–2000, 2001–2002, and 2003–2005

Fortification mandate period¶	No. of cases	No. of live births	Birth prevalence	Prevalence ratio (95% CI**)
All racial/ethnic populations				
Prefortification (1995–1996)	1,864	6,965,809	2.68	1.31 (1.22–1.40)
Early postfortification (1999–2000)	1,471	7,204,393	2.04	Referent
Mid-postfortification (2001–2002)	1,450	7,240,291	2.00	0.98 (0.91–1.05)
Recent postfortification (2003–2005)	2,116	11,126,673	1.90	0.93 (0.87–1.00)
White, non-Hispanic				
Prefortification (1995–1996)	1,260	4,327,798	2.91	1.38 (1.27–1.50)
Early postfortification (1999–2000)	906	4,291,654	2.11	Referent
Mid-postfortification (2001–2002)	854	4,198,752	2.03	0.96 (0.88–1.06)
Recent postfortification (2003–2005)	1,254	6,269,861	2.00	0.95 (0.87–1.03)
Black, non-Hispanic				
Prefortification (1995–1996)	210	1,013,369	2.07	0.95 (0.79–1.15)
Early postfortification (1999–2000)	226	1,039,112	2.17	Referent
Mid-postfortification (2001–2002)	222	1,018,074	2.18	1.05 (0.83–1.21)
Recent postfortification (2003–2005)	265	1,522,521	1.74	0.80 (0.67–0.96)
Hispanic				
Prefortification (1995–1996)	333	1,236,449	2.69	1.42 (1.21–1.66)
Early postfortification (1999–2000)	272	1,428,412	1.90	Referent
Mid-postfortification (2001–2002)	326	1,568,936	2.08	1.09 (0.93–1.28)
Recent postfortification (2003–2005)	506	2,587,519	1.96	1.03 (0.89–1.19)

* Per 10,000 live births.
† The Food and Drug Administration mandated addition of folic acid to all enriched cereal grain products in the United States by January 1998.
§ Data from four states (Maryland, New Mexico, New York, and Oklahoma) were excluded because information on spina bifida was not reported on birth certificates for at least 1 year or was recorded as "not stated" for >25% of all births for multiple years.
¶ Births during 1997–1998 were excluded because most conceptions corresponding to births during that period occurred before folic acid fortification was mandated in the United States.
** Confidence interval.

FIGURE. Four-quarter simple moving average of birth prevalence of spina bifida,* by race/ethnicity of mother and selected folic acid fortification mandate periods† — National Vital Statistics System, United States,§ 1995–2005



* Per 10,000 live births.
† The Food and Drug Administration mandated addition of folic acid to all enriched cereal grain products in the United States by January 1998.
§ Data from four states (Maryland, New Mexico, New York, and Oklahoma) were excluded because information on spina bifida was not reported on birth certificates for at least 1 year or was recorded as "not stated" for >25% of all births for multiple years.
¶ Births during 1997–1998 were excluded because most conceptions corresponding to births during that period occurred before folic acid fortification was mandated in the United States.

population and a 14% decline for infants with non-Hispanic black mothers. However, the decreases in that study were not statistically significant (*4*). In this report, the decrease in prevalence of spina bifida among infants with non-Hispanic black mothers is similar in magnitude to those observed earlier in the postfortification period for infants with non-Hispanic white and Hispanic mothers. This might have resulted from a delay in the effect of folic acid fortification of cereal grain products among non-Hispanic black mothers. If so, the reasons for the delay might be racial/ethnic differences in folic acid consumption, eating habits, or genetic factors (*4,5,7*). Another possibility is that, during this period, changes might have occurred in spina bifida ascertainment on birth certificates that differed by race/ethnicity. Although no specific evidence exists to suggest differential ascertainment by race/ethnicity, the possibility cannot be ruled out.

The findings in this report are subject to at least two limitations. First, birth defects are underreported on birth certificates, including defects such as spina bifida that are readily apparent at birth (*8*). Previous findings comparing birth certificate data to birth defects registry data have reported a sensitivity of 40% (*8*). The low sensitivity of birth certificate data likely is attributable to false negatives and might lead to an underestimate of the total number of cases of spina bifida. Because the overall trends in spina bifida prevalence based on birth certificate data are consistent with those derived from population-based birth defects surveillance data, substantial changes in the proportion of false negatives among study periods are unlikely. Although the sensitivity of birth certificates is low for spina bifida, a positive predictive value of 100% for spina bifida suggests that the trends described in this report reflect true cases of spina bifida (*8*). Second, because birth certificates are completed for live births only, pregnancies affected by spina bifida that ended in induced or spontaneous abortion were not ascertained. Although little information is available regarding recent trends in pregnancy termination after a prenatal diagnosis of spina bifida, data from the Metropolitan Atlanta Congenital Defects Program indicate that the yearly proportion of all defects that were diagnosed prenatally remained constant from 1995 to 2004 (*9*). Furthermore, the trends presented in this report are consistent with those based on birth defects surveillance data that included prenatally ascertained cases (*4*), which suggests that the observed changes are likely to be representative of actual changes in spina bifida prevalence.

An estimated 50%–70% of NTDs can be prevented through daily consumption of 400 μg of folic acid (*1*). Recent reports have described decreasing concentrations of serum and red blood cell folate among women of childbearing age (*10*). The results presented in this report show no corresponding rise in spina bifida prevalence. However, continued monitoring of spina bifida prevalence is essential to monitor the impact of folic acid fortification and other interventions to reduce the incidence of NTDs. Future decreases in the prevalence of spina bifida might be attenuated as the percentage of NTDs preventable by consuming folic acid continues to diminish.

Future public health efforts to reduce the prevalence of spina bifida should focus on subgroups of women with known risk factors for an NTD-affected pregnancy, such as obesity, Hispanic ethnicity, and certain genetic factors. Additional study of genetic and environmental risk and protective factors is warranted. All women of childbearing age who are capable of becoming pregnant should consume 400 μg of folic acid daily through dietary supplements and/or fortified foods, in addition to a diet containing folate-rich foods, to reduce their risk for a pregnancy affected by an NTD.

References

1. CDC. Recommendations for the use of folic acid to reduce the number of cases of spina bifida and other neural tube defects. MMWR 1992;41(No. RR-14).
2. Food and Drug Administration. Food standards: amendment of standards of identity for enriched grain products to require addition of folic acid. Federal Register 1996;61:8781–97.
3. Honein MA, Paulozzi LJ, Mathews TJ, Erickson JD, Wong LY. Impact of folic acid fortification of the US food supply on the occurrence of neural tube defects. JAMA 2001;285:2981–6.
4. Boulet SL, Yang Q, Mai C, et al. Trends in the postfortification prevalence of spina bifida and anencephaly in the United States. Birth Defects Res A Clin Mol Teratol 2008;82:527–32.
5. Williams LJ, Rasmussen SA, Flores A, Kirby RS, Edmonds LD. Decline in the prevalence of spina bifida and anencephaly by race/ethnicity: 1995–2002. Pediatrics 2005;116:580–6.
6. Parker JD, Schenker N, Ingram DD, Weed JA, Heck KE, Madans JH. Bridging between two standards for collecting information on race and ethnicity: an application to Census 2000 and vital rates. Public Health Rep 2004;119:192–205.
7. Mitchell LE. Epidemiology of neural tube defects. Am J Med Genet C Semin Med Genet 2005;135C:88–94.
8. Watkins ML, Edmonds L, McClearn A, Mullins L, Mulinare J, Khoury M. The surveillance of birth defects: the usefulness of the revised US standard birth certificate. Am J Public Health 1996;86:731–4.
9. Cragan JD, Gilboa SM. Including prenatal diagnoses in birth defects monitoring: experience of the Metropolitan Atlanta Congenital Defects Program. Birth Defects Res A Clin Mol Teratol. In press 2009.
10. CDC. Folate status in women of childbearing age, by race/ethnicity—United States, 1999–2000, 2001–2002, and 2003–2004. MMWR 2007;55:1377–80.

Investigation of Patients Treated by an HIV-Infected Cardiothoracic Surgeon — Israel, 2007

Transmission of human immunodeficiency virus (HIV) from an infected health-care worker to patients is rare (*1*), with the greatest potential for occurrence during exposure-prone, invasive surgical procedures in which the blood of the health-care worker might come into contact with patients' blood or mucous membranes. When a surgeon is discovered to have HIV infection, a decision must be made about notification of patients, but only limited data are available to guide decision-making. Such notifications generally are decided upon on a case-by-case basis, taking into account such factors as the nature of the procedures performed, the infection-control knowledge and practices of the infected surgeon, the presumed likelihood of transmission, and available resources (*2*). This report describes the case of a cardiothoracic surgeon in Israel specializing in open-heart procedures (coronary artery bypass grafting and valve surgery) who was found to be HIV positive in January 2007 during evaluation for fever of recent onset. The duration of infection was unknown. A lookback investigation of patients operated on by the infected surgeon during the preceding 10 years was conducted under the auspices of the Israel Ministry of Health to determine whether any surgeon-to-patient HIV transmission had occurred. Of 1,669 patients identified, 545 (33%) underwent serologic testing for HIV antibody. All results were negative. A Ministry-appointed panel of experts delineated conditions under which the surgeon could resume work. The results of this investigation add to previously published data indicating a low risk for provider-to-patient HIV transmission.

The surgeon had been in practice for more than 2 decades and performed approximately 150 procedures per year. The surgeon reported no risk factors for HIV and had no available record of prior HIV testing. The surgeon was aware of and reportedly compliant with institutional infection-control guidelines and did not report any incidents of blood exposures that might have placed patients at risk.

At the time of diagnosis, the surgeon's CD4 T-cell count was 49 cells/μL, and HIV RNA was >100,000 copies/mL. The surgeon had a protective serum level of hepatitis B surface antibody and was seronegative for hepatitis C virus (HCV) antibody.

The Ministry of Health was notified of the diagnosis and, to allay fears of potential exposure, in January 2007 instructed the hospitals at which the surgeon worked to contact all patients operated on by the surgeon since 1997 and to offer them HIV testing. Computerized lists of the surgeon's patients generated by the hospitals based on operation reports were cross-checked

with the national registry of HIV-positive patients. Because all laboratories performing non-anonymous HIV testing in Israel are obligated to send positive serum samples to the Ministry of Health's national HIV reference laboratory for confirmation, this registry contains the names of all patients who have tested positive for HIV infection in the country, with the exception of those found positive in anonymous testing. Patients were contacted by regular mail or telephone, advised that an unnamed surgeon who operated on them was found to be HIV positive, and told that although the risk for HIV transmission via surgery was minimal, they were being offered free testing and counseling. A telephone hotline for patients with questions was established at the surgeon's hospital of current employment, and this number was provided via the national news media and in the letters mailed by this hospital.

The protocol for testing, as delineated by the Ministry of Health, was as follows: 1) initial screening for HIV antibody was to be performed via enzyme-linked immunosorbent assay (ELISA) of serum; 2) if the result was equivocal, combination testing, via ELISA, for HIV antibody and p24 antigen simultaneously, was to be performed twice; 3) if the result of combination testing was equivocal, an additional serum sample was to be requested for testing 1 month later; and 4) in the event of a positive result on HIV antibody or combination testing, serum was to be submitted to the national reference laboratory for Western blot confirmation.

A total of 1,669 patients, operated on by the surgeon at four hospitals, were identified. None was listed in the national HIV registry, indicating that none had ever tested positive (non-anonymously) for HIV infection in Israel. A total of 121 were known to have died, and a correct address could not be obtained for 54. An attempt was made to contact the remaining 1,494 patients. A total of 545 patients (33% of the total 1,669) submitted serum samples. A total of 531 samples (97%) were tested at either of two virology laboratories at tertiary-care hospitals; the remaining 14 samples were tested at outside laboratories, and results were submitted to the investigators. All samples were reported negative for HIV antibody (1-sided, 97.5% confidence interval = 0–6.7 per 1,000 patients, via Poisson distribution).

After receipt of these results, the Ministry of Health appointed a panel of experts to determine whether and under what conditions the surgeon could resume work. Upon diagnosis, a regimen of antiretroviral therapy had been prescribed for the surgeon, and at the time of the panel's report, the surgeon's CD4 T-cell count was 272 cells/μL and HIV RNA was below the threshold of detection (<50 copies/mL). Antiretroviral-resistance testing performed at baseline revealed no resistance-associated mutations. After considering the clinical details of the surgeon's case, the published literature on HIV transmission from infected health-care workers to patients, and the findings of this lookback investigation, the panel recommended allowing the resumption of work, with no restrictions on the types of procedures the surgeon could perform, provided the surgeon met the following conditions: 1) instruction by infection-control personnel at the surgeon's hospital regarding safe practices, including adherence to standard precautions and hand hygiene requirements (*3*), double-gloving during all surgery, and immediate reporting of any cuts in gloves or fingersticks, plus agreement by the surgeon to abide by these practices; 2) routine health-care follow-up at 3-month intervals, including measurement of CD4 T-cell count and HIV RNA; and 3) adherence to a prescribed antiretroviral regimen, maintenance of good health, and continued CD4 T-cell level >200 cells/μL, with HIV RNA below the threshold of detection. On the basis of the published literature, the panel did not require notification of prospective patients of the surgeon's HIV status because of the extremely low likelihood of transmission to patients if the conditions for resuming surgery were met.

These conditions were consistent with the recommendations contained in the position paper of the Society for Healthcare Epidemiology of America of 1997 (*4*). By agreement with the surgeon and the administration at the hospital of current employment, an infection-control physician on the hospital's staff familiar with the case was charged with ensuring compliance with these conditions. As of June 2008, none of the 1,669 patients included in the initial contact list was listed in the national HIV registry.

Reported by: *MJ Schwaber, MD, on behalf of the HIV Lookback Working Group, Israel Ministry of Health. I Sereti, MD, National Institute of Allergy and Infectious Disease, National Institutes of Health, US Dept of Health and Human Svcs.*

Editorial Note: Transmission of HIV from a health-care worker to patients is extremely rare. In the early 1990s, CDC reported on six patients infected by a Florida dentist (*5*). Subsequently, only three additional cases have been reported: 1) probable transmission from an orthopedic surgeon to a patient in France; 2) probable transmission from a nurse to a patient, also in France; and 3) probable transmission from a gynecologist to a patient during a cesarean delivery in Spain (*6*). This report contributes to the published literature suggesting that, when proper procedures are followed, the risk for surgeon-to-patient transmission of HIV is minimal.

In 1991, CDC issued guidelines to prevent transmission of HIV and hepatitis B virus (HBV) to patients, which required health-care workers infected with either of these viruses to refrain from performing exposure-prone procedures before obtaining counsel from a review panel and to notify prospective

patients of the health-care worker's seropositivity before performing exposure-prone invasive procedures (*7*). The guidelines provide general characteristics of exposure-prone procedures, which include digital palpation of a needle tip in a body cavity or the simultaneous presence of the health-care worker's fingers and a needle or other sharp instrument or object in a poorly visualized or highly confined anatomic site. Although medical organizations and institutions are advised to identify specific procedures falling into this category, the guidelines include cardiothoracic procedures among the types of invasive surgical procedures that should be considered exposure-prone. Regarding retrospective notification of patients who have had exposure-prone procedures performed on them by infected health-care workers, the guidelines note that more data are needed to determine the risk for transmission during such procedures, and notification should be considered on a case-by-case basis, taking into consideration an assessment of specific risks, confidentiality issues, and available resources (*7*).

During the 17 years since the CDC guidelines were issued, data based on published lookback investigations of bloodborne pathogen outbreaks and mathematical modeling indicate that the risk for transmission of HIV from an infected surgeon to a patient is considerably lower than that for HBV or HCV (*6,8*). Regarding cardiothoracic surgery specifically, previous lookback studies have revealed transmission of HBV and HCV (*6,8*) but no transmission of HIV (*9*). Moreover, the degree of blood infectivity of HIV carriers has been shown to vary, in part, as a function of viral load (*10*), which can now be rendered undetectable via use of antiretroviral regimens that were unavailable at the time the guidelines were issued.

The findings in this report are subject to at least two limitations. First, HIV test results were available for only one third of the patients identified as having been operated on by the infected surgeon. Some of the patients had died, and the cause of death was not known to the investigators. Some were not successfully contacted, some might have been tested anonymously, and some might have been tested in laboratories other than those provided by the investigation centers and not have notified the investigators of their results. However, more than 1 year after the investigation was initiated, none of the names on the initial contact list appeared in the national registry of known HIV-positive patients, which contains the names of all patients having tested positive for HIV (non-anonymously) in Israel. Second, only patients operated on by the surgeon during the decade before diagnosis were sought. Although transmission of HIV might have occurred more than 10 years before diagnosis, this possibility is unlikely given the fact that, untreated, the surgeon was clinically well until the weeks preceding diagnosis.

This report adds to the existing body of data already accumulated from lookback studies of patients of HIV-positive health-care workers and adds to the data contained in the single previously published lookback investigation of potential HIV transmission from a cardiothoracic surgeon to patients (*9*). The data in this and other studies published since the CDC guidelines of 1991, considered together, argue for a very low risk for provider-to-patient HIV transmission in the present era and could form the basis for national and international public health bodies to consider issuing revised guidelines for medical institutions faced with HIV infection in a health-care worker performing exposure-prone procedures.

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References

1. Gerberding J. Provider-to-patient HIV transmission: how to keep it exceedingly rare. Ann Intern Med 1999;130:64–5.
2. Robert LM, Chamberland ME, Cleveland JL, et al. Investigations of patients of health care workers infected with HIV. The Centers for Disease Control and Prevention database. Ann Intern Med 1995;122:653–7.
3. Siegel JD, Rhinehart D, Jackson M, Chiarello L; the Healthcare Infection Control Practices Advisory Committee. 2007 guideline for isolation precautions: preventing transmission of infectious agents in healthcare settings. Am J Infect Control 2007;35(10 Suppl 2):S65–164.
4. AIDS/TB Committee of the Society for Healthcare Epidemiology of America. Management of healthcare workers infected with hepatitis B virus, hepatitis C virus, human immunodeficiency virus, or other bloodborne pathogens. Infect Control Hosp Epidemiol 1997;18:349–63.
5. CDC. Update: investigations of persons treated by HIV-infected health-care workers—United States. MMWR 1993;42:329–31, 337.
6. Perry JL, Pearson RD, Jagger J. Infected health care workers and patient safety: a double standard. Am J Infect Control 2006;34:313–9.
7. CDC. Recommendations for preventing transmission of human immunodeficiency virus and hepatitis B virus to patients during exposure-prone invasive procedures. MMWR 1991;40(No. RR-8).
8. Puro V, De Carli G, Scognamiglio P, Porcasi R, Ippolito G. Risk of HIV and other blood-borne infections in the cardiac setting: patient-to-provider and provider-to-patient transmission. Ann N Y Acad Sci 2001;946:291–309.
9. Babinchak TJ, Renner C. Patients treated by a thoracic surgeon with HIV. A review. Chest 1994;106:681–3.
10. Andreoni M, Sarmati L, Ercoli L, et al. Correlation between changes in plasma HIV RNA levels and in plasma infectivity in response to antiretroviral therapy. AIDS Res Hum Retroviruses 1997;13:555–61.

Changes in Tobacco Use Among Youths Aged 13–15 Years — Panama, 2002 and 2008

Tobacco use is the single most preventable cause of death in the world today (*1*), and the majority of smokers begin using tobacco products before age 18 years (*2*). However, before the late 1990s, few countries had reliable data on youth tobacco use. In 1999, the World Health Organization (WHO), CDC, and the Canadian Public Health Association developed the Global Youth Tobacco Survey (GYTS) to help countries monitor youth tobacco use (*3*). At the same time, WHO initiated the Framework Convention on Tobacco Control (WHO FCTC), the first international public health treaty on tobacco control (*4*). Panama ratified WHO FCTC in 2004 and enacted two key antitobacco regulations in 2005 and 2008. To evaluate progress toward attaining tobacco control goals in Panama, Panama's Ministry of Health, CDC, and WHO compared results from GYTS surveys conducted in Panama in 2002 and 2008. This report summarizes the results of that comparison, which revealed substantial decreases from 2002 to 2008 in youth current cigarette smoking (13.2% versus 4.3%), current use of tobacco products other than cigarettes (9.8% versus 5.8%), and likely initiation of smoking by never smokers (13.8% versus 10.0%). In addition, factors influencing tobacco use showed substantial decreases, including 1) exposure to secondhand smoke (SHS) at home and in public places, 2) best friends smoking, 3) protobacco advertising in newspapers and magazines, and 4) having an object with a tobacco company logo on it. These results suggest that comprehensive regulations in Panama helped reduce tobacco use among adolescents and further gains are possible.

GYTS is a school-based survey that collects data from students aged 13–15 years and has been completed in 163 countries, with repeat surveys in 100 countries. GYTS uses a two-stage cluster sample design that produces representative samples of students in grades associated with students aged 13–15 years (*3*). GYTS uses a standardized methodology for constructing sampling frames, selecting schools and classes, preparing questionnaires, conducting field procedures, and processing data. At the first stage, the probability of schools being selected is proportional to the number of students enrolled in the specific grades. At the second sampling stage, classes within the selected schools are randomly selected. All enrolled students in selected classes the day the survey is administered are eligible to participate. Student participation is voluntary and kept anonymous by using self-administered data collection procedures.

GYTS was conducted in Panama in 2002 and 2008. In both years, GYTS sampling included all public and private schools with grades 8–10. In 2002, a total of 2,017 students completed the Panama GYTS from 50 selected schools. Of these students, 1,296 indicated that they were aged 13–15 years. In 2008, a total of 3,534 students completed the Panama GYTS from 50 selected schools, of whom 2,716 indicated that they were aged 13–15 years. The school response rate (number of participating schools divided by the number of selected schools) was 98.0% in 2002 and 96.0% in 2008; the class response rate (number of participating classes divided by the number of selected classes) was 100.0% in 2002 and 99.3% in 2008; the student response rate (number of participating students divided by the number of students enrolled in the class) was 89.1% in 2002 and 83.9% in 2008; and the overall response rate (product of the school response rate, the class response rate, and the student response rate) was 87.3% and 80.0%, respectively.

This report summarizes the results from 10 key GYTS tobacco-use indicators: 1) current cigarette smoking; 2) current use of tobacco products other than cigarettes; 3) likely initiation of cigarette smoking in the next year among never smokers (i.e., susceptibility) (*5*); 4) exposure to SHS at home and in public places; 5) one or more best friends smoke cigarettes; 6) in favor of banning cigarette smoking in public places; 7) exposure to protobacco advertising in newspapers and magazines, having protobacco promotional items, having been offered free cigarettes, and exposure to antitobacco

* Results are based on specific responses to the following questions: 1) A response of "1 or more days" to the question, "During the past 30 days on how many days did you smoke cigarettes?" 2) A positive response to the question, "During the past 30 days did you smoke any tobacco product other than cigarettes?" 3) A negative response to the question, "Have you ever tried or experimented with cigarette smoking, even one or two puffs?" and a response of anything but "definitely no" to the questions, "If one of your best friends offered you a cigarette, would you smoke it?" and "Do you think you will try smoking a cigarette in the next year?" 4) A response of "1 or more days" to the questions: "During the past 7 days, on how many days have people smoked in your presence in your home?" and "During the past 7 days, on how many days have people smoked in your presence, in places other than your home?" 5) A response of "most" or "all" to the question, "Do most or all of your best friends smoke?" 6) A positive response to the question, "Are you in favor of banning smoking in public places (such as in restaurants; in buses, streetcars, and trains; in schools; on playgrounds; in gyms and sports arenas; in discos?)" 7) A response of "a lot" or "a few" to the questions, "During the past 30 days (1 month), how many advertisements or promotions for cigarettes have you seen in newspapers or magazines?" and "During the past 30 days (1 month), how many anti-smoking media messages (e.g. television, radio, billboards, posters, newspapers, magazines, movies, drama) have you seen or heard," and a positive response to the questions, "Do you have something (T-shirt, pen, backpack, etc.) with a cigarette brand logo on it?" or "Has a cigarette company representative ever offered you a free cigarette?" 8) For current cigarette smokers, a positive response to the question, "Do you want to stop smoking now?" 9) For current cigarette smokers, a response of "bought them in a store" to the question, "During the past 30 days, how did you usually get your own cigarettes?" and a negative response to the question, "During the past 30 days, did anyone ever refuse to sell you cigarettes because of your age?" 10) A positive response to the question, "During this school year, were you taught in any of your classes about the dangers of smoking?"

media messages; 8) among current cigarette smokers, the desire to stop smoking; 9) among current cigarette smokers, those who bought their cigarettes in a store and were not refused the purchase because of their age; and 10) students who were taught in school about the dangers of smoking.* T-tests were used to determine differences between subpopulations (*6*). Differences between prevalence estimates were considered statistically significant at p<0.05.

From 2002 to 2008, prevalence of current cigarette smoking among students aged 13–15 years in Panama decreased 60% for boys, 75% for girls, and 67% overall (from 13.2% to 4.3%) (Table 1). The level of current cigarette smoking in 2002 and in 2008 did not differ by sex. Current use of other tobacco products decreased 41% overall from 2002 (9.8%) to 2008 (5.8%). The percentage of never smokers who were susceptible to initiation of smoking decreased 43% from 2002 to 2008 for girls (from 14.5% to 8.3%).

From 2002 to 2008, the percentage of students who reported exposure to SHS decreased 32% at home (from 32.0% to 21.9%) and 22% in public places (from 51.8% to 40.3%); and the percentage of students whose best friends smoke decreased 58% (from 14.5% to 6.1%) (Table 2). Support among students aged 13–15 years for a ban on smoking in public places increased 12% from 2002 (80.5%) to 2008 (89.9%).

The percentage of students who saw protobacco advertisements in newspapers or magazines decreased 16% (from 67.4% in 2002 to 56.7% in 2008) (Table 2). The percentage of students who owned an item with a tobacco logo on it decreased 47% from 2002 to 2008 (from 12.0% to 6.4%). The percentage of students reporting having been offered free cigarettes by a tobacco company representative did not change significantly over time (8.1% in 2002 and 5.9% in 2008). The percentage of students who saw antismoking mass media messages increased 7% from 2002 to 2008 (from 77.3% to 82.5%). The percentage of current smokers who wanted to stop smoking did not change over time, nor did the percentage of smokers who bought their cigarettes in a store and were not refused purchase because of their age. The percentage of students who were taught in school regarding the dangers of smoking also did not change over time.

Reported by: *R Roa, MD, Ministry of Health, Panama. R Franklin-Peroune, World Health Organization, Pan American Health Organization. NR Jones, PhD, Univ of Wisconsin-Madison. CW Warren, PhD, J Lee, MPH, V Lea, MPH, A Goding, MSPH, S Asma, DDS, National Center for Chronic Disease Prevention and Health Promotion, CDC.*

Editorial Note: The findings in this report indicate that cigarette smoking, other tobacco use, and the likely initiation of smoking in the next year by never smokers declined substantially among Panama youths from 2002 to 2008. The Panama Ministry of Health has made tobacco control a priority and has established a national tobacco control agency (*1*). Panama is one of four Latin American countries (along with Bolivia, Costa Rica, and Paraguay) that has reported a significant decrease in adolescent tobacco use since 1999 (CDC, unpublished data, 2008). In all four countries, the enactment of antitobacco

TABLE 1. Estimated percentage of youths aged 13–15 years with selected tobacco use characteristics, by sex — Global Youth Tobacco Survey, Panama, 2002 and 2008*

Characteristic	2002		2008		% change 2002 to 2008	p-value¶
	%†	(95% CI§)	%†	(95% CI§)		
Current cigarette smoker**						
Total	**13.2**	**(9.7–17.7)**	**4.3**	**(3.0–6.2)**	**-67**	**<0.001**
Boy	14.7	(10.4–20.2)	5.9	(4.0–8.5)	-60	0.001
Girl	11.1	(7.8–15.6)	2.8	(1.7–4.6)	-75	<0.001
Current user of other tobacco products††						
Total	**9.8**	**(8.4–11.5)**	**5.8**	**(4.5–7.3)**	**-41**	**<0.001**
Boy	11.0	(8.3–14.6)	7.1	(5.3–9.5)	-35	0.038
Girl	7.8	(6.0–10.1)	4.5	(3.3–6.0)	-42	0.007
Never smokers likely to initiate smoking in the next year§§						
Total	**13.8**	**(11.4–16.7)**	**10.0**	**(8.8–11.4)**	**-28**	**0.009**
Boy	13.3	(10.1–17.2)	12.3	(10.6–14.3)	-8	0.617
Girl	14.5	(11.7–17.9)	8.3	(6.5–10.4)	-43	<0.001

* In total, 1,296 students aged 13–15 years completed the survey in 2002 and 2,716 in 2008.
† Weighted percentage.
§ Confidence interval.
¶ T-test.
** Responded "1 or more days" to the question, "During the past 30 days on how many days did you smoke cigarettes?"
†† Responded "yes" to the question, "During the past 30 days did you smoke any tobacco product other than cigarettes?"
§§ Responded "no" to the question, "Have you ever tried or experimented with cigarette smoking, even one or two puffs?" and a response of anything but "definitely no" to the questions, "If one of your best friends offered you a cigarette, would you smoke it?" and "Do you think you will try smoking a cigarette in the next year?"

TABLE 2. Estimated percentage of youths aged 13–15 years with selected factors influencing tobacco use — Global Youth Tobacco Survey, Panama, 2002 and 2008*

Factor	2002		2008		% change 2002 to 2008	p-value¶
	%†	(95% CI§)	%†	(95% CI)		
Exposure to secondhand smoke						
Live in home where others smoked	32.0	(29.2–35.0)	21.9	(19.9–24.0)	-32	<0.001
Exposed to smoke in public places	51.8	(49.0–54.6)	40.3	(37.1–43.5)	-22	<0.001
All or most best friends smoke	14.5	(11.2–18.5)	6.1	(4.7–7.9)	-58	<0.001
In favor of banning smoking in public places	80.5	(76.4–84.0)	89.9	(88.0–91.5)	12	<0.001
Media/Advertising						
During the past month saw any advertisements or promotions for cigarettes in newspapers or magazines	67.4	(63.5–71.0)	56.7	(54.2–59.2)	-16	<0.001
Have an object (T-shirt, pen, backpack, etc.) with a cigarette brand logo on it	12.0	(10.0–14.5)	6.4	(5.2–7.9)	-47	<0.001
Offered free cigarettes by a tobacco representative	8.1	(6.2–10.7)	5.9	(4.8–7.1)	-27	0.077
During the past month saw any antismoking media messages	77.3	(74.8–79.6)	82.5	(80.4–84.4)	7	0.001
Cessation (current cigarette smokers)						
Want to stop smoking	54.3	(41.6–66.4)	65.9	(47.8–80.3)	21	0.260
Access (current cigarette smokers)						
Bought cigarettes in a store	46.2	(36.5–56.3)	33.5	(22.5–42.6)	-27	0.113
Bought cigarettes in a store and were not refused purchase because of age	76.0	(58.1–87.9)	56.6	(35.4–75.6)	-26	0.140
School curricula						
Were taught in school about the dangers of smoking	64.6	(60.9–68.2)	65.8	(62.2–69.1)	2	0.651

* In total, 1,296 students aged 13–15 years completed the survey in 2002 and 2,716 in 2008.
† Weighted percentage.
§ Confidence interval.
¶ T-test.

laws and regulations have proven important in leading to this behavior change among adolescents.

WHO notes that reductions in tobacco use most often are the result of measures such as 1) raising taxes on tobacco, 2) banning advertising promotion and sponsorship, 3) reducing exposure of the population to SHS, 4) informing the public regarding the dangers of tobacco, and 5) establishing tobacco cessation programs (*1*). Certain of the results in this report (e.g., significant declines from 2002 to 2008 in exposure to SHS at home and in public places, best friends smoking, having seen protobacco advertisements in newspapers and magazines, and having an object with a tobacco company logo on it) likely resulted from enactment of regulations in Panama in 2005 and 2008: the Ministry decree† and Law No. 13.§ The 2005 Ministry decree required health warnings on all tobacco product packages, banned the sale of individual cigarettes, prohibited use of vending machines for cigarettes, and banned protobacco advertising on billboards. The 2005 decree is believed to have had limited effect because of moderate enforcement (*1*). In January 2008, Panama adopted Law No. 13, which intensified tobacco control measures by banning protobacco statements on cigarette packages; requiring complete prohibition of any form of protobacco advertising, promotion, or sponsorship of all kinds in all venues, including sports venues; prohibiting tobacco consumption in all enclosed work environments; and requiring the integration of content on the health consequences of tobacco consumption into the curricula of general education and basic secondary education. Law No. 13 also included policies and penalties for violations of the law and its regulations. The 2008 GYTS was conducted in June, only 6 months after the law went into force in January; thus the results likely do not fully reflect the effects of Law No.13.

The findings in this report are subject to at least three limitations. First, because the sample surveyed was limited to youths attending school, they might not be representative of all persons age 13–15 years in Panama. Ministry of Education data by age show that 85% of youths aged 13 years, 80% of youths aged 14 years, and 69% of youths aged 15 years are enrolled in school (R. Roa, Panama Ministry of Health, personal communication, 2008). Second, these data apply only to youths who were in school the day the survey was administered and completed the survey. However, student response was 89%

† Measures for preventing and reducing the consumption of tobacco and exposure to smoke from tobacco, because of its harmful effects on people's health [Spanish]. Executive Decree No. 17 (March 17, 2005). Republic of Panama. Official Gazette No. 25262; March 22, 2005.
§ Measures for control of tobacco and its adverse health effects [Spanish]. Law No. 13 (January 13, 2008). Republic of Panama. Digital Official Gazette No. 25966; January 25, 2008.

in 2002 and 85% in 2008, suggesting minimal bias resulting from absence or nonresponse. Finally, data are based on self-reports of students, which might result in underreporting or overreporting of tobacco use. However, responses to tobacco questions on surveys similar to GYTS have shown good test-retest reliability in the United States (*7*).

The ideal goal in Panama, as for all countries that ratify the WHO FCTC, is zero tobacco use among adolescents. To attain this goal, Panama's Ministry of Health should continue to make youth tobacco use prevention a programmatic priority and broaden the program to include excise tax increases, a complete ban on smoking in all indoor work places, and a complete ban on protobacco advertising. Repeating the GYTS in the future will be important for tracking the trend in adolescent tobacco use in Panama and monitoring the effect of the obligations of WHO FCTC.

References

1. World Health Organization. WHO report on the global tobacco epidemic, 2008. Geneva, Switzerland: World Health Organization; 2008. Available at http://www.who.int/tobacco/mpower/mpower_report_full_2008.pdf.
2. CDC. Preventing tobacco use among young people: a report of the Surgeon General, 1994. Atlanta, GA: US Department of Health and Human Services, CDC; 1994. Available at http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_1994/index.htm.
3. CDC. Global youth tobacco surveillance, 2000–2007. MMWR 2008;57(No.SS-1).
4. World Health Organization. WHO framework convention on tobacco control. Geneva, Switzerland: World Health Organization; 2003. Available at http://www.who.int/tobacco/framework/who_fctc_english.pdf.
5. Pierce JP, Choi WS, Gilpin EA, Farkas AJ, Merritt RK. Validation of susceptibility as a predictor of which adolescents take up smoking in the United States. Health Psychol 1999;15:355–61.
6. Hinkle DE, Wiersma W, Jurs SG. Applied statistics for the behavioral sciences. 5th ed. Boston, MA: Houghton Mifflin; 2003.
7. Brener ND, Kann L, McMannus T, Kinchen SA, Sundberg EC, Ross JG. Reliability of the 1999 Youth Risk Behaviors Survey questionnaire. J Adolesc Health 2002;31:336–42.

Erratum: Vol. 57, Nos. 51 & 52

In the "Recommended Immunization Schedules for Persons Aged 0 Through 18 Years — United States, 2009," an error occurred on page Q-1. The first bulleted sentence should read as follows:

- "Recommendations for rotavirus vaccines include changes for the maximum age for the first dose (14 weeks 6 days) and the maximum age for **the final dose of the series** (**8 months** 0 days)."

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending January 3, 2009 (53rd week)*

Disease	Current week	Cum 2008	5-year weekly average†	Total cases reported for previous years 2007	2006	2005	2004	2003	States reporting cases during current week (No.)
Anthrax	—	—	—	1	1	—	—	—	
Botulism:									
foodborne	—	13	0	32	20	19	16	20	
infant	—	98	2	85	97	85	87	76	
other (wound & unspecified)	—	24	1	27	48	31	30	33	
Brucellosis	—	86	3	131	121	120	114	104	
Chancroid	—	31	0	23	33	17	30	54	
Cholera	—	2	0	7	9	8	6	2	
Cyclosporiasis§	—	127	2	93	137	543	160	75	
Diphtheria	—	—	—	—	—	—	—	1	
Domestic arboviral diseases§,¶:									
California serogroup	—	40	0	55	67	80	112	108	
eastern equine	—	2	—	4	8	21	6	14	
Powassan	—	1	—	7	1	1	1	—	
St. Louis	—	8	—	9	10	13	12	41	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§,**:									
Ehrlichia chaffeensis	1	848	17	828	578	506	338	321	NC (1)
Ehrlichia ewingii	—	9	—	—	—	—	—	—	
Anaplasma phagocytophilum	—	485	27	834	646	786	537	362	
undetermined	—	69	2	337	231	112	59	44	
Haemophilus influenzae,††									
invasive disease (age <5 yrs):									
serotype b	1	27	1	22	29	9	19	32	MD (1)
nonserotype b	2	164	4	199	175	135	135	117	NC (2)
unknown serotype	1	192	5	180	179	217	177	227	GA (1)
Hansen disease§	—	72	2	101	66	87	105	95	
Hantavirus pulmonary syndrome§	—	14	1	32	40	26	24	26	
Hemolytic uremic syndrome, postdiarrheal§	1	232	7	292	288	221	200	178	CA (1)
Hepatitis C viral, acute	20	830	25	849	766	652	720	1,102	IN (1), NC (1), TN (1), AZ (16), OR (1)
HIV infection, pediatric (age <13 years)§§	—	—	3	—	—	380	436	504	
Influenza-associated pediatric mortality§,¶¶	—	91	1	77	43	45	—	N	
Listeriosis	3	656	19	808	884	896	753	696	NC (1), WA (1), CA (1)
Measles***	—	132	1	43	55	66	37	56	
Meningococcal disease, invasive†††:									
A, C, Y, & W-135	2	276	7	325	318	297	—	—	NC (1), WA (1)
serogroup B	1	151	6	167	193	156	—	—	WA (1)
other serogroup	—	30	1	35	32	27	—	—	
unknown serogroup	4	600	22	550	651	765	—	—	NC (1), WA (1), CA (2)
Mumps	3	386	17	800	6,584	314	258	231	NC (1), CA (2)
Novel influenza A virus infections	—	1	—	4	N	N	N	N	
Plague	—	1	0	7	17	8	3	1	
Poliomyelitis, paralytic	—	—	—	—	—	1	—	—	
Polio virus infection, nonparalytic§	—	—	—	—	N	N	N	N	
Psittacosis§	—	12	0	12	21	16	12	12	
Qfever total§,§§§:	1	115	3	171	169	136	70	71	
acute	1	103	—	—	—	—	—	—	CA (1)
chronic	—	12	—	—	—	—	—	—	
Rabies, human	—	1	0	1	3	2	7	2	
Rubella¶¶¶	—	17	0	12	11	11	10	7	
Rubella, congenital syndrome	—	—	—	—	1	1	—	1	
SARS-CoV§,****	—	—	—	—	—	—	—	8	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	—	127	4	132	125	129	132	161	
Syphilis, congenital (age <1 yr)	—	227	9	430	349	329	353	413	
Tetanus	—	15	1	28	41	27	34	20	
Toxic-shock syndrome (staphylococcal)§	—	66	3	92	101	90	95	133	
Trichinellosis	30	37	0	5	15	16	5	6	CA (30)
Tularemia	1	106	3	137	95	154	134	129	OR (1)
Typhoid fever	2	387	8	434	353	324	322	356	MD (1), WA (1)
Vancomycin-intermediate *Staphylococcus aureus*§	—	33	0	37	6	2	—	N	
Vancomycin-resistant *Staphylococcus aureus*§	—	—	0	2	1	3	1	N	
Vibriosis (noncholera *Vibrio* species infections)§	2	451	5	447	N	N	N	N	CA (2)
Yellow fever	—	—	—	—	—	—	—	—	

See Table I footnotes on next page.

TABLE I. (*Continued*) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending January 3, 2009 (53rd week)*

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

* Incidence data for reporting year 2008 are provisional, whereas data for 2003, 2004, 2005, 2006, and 2007 are finalized.

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

§ Not notifiable in all states. Data from states where the condition is not notifiable are excluded from this table, except in 2007 and 2008 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/epo/dphsi/phs/infdis.htm.

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

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

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

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

¶¶ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. One confirmed influenza-associated pediatric death was reported for the current 2008-09 season.

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

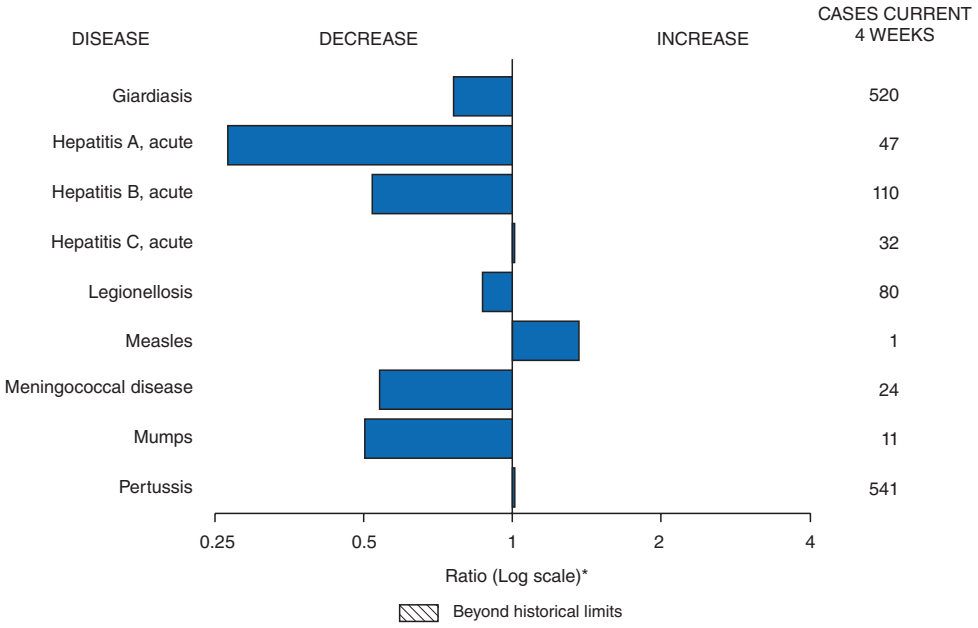
††† Data for meningococcal disease (all serogroups) are available in Table II.

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

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

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

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals January 3, 2009, with historical data



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

Notifiable Disease Data Team and 122 Cities Mortality Data Team

Patsy A. Hall

Deborah A. Adams
Willie J. Anderson
Lenee Blanton
Rosaline Dhara
Michael S. Wodajo
Pearl C. Sharp

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending January 3, 2009, and December 29, 2007 (53rd week)*

Reporting area	Chlamydia†					Coccidiodomycosis					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 week		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	7,228	21,338	25,223	1093514	1108374	128	122	322	7,283	8,121	29	100	430	7,749	11,170
New England	308	707	1,048	37,389	36,429	—	0	1	1	2	1	5	40	303	335
Connecticut	—	202	468	11,204	11,454	N	0	0	N	N	—	0	38	38	42
Maine§	—	51	72	2,484	2,541	N	0	0	N	N	—	0	6	45	56
Massachusetts	268	329	623	17,541	16,145	N	0	0	N	N	—	1	9	91	132
New Hampshire	18	42	64	2,143	2,055	—	0	1	1	2	1	1	4	59	47
Rhode Island§	4	55	208	3,180	3,177	—	0	0	—	—	—	0	3	10	11
Vermont§	18	14	52	837	1,057	N	0	0	N	N	—	1	7	60	47
Mid. Atlantic	1,083	2,730	5,069	149,152	144,722	—	0	0	—	—	—	12	34	711	1,365
New Jersey	—	442	576	21,651	21,536	N	0	0	N	N	—	0	2	26	67
New York (Upstate)	—	532	834	27,595	29,975	N	0	0	N	N	—	4	17	263	254
New York City	1,012	1,008	3,412	58,372	50,742	N	0	0	N	N	—	2	6	102	105
Pennsylvania	71	804	1,054	41,534	42,469	N	0	0	N	N	—	5	15	320	939
E.N. Central	375	3,517	4,285	176,919	180,524	2	1	3	44	36	8	25	125	2,042	1,921
Illinois	—	1,074	1,379	52,139	55,470	N	0	0	N	N	—	2	13	189	201
Indiana	290	377	713	20,878	20,712	N	0	0	N	N	—	3	12	185	149
Michigan	—	841	1,226	44,175	37,353	—	0	3	31	24	—	5	13	273	211
Ohio	32	812	1,261	42,653	47,434	2	0	1	13	12	7	6	59	689	570
Wisconsin	53	324	615	17,074	19,555	N	0	0	N	N	1	9	46	706	790
W.N. Central	566	1,268	1,696	65,096	63,085	—	0	2	4	86	2	16	68	976	1,659
Iowa	100	174	240	9,243	8,643	N	0	0	N	N	—	4	30	280	610
Kansas	107	179	529	9,234	8,180	N	0	0	N	N	—	1	8	83	144
Minnesota	—	265	373	12,591	13,413	—	0	0	—	77	—	4	15	228	302
Missouri	251	490	566	24,774	23,308	—	0	2	4	9	2	3	13	180	182
Nebraska§	58	78	244	4,463	5,132	N	0	0	N	N	—	2	8	113	174
North Dakota	10	34	58	1,817	1,789	N	0	0	N	N	—	0	2	7	78
South Dakota	40	55	85	2,974	2,620	N	0	0	N	N	—	1	9	85	169
S. Atlantic	1,285	3,584	6,325	190,371	217,935	—	0	1	5	5	2	17	46	1,006	1,287
Delaware	132	67	150	3,868	3,479	—	0	1	2	—	—	0	2	11	20
District of Columbia	—	126	207	6,580	6,029	—	0	0	—	2	—	0	2	11	3
Florida	654	1,367	1,571	69,479	57,575	N	0	0	N	N	—	7	35	478	667
Georgia	2	260	1,301	21,440	42,913	N	0	0	N	N	—	4	13	237	239
Maryland§	253	439	697	23,271	23,150	—	0	1	3	3	—	1	4	45	36
North Carolina	—	0	1,208	5,901	30,611	N	0	0	N	N	1	0	16	78	132
South Carolina§	—	480	3,043	26,116	26,431	N	0	0	N	N	1	1	4	53	88
Virginia§	243	621	1,059	30,522	24,579	N	0	0	N	N	—	1	4	70	90
West Virginia	1	60	102	3,194	3,168	N	0	0	N	N	—	0	3	23	12
E.S. Central	770	1,567	2,302	83,533	82,503	—	0	0	—	—	1	3	9	164	616
Alabama§	—	456	561	22,240	25,153	N	0	0	N	N	—	1	6	67	125
Kentucky	—	240	373	12,082	8,798	N	0	0	N	N	—	0	4	35	249
Mississippi	360	390	1,048	21,251	21,686	N	0	0	N	N	—	0	2	17	102
Tennessee§	410	534	792	27,960	26,866	N	0	0	N	N	1	1	6	45	140
W.S. Central	138	2,780	3,530	140,661	127,631	—	0	1	3	3	2	5	154	1,615	487
Arkansas§	109	276	455	13,620	9,954	N	0	0	N	N	—	0	6	39	63
Louisiana	—	404	775	21,245	19,362	—	0	1	3	3	—	1	5	61	64
Oklahoma	29	167	392	7,909	12,529	N	0	0	N	N	2	1	16	134	127
Texas§	—	1,947	2,351	97,887	85,786	N	0	0	N	N	—	2	139	1,381	233
Mountain	925	1,260	1,680	65,271	74,414	92	86	181	4,794	4,998	2	8	37	524	2,922
Arizona	294	458	651	23,086	24,866	92	86	181	4,709	4,832	1	1	9	92	53
Colorado	413	214	587	11,977	17,186	N	0	0	N	N	1	1	12	111	211
Idaho§	—	60	314	3,797	3,722	N	0	0	N	N	—	1	5	66	464
Montana§	23	59	87	2,962	2,748	N	0	0	N	N	—	1	3	41	75
Nevada§	101	178	416	9,336	9,514	—	0	6	46	72	—	0	1	1	37
New Mexico§	—	130	455	7,353	9,460	—	0	3	28	23	—	1	23	150	125
Utah	78	107	253	5,233	5,721	—	0	3	9	68	—	0	6	46	1,901
Wyoming§	16	30	58	1,527	1,197	—	0	1	2	3	—	0	4	17	56
Pacific	1,778	3,665	4,201	185,122	181,131	34	31	217	2,432	2,991	11	8	18	408	578
Alaska	68	83	129	4,489	4,911	N	0	0	N	N	—	0	1	3	4
California	1,353	2,875	3,300	146,174	141,928	34	31	217	2,432	2,991	7	5	14	253	303
Hawaii	32	103	161	5,248	5,659	N	0	0	N	N	—	0	1	2	6
Oregon§	169	188	631	10,621	9,849	N	0	0	N	N	—	1	4	53	126
Washington	156	356	634	18,590	18,784	N	0	0	N	N	4	1	11	97	139
American Samoa	—	0	20	73	95	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	4	24	124	822	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	116	333	6,769	7,909	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	12	23	502	150	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 3, 2009, and December 29, 2007 (53rd week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive All ages, all serotypes†				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	101	304	587	17,160	19,417	1,636	5,890	6,817	299,315	355,991	24	46	81	2,547	2,541
New England	4	24	49	1,259	1,461	28	96	171	5,188	5,744	1	2	8	149	188
Connecticut	—	6	14	315	370	—	49	129	2,522	2,327	—	0	7	43	54
Maine§	—	3	12	184	197	—	2	6	92	118	—	0	2	17	13
Massachusetts	—	9	17	343	605	28	39	69	2,140	2,695	—	1	5	57	89
New Hampshire	2	3	11	155	33	—	2	6	98	138	1	0	1	11	18
Rhode Island§	—	1	8	87	85	—	6	13	303	402	—	0	7	13	10
Vermont§	2	3	13	175	171	—	0	3	33	64	—	0	3	8	4
Mid. Atlantic	1	60	108	3,159	3,283	264	616	987	32,857	36,479	1	10	18	498	491
New Jersey	—	7	14	302	403	—	100	167	5,152	6,076	—	1	7	71	70
New York (Upstate)	—	21	51	1,202	1,275	—	117	205	6,041	7,389	—	3	7	154	153
New York City	1	16	29	807	847	205	178	633	10,773	10,308	1	1	6	89	103
Pennsylvania	—	15	46	848	758	59	213	270	10,891	12,706	—	4	8	184	165
E.N. Central	14	48	87	2,589	2,867	130	1,204	1,648	62,738	72,903	5	7	17	380	401
Illinois	—	11	31	617	866	—	361	480	17,964	20,813	—	2	7	123	124
Indiana	N	0	0	N	N	98	148	284	8,256	8,790	2	1	12	73	78
Michigan	—	12	22	592	620	—	320	657	16,760	15,482	—	0	2	22	31
Ohio	13	17	31	904	826	18	283	531	15,150	21,066	3	2	6	135	108
Wisconsin	1	9	20	476	555	14	88	176	4,608	6,752	—	0	2	27	60
W.N. Central	11	26	143	1,979	2,237	137	316	425	16,438	19,356	1	3	15	194	161
Iowa	2	6	18	319	301	9	28	48	1,594	1,928	—	0	1	2	1
Kansas	2	3	11	162	184	19	40	130	2,288	2,282	—	0	3	16	11
Minnesota	—	0	106	666	913	—	55	92	2,718	3,459	—	0	10	61	82
Missouri	4	8	22	467	515	80	149	199	7,983	9,876	1	1	6	73	42
Nebraska§	3	4	10	212	160	20	25	47	1,345	1,434	—	0	2	29	19
North Dakota	—	0	3	23	60	1	3	6	131	116	—	0	3	13	6
South Dakota	—	2	10	130	104	8	7	20	379	261	—	0	0	—	—
S. Atlantic	2	54	87	2,840	3,088	406	1,206	2,009	63,940	85,787	14	12	25	682	620
Delaware	—	1	3	39	41	23	19	44	1,045	1,293	—	0	2	8	8
District of Columbia	—	1	5	56	74	—	49	101	2,575	2,373	—	0	2	11	3
Florida	—	24	57	1,357	1,268	226	447	522	22,920	23,327	—	3	9	189	168
Georgia	—	9	27	558	681	2	111	438	8,243	17,835	4	2	9	148	127
Maryland§	—	5	12	255	269	61	116	206	6,271	6,768	5	2	6	98	88
North Carolina	N	0	0	N	N	—	0	831	2,638	16,666	5	1	9	81	59
South Carolina§	2	2	6	134	121	—	185	830	9,347	10,326	—	1	7	50	57
Virginia§	—	7	17	377	582	94	182	486	10,176	6,269	—	1	6	74	80
West Virginia	—	1	5	64	52	—	14	26	725	930	—	0	3	23	30
E.S. Central	—	8	21	456	576	255	547	837	29,545	32,212	—	3	8	133	140
Alabama§	—	5	12	253	273	—	172	250	8,756	10,885	—	0	2	22	29
Kentucky	N	0	0	N	N	—	89	153	4,531	3,449	—	0	1	2	10
Mississippi	N	0	0	N	N	143	133	401	7,496	8,314	—	0	2	14	10
Tennessee§	—	3	13	203	303	112	162	297	8,762	9,564	—	2	6	95	91
W.S. Central	4	7	20	438	469	30	945	1,297	47,543	52,205	—	2	8	103	131
Arkansas§	3	2	8	139	158	22	86	167	4,378	4,168	—	0	2	10	12
Louisiana	—	2	10	136	139	—	169	317	9,000	11,137	—	0	1	10	14
Oklahoma	1	2	9	163	172	8	56	124	2,971	4,827	—	1	7	73	91
Texas§	N	0	0	N	N	—	629	810	31,194	32,073	—	0	2	10	14
Mountain	13	27	62	1,528	1,887	142	206	338	10,472	13,884	2	5	14	286	261
Arizona	3	2	8	143	192	38	62	93	3,226	5,062	—	2	11	110	91
Colorado	2	10	27	550	580	70	57	100	3,096	3,376	2	1	4	57	58
Idaho§	6	3	14	198	223	—	3	13	173	269	—	0	4	12	8
Montana§	1	1	9	86	112	1	2	7	110	122	—	0	1	4	2
Nevada§	—	1	8	91	146	28	39	130	2,107	2,357	—	0	2	14	12
New Mexico§	—	1	7	86	119	—	24	47	1,200	1,796	—	0	4	40	43
Utah	—	6	18	346	466	5	10	20	442	821	—	1	5	45	41
Wyoming§	1	0	3	28	49	—	2	9	118	81	—	0	2	4	6
Pacific	52	53	85	2,912	3,549	244	596	759	30,594	37,421	—	2	6	122	148
Alaska	2	2	10	104	79	9	10	17	525	579	—	0	2	17	15
California	31	34	56	1,890	2,336	177	494	633	25,530	31,294	—	0	3	24	48
Hawaii	—	1	4	42	77	6	11	22	558	659	—	0	2	21	12
Oregon§	1	8	18	445	462	21	23	48	1,226	1,236	—	1	4	57	67
Washington	18	8	31	431	595	31	53	90	2,755	3,653	—	0	2	3	6
American Samoa	—	0	0	—	—	—	0	1	3	3	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	2	—	1	15	73	142	—	0	0	—	1
Puerto Rico	—	2	13	158	371	—	5	25	270	323	—	0	0	—	2
U.S. Virgin Islands	—	0	0	—	—	—	2	6	93	39	N	0	0	N	N

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 3, 2009, and December 29, 2007 (53rd week)*

Reporting area	Hepatitis (viral, acute), by type†										Legionellosis				
	A					B									
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	9	45	76	2,340	2,979	28	66	92	3,513	4,519	4	43	145	2,815	2,716
New England	—	2	7	102	131	—	1	7	62	125	—	2	16	144	165
Connecticut	—	0	4	26	26	—	0	7	23	38	—	0	5	46	44
Maine§	—	0	2	11	5	—	0	2	13	19	—	0	2	10	9
Massachusetts	—	0	5	38	66	—	0	1	9	42	—	0	2	13	50
New Hampshire	—	0	2	13	12	—	0	2	11	5	—	0	5	30	8
Rhode Island§	—	0	2	12	14	—	0	1	4	16	—	0	14	40	45
Vermont§	—	0	1	2	8	—	0	1	2	5	—	0	1	5	9
Mid. Atlantic	—	6	12	299	455	—	9	14	428	561	—	13	59	950	842
New Jersey	—	1	4	59	124	—	2	7	115	162	—	1	8	103	116
New York (Upstate)	—	1	4	64	79	—	1	4	65	89	—	5	19	335	234
New York City	—	2	6	108	156	—	2	6	96	122	—	1	12	120	184
Pennsylvania	—	1	6	68	96	—	3	8	152	188	—	6	33	392	308
E.N. Central	1	6	16	318	343	4	8	13	415	457	2	9	40	594	608
Illinois	—	1	10	98	118	—	2	6	114	129	—	1	10	89	111
Indiana	1	0	4	22	28	4	0	4	53	64	—	1	6	53	71
Michigan	—	2	7	116	97	—	2	6	130	120	—	2	16	158	172
Ohio	—	1	4	51	68	—	2	8	112	124	2	3	18	269	215
Wisconsin	—	0	2	31	32	—	0	1	6	20	—	0	3	25	39
W.N. Central	5	4	16	250	201	1	2	7	110	121	—	2	9	138	118
Iowa	—	1	7	106	48	—	0	2	20	26	—	0	2	19	11
Kansas	—	0	3	14	11	—	0	3	7	9	—	0	1	2	10
Minnesota	5	0	8	42	93	1	0	4	15	25	—	0	4	23	30
Missouri	—	1	3	44	22	—	1	4	58	39	—	1	7	70	46
Nebraska§	—	0	5	40	19	—	0	2	9	13	—	0	4	21	15
North Dakota	—	0	0	—	2	—	0	1	1	2	—	0	0	—	2
South Dakota	—	0	1	4	6	—	0	0	—	7	—	0	1	3	4
S. Atlantic	1	7	14	372	485	3	17	34	902	1,039	2	8	22	468	464
Delaware	—	0	1	7	9	—	0	3	11	15	—	0	2	13	12
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	15	17
Florida	—	2	8	146	152	—	6	12	340	337	—	3	7	149	153
Georgia	—	1	4	45	67	—	3	8	146	155	—	0	4	32	43
Maryland§	—	1	3	40	73	—	2	4	81	113	2	2	10	126	89
North Carolina	1	0	9	62	66	3	0	17	83	128	—	0	7	37	51
South Carolina§	—	0	3	19	18	—	1	6	62	65	—	0	2	13	17
Virginia§	—	1	5	48	89	—	2	7	110	144	—	1	4	60	61
West Virginia	—	0	1	5	11	—	1	4	69	82	—	0	3	23	21
E.S. Central	—	1	9	80	109	1	7	13	375	385	—	2	10	113	102
Alabama§	—	0	2	12	24	—	2	6	103	128	—	0	2	16	12
Kentucky	—	0	3	29	20	—	2	5	92	76	—	1	4	56	50
Mississippi	—	0	2	6	8	—	1	3	45	37	—	0	1	1	—
Tennessee§	—	0	6	33	57	1	3	8	135	144	—	0	5	40	40
W.S. Central	—	3	12	187	319	9	12	23	652	1,065	—	1	9	86	153
Arkansas§	—	0	1	5	14	—	0	4	30	72	—	0	2	11	17
Louisiana	—	0	1	11	28	—	1	4	79	100	—	0	2	9	6
Oklahoma	—	0	3	7	13	3	2	8	117	152	—	0	6	10	9
Texas§	—	3	11	164	264	6	7	19	426	741	—	1	5	56	121
Mountain	1	4	12	204	231	—	4	12	189	214	—	2	7	88	112
Arizona	—	2	11	108	152	—	1	5	69	81	—	0	2	23	40
Colorado	—	0	3	35	26	—	0	3	30	35	—	0	2	10	21
Idaho§	—	0	3	18	8	—	0	2	9	15	—	0	1	3	6
Montana§	—	0	1	1	9	—	0	1	2	1	—	0	1	4	3
Nevada§	1	0	3	10	12	—	0	3	33	49	—	0	2	10	9
New Mexico§	—	0	3	17	12	—	0	2	11	13	—	0	1	7	10
Utah	—	0	2	12	9	—	0	3	31	15	—	0	2	31	20
Wyoming§	—	0	1	3	3	—	0	1	4	5	—	0	0	—	3
Pacific	1	10	24	528	705	10	7	17	380	552	—	4	10	234	152
Alaska	—	0	1	3	5	—	0	2	9	9	—	0	1	3	—
California	—	7	24	435	603	9	5	13	276	402	—	3	8	190	112
Hawaii	—	0	2	17	7	—	0	1	7	17	—	0	1	8	2
Oregon§	—	0	3	25	31	—	1	3	39	59	—	0	2	16	14
Washington	1	1	5	48	59	1	1	4	49	65	—	0	3	17	24
American Samoa	—	0	0	—	—	—	0	0	—	14	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	3	—	0	0	—	—
Puerto Rico	—	0	2	17	64	—	0	5	39	93	—	0	1	2	4
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 3, 2009, and December 29, 2007 (53rd week)*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All serotypes				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	16	421	1,453	26,739	27,444	2	20	44	1,075	1,408	7	19	47	1,057	1,077
New England	9	43	260	3,734	7,786	—	0	6	38	94	—	0	3	22	45
Connecticut	—	0	0	—	3,058	—	0	3	11	30	—	0	1	1	6
Maine§	8	2	72	868	529	—	0	1	1	8	—	0	1	6	8
Massachusetts	—	12	114	1,039	2,988	—	0	2	14	34	—	0	3	15	20
New Hampshire	—	13	141	1,465	896	—	0	2	6	9	—	0	0	—	3
Rhode Island§	—	0	0	—	177	—	0	1	1	8	—	0	0	—	3
Vermont§	1	3	40	362	138	—	0	1	5	5	—	0	0	—	5
Mid. Atlantic	—	243	1,003	15,673	11,293	—	4	14	247	403	—	2	6	119	128
New Jersey	—	31	211	2,801	3,134	—	0	0	—	72	—	0	2	10	18
New York (Upstate)	—	99	356	5,861	3,748	—	0	4	36	78	—	0	3	31	38
New York City	—	0	4	53	417	—	3	10	171	209	—	0	2	29	22
Pennsylvania	—	83	531	6,958	3,994	—	1	3	40	44	—	1	5	49	50
E.N. Central	—	11	145	1,431	2,102	—	2	7	141	139	—	3	9	177	167
Illinois	—	0	11	96	149	—	1	6	70	63	—	1	4	66	61
Indiana	—	0	8	41	55	—	0	2	5	11	—	0	4	27	31
Michigan	—	1	10	100	51	—	0	2	18	20	—	0	3	30	28
Ohio	—	1	5	48	33	—	0	3	30	28	—	1	4	40	35
Wisconsin	—	10	129	1,146	1,814	—	0	3	18	17	—	0	2	14	12
W.N. Central	—	7	156	1,317	1,398	—	1	10	71	57	—	2	8	96	73
Iowa	—	1	8	103	123	—	0	3	12	3	—	0	3	18	15
Kansas	—	0	1	5	8	—	0	2	9	4	—	0	2	7	5
Minnesota	—	3	152	1,183	1,238	—	0	8	28	29	—	0	7	27	26
Missouri	—	0	1	8	10	—	0	3	14	8	—	0	3	26	17
Nebraska§	—	0	2	14	7	—	0	2	8	7	—	0	1	12	5
North Dakota	—	0	1	1	12	—	0	0	—	5	—	0	1	3	2
South Dakota	—	0	1	3	—	—	0	0	—	1	—	0	1	3	3
S. Atlantic	5	66	218	4,121	4,575	1	5	15	275	273	2	2	10	153	177
Delaware	—	12	37	766	715	—	0	1	3	4	—	0	1	2	1
District of Columbia	—	2	11	158	116	—	0	2	4	3	—	0	0	—	—
Florida	—	2	10	115	30	—	1	7	64	56	—	1	3	50	67
Georgia	—	0	3	24	11	—	1	5	53	39	—	0	2	18	24
Maryland§	5	29	157	2,076	2,576	—	1	6	68	76	—	0	4	18	21
North Carolina	—	0	7	51	53	1	0	7	31	22	2	0	3	16	22
South Carolina§	—	0	2	24	31	—	0	1	9	7	—	0	3	22	16
Virginia§	—	11	52	809	959	—	1	3	43	65	—	0	2	22	23
West Virginia	—	1	11	98	84	—	0	0	—	1	—	0	1	5	3
E.S. Central	—	1	5	47	51	1	0	2	24	39	—	1	6	54	54
Alabama§	—	0	3	10	13	—	0	1	4	7	—	0	2	10	9
Kentucky	—	0	2	5	6	—	0	1	6	9	—	0	2	10	13
Mississippi	—	0	1	1	1	—	0	1	1	2	—	0	2	12	12
Tennessee§	—	0	3	31	31	1	0	2	13	21	—	0	3	22	20
W.S. Central	—	2	7	101	91	—	1	11	82	156	—	2	7	115	115
Arkansas§	—	0	0	—	1	—	0	0	—	2	—	0	2	14	9
Louisiana	—	0	1	3	2	—	0	1	4	14	—	0	3	24	29
Oklahoma	—	0	0	—	1	—	0	2	4	10	—	0	3	18	22
Texas§	—	2	7	98	87	—	1	11	74	130	—	1	5	59	55
Mountain	—	0	4	46	45	—	0	3	32	65	—	1	4	58	69
Arizona	—	0	2	8	2	—	0	2	14	12	—	0	2	9	13
Colorado	—	0	2	7	—	—	0	1	4	23	—	0	1	16	22
Idaho§	—	0	2	9	9	—	0	1	3	6	—	0	1	5	8
Montana§	—	0	1	4	4	—	0	0	—	3	—	0	1	5	3
Nevada§	—	0	2	5	15	—	0	3	3	3	—	0	1	4	6
New Mexico§	—	0	2	6	5	—	0	1	3	5	—	0	1	8	3
Utah	—	0	1	4	7	—	0	1	5	13	—	0	3	9	12
Wyoming§	—	0	1	3	3	—	0	0	—	—	—	0	1	2	2
Pacific	2	5	10	269	103	—	2	10	165	182	5	5	19	263	249
Alaska	—	0	2	5	10	—	0	2	6	2	—	0	2	5	3
California	2	3	10	205	75	—	2	8	123	130	2	3	19	186	177
Hawaii	N	0	0	N	N	—	0	1	3	2	—	0	1	5	10
Oregon§	—	1	4	48	6	—	0	2	4	18	—	1	3	39	31
Washington	—	0	4	11	12	—	0	3	29	30	3	0	2	28	28
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	2	3	1	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	1	3	—	0	1	3	8
U.S. Virgin Islands	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 are provisional.
† Data for meningococcal disease, invasive caused by serogroups A, C, Y, & 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 January 3, 2009, and December 29, 2007 (53rd week)*

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	164	174	315	10,007	10,454	17	101	164	4,911	5,975	14	31	145	2,276	2,221
New England	4	11	35	620	1,552	6	7	20	372	522	—	0	2	4	10
Connecticut	—	0	4	34	89	3	4	17	203	219	—	0	0	—	—
Maine†	—	0	5	47	83	1	1	5	64	86	N	0	0	N	N
Massachusetts	—	8	32	420	1,178	N	0	0	N	N	—	0	1	1	9
New Hampshire	4	1	4	48	80	—	0	3	35	53	—	0	1	1	1
Rhode Island†	—	0	7	59	59	N	0	0	N	N	—	0	2	2	—
Vermont†	—	0	2	12	63	2	1	6	70	164	—	0	0	—	—
Mid. Atlantic	—	19	41	1,051	1,314	6	28	63	1,536	997	—	1	5	80	85
New Jersey	—	1	6	71	229	—	0	0	—	—	—	0	2	12	32
New York (Upstate)	—	7	24	426	549	6	9	20	500	514	—	0	2	17	7
New York City	—	0	5	46	150	—	0	2	19	44	—	0	2	24	28
Pennsylvania	—	9	34	508	386	—	18	48	1,017	439	—	0	2	27	18
E.N. Central	84	30	189	1,919	1,495	—	3	28	247	414	—	1	15	150	60
Illinois	—	6	39	517	199	—	1	21	103	113	—	1	10	104	39
Indiana	27	1	15	139	68	—	0	2	10	13	—	0	3	8	6
Michigan	—	6	14	294	292	—	0	8	73	202	—	0	1	3	4
Ohio	57	10	176	846	609	—	1	7	61	86	—	0	4	34	10
Wisconsin	—	2	7	123	327	N	0	0	N	N	—	0	1	1	1
W.N. Central	18	17	120	1,378	909	—	3	13	206	276	1	4	32	456	369
Iowa	—	2	20	209	150	—	0	5	29	31	—	0	2	7	17
Kansas	1	1	13	78	104	—	0	0	—	110	—	0	0	—	12
Minnesota	—	2	26	224	393	—	0	10	65	40	—	0	0	—	6
Missouri	15	6	50	535	118	—	1	8	65	38	1	4	31	426	315
Nebraska†	2	2	35	281	70	—	0	0	—	—	—	0	4	20	14
North Dakota	—	0	1	1	14	—	0	7	24	30	—	0	0	—	—
South Dakota	—	0	7	50	60	—	0	2	23	27	—	0	1	3	5
S. Atlantic	16	17	44	937	978	4	37	101	2,024	2,184	13	12	71	928	1,020
Delaware	—	0	3	18	11	—	0	0	—	—	—	0	5	33	17
District of Columbia	—	0	1	7	9	—	0	0	—	—	—	0	2	8	3
Florida	—	5	20	306	211	—	0	77	139	128	—	0	3	20	19
Georgia	—	1	6	91	37	—	5	42	339	300	—	1	8	73	60
Maryland†	1	2	8	130	118	—	8	17	420	431	—	1	7	72	63
North Carolina	15	0	15	94	330	4	9	16	454	472	12	2	55	511	665
South Carolina†	—	2	10	129	102	—	0	0	—	46	1	1	9	55	64
Virginia†	—	3	10	152	128	—	11	24	591	730	—	2	15	149	123
West Virginia	—	0	2	10	32	—	1	9	81	77	—	0	1	7	6
E.S. Central	3	7	28	395	463	—	3	7	165	156	—	3	23	324	276
Alabama†	—	1	5	59	91	—	0	0	—	—	—	1	8	90	96
Kentucky	1	2	11	136	33	—	0	4	45	21	—	0	1	1	5
Mississippi	1	2	5	92	255	—	0	1	2	3	—	0	3	12	20
Tennessee†	1	1	14	108	84	—	2	6	118	132	—	2	19	221	155
W.S. Central	10	27	106	1,631	1,303	—	1	11	92	1,086	—	1	41	286	361
Arkansas†	9	1	19	93	173	—	0	6	48	33	—	0	14	68	122
Louisiana	—	1	7	77	21	—	0	0	—	6	—	0	1	5	4
Oklahoma	1	0	21	56	58	—	0	10	42	78	—	0	26	170	186
Texas†	—	23	98	1,405	1,051	—	0	1	2	969	—	1	6	43	49
Mountain	8	15	34	814	1,137	—	1	8	77	97	—	1	3	43	37
Arizona	—	4	10	204	210	N	0	0	N	N	—	0	2	17	10
Colorado	6	3	6	160	307	—	0	0	—	—	—	0	1	1	3
Idaho†	2	0	5	38	45	—	0	0	—	12	—	0	1	1	4
Montana†	—	1	11	83	53	—	0	2	9	21	—	0	1	3	1
Nevada†	—	0	7	19	37	—	0	4	5	13	—	0	2	2	—
New Mexico†	—	1	8	68	74	—	0	3	25	15	—	0	1	2	6
Utah	—	4	13	226	387	—	0	6	14	16	—	0	1	7	—
Wyoming†	—	0	2	16	24	—	0	3	24	20	—	0	2	10	13
Pacific	21	22	83	1,262	1,303	1	3	13	192	243	—	0	1	5	3
Alaska	1	3	21	258	89	—	0	4	15	45	N	0	0	N	N
California	1	7	23	392	590	1	3	12	163	186	—	0	1	2	1
Hawaii	—	0	2	17	19	—	0	0	—	—	N	0	0	N	N
Oregon†	—	3	10	176	123	—	0	4	14	12	—	0	1	3	2
Washington	19	5	63	419	482	—	0	0	—	—	N	0	0	N	N
American Samoa	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	0	—	—	—	1	5	59	48	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 3, 2009, and December 29, 2007 (53rd week)*

Reporting area	Salmonellosis					Shiga toxin-producing E. coli (STEC)†					Shigellosis				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	427	855	1,493	46,151	47,995	45	82	250	5,164	4,847	160	418	609	20,444	19,758
New England	3	19	513	1,713	2,239	1	3	47	226	315	—	2	39	158	250
Connecticut	—	0	484	484	431	—	0	44	44	71	—	0	38	38	44
Maine§	3	3	8	153	138	—	0	3	25	41	—	0	6	21	14
Massachusetts	—	14	52	741	1,305	—	1	11	80	145	—	1	5	78	155
New Hampshire	—	2	10	146	171	1	1	3	41	35	—	0	1	4	7
Rhode Island§	—	1	8	106	111	—	0	3	9	8	—	0	1	12	25
Vermont§	—	1	7	83	83	—	0	3	27	15	—	0	2	5	5
Mid. Atlantic	1	88	177	5,092	5,946	—	6	192	595	531	1	44	96	2,309	939
New Jersey	—	14	30	671	1,226	—	0	3	30	118	—	13	38	764	184
New York (Upstate)	—	25	60	1,441	1,476	—	3	188	413	208	—	10	35	575	185
New York City	1	23	53	1,259	1,296	—	1	5	61	50	1	13	35	709	283
Pennsylvania	—	27	78	1,721	1,948	—	1	8	91	155	—	4	23	261	287
E.N. Central	45	89	192	5,002	5,923	4	11	74	924	746	59	76	120	4,073	3,186
Illinois	—	25	72	1,315	1,966	—	1	10	112	131	—	18	34	896	781
Indiana	16	9	53	613	675	—	1	14	93	105	5	10	39	596	296
Michigan	—	17	38	914	966	—	2	43	235	128	—	3	20	214	83
Ohio	29	25	65	1,369	1,322	3	3	17	204	155	54	37	80	1,927	1,257
Wisconsin	—	15	50	791	994	1	4	20	280	227	—	8	33	440	769
W.N. Central	21	49	151	2,815	2,877	4	12	59	812	780	3	16	39	928	1,819
Iowa	—	8	16	424	477	—	2	21	203	175	1	3	11	201	109
Kansas	5	7	31	474	405	2	0	7	54	52	2	1	5	68	26
Minnesota	—	12	70	710	701	—	3	21	203	232	—	5	25	308	237
Missouri	13	14	48	772	764	2	2	11	149	152	—	4	14	223	1,276
Nebraska§	3	4	13	239	275	—	2	29	149	93	—	0	3	15	28
North Dakota	—	0	7	45	81	—	0	1	3	29	—	0	5	37	21
South Dakota	—	2	9	151	174	—	1	4	51	47	—	0	9	76	122
S. Atlantic	71	240	457	12,363	12,650	21	13	50	804	710	22	58	100	3,120	4,772
Delaware	—	2	9	146	140	—	0	2	14	16	—	0	1	12	11
District of Columbia	—	1	4	52	64	—	0	1	12	—	—	0	3	19	18
Florida	—	100	174	5,242	5,022	—	2	11	148	164	—	15	34	796	2,288
Georgia	9	43	86	2,239	2,031	—	1	7	89	94	3	20	48	1,091	1,641
Maryland§	10	13	36	792	903	2	2	10	122	85	5	2	8	118	117
North Carolina	37	22	106	1,563	1,844	19	1	12	140	153	7	3	27	275	105
South Carolina§	15	18	55	1,133	1,166	—	1	4	40	14	7	8	32	539	220
Virginia§	—	18	42	1,015	1,249	—	3	25	210	165	—	4	13	249	200
West Virginia	—	3	12	181	231	—	0	3	29	19	—	0	3	21	172
E.S. Central	11	58	138	3,394	3,482	1	5	21	282	319	9	36	67	1,886	3,037
Alabama§	4	14	47	940	980	—	1	17	60	67	—	7	18	395	741
Kentucky	3	9	18	480	574	—	1	7	100	123	—	3	24	260	504
Mississippi	—	14	57	1,054	1,048	—	0	2	6	8	—	5	18	291	1,420
Tennessee§	4	14	60	920	880	1	2	7	116	121	9	17	44	940	372
W.S. Central	15	117	265	6,221	6,065	1	6	27	326	300	35	92	214	4,928	3,117
Arkansas§	7	11	40	777	847	—	1	3	43	45	6	11	27	573	105
Louisiana	—	16	50	983	978	—	0	1	2	12	—	11	25	594	493
Oklahoma	7	14	36	814	706	1	1	19	54	33	1	3	11	178	161
Texas§	1	57	176	3,647	3,534	—	4	10	227	210	28	62	187	3,583	2,358
Mountain	19	58	110	3,210	2,752	2	10	38	597	589	9	19	53	1,208	983
Arizona	7	19	45	1,122	1,001	1	1	5	70	106	6	10	34	655	557
Colorado	8	12	43	703	563	1	3	17	189	154	2	2	11	145	123
Idaho§	2	3	14	192	155	—	2	15	148	133	—	0	2	14	14
Montana§	—	2	8	122	121	—	0	3	37	—	—	0	1	8	27
Nevada§	1	3	9	178	263	—	0	2	10	31	1	4	13	217	79
New Mexico§	—	6	33	482	290	—	1	6	49	42	—	2	10	122	108
Utah	—	6	19	359	286	—	1	9	89	100	—	1	3	39	42
Wyoming§	1	1	4	52	73	—	0	1	5	23	—	0	1	8	33
Pacific	241	108	523	6,341	6,061	11	9	49	598	557	22	28	82	1,834	1,655
Alaska	—	1	4	57	87	—	0	1	7	5	—	0	1	1	8
California	213	78	507	4,810	4,571	7	6	39	327	293	18	26	74	1,590	1,331
Hawaii	—	5	15	264	313	—	0	2	13	39	—	1	3	42	71
Oregon§	—	7	20	424	330	—	1	8	68	79	—	1	10	92	86
Washington	28	12	73	786	760	4	2	15	183	141	4	2	9	109	159
American Samoa	—	0	1	3	—	—	0	0	—	—	—	0	1	1	5
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	13	20	—	0	0	—	—	—	0	3	15	19
Puerto Rico	—	10	29	540	949	—	0	1	2	1	—	0	4	19	24
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 3, 2009, and December 29, 2007 (53rd week)*

Reporting area	Streptococcal diseases, invasive, group A					*Streptococcus pneumoniae*, invasive disease, nondrug resistant† Age <5 years				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max		
United States	48	86	181	5,166	5,294	14	32	55	1,664	2,032
New England	2	5	31	330	409	—	1	11	72	141
Connecticut	—	0	26	101	132	—	0	11	11	24
Maine§	—	0	3	28	28	—	0	1	3	4
Massachusetts	—	2	8	138	190	—	0	5	39	89
New Hampshire	—	0	2	31	27	—	0	1	11	13
Rhode Island§	—	0	9	18	14	—	0	2	7	9
Vermont§	2	0	2	14	18	—	0	1	1	2
Mid. Atlantic	—	18	43	1,011	946	—	3	12	214	350
New Jersey	—	2	11	153	173	—	1	4	63	75
New York (Upstate)	—	6	17	330	295	—	2	9	110	123
New York City	—	4	10	188	226	—	0	6	41	152
Pennsylvania	—	7	16	340	252	N	0	0	N	N
E.N. Central	14	15	42	928	987	6	5	15	270	334
Illinois	—	4	16	244	293	—	0	5	48	84
Indiana	9	2	9	139	128	5	0	5	40	37
Michigan	—	3	10	173	201	—	1	5	78	84
Ohio	4	5	14	262	239	1	1	4	66	69
Wisconsin	1	1	10	110	126	—	1	4	38	60
W.N. Central	4	5	39	386	351	2	2	11	158	116
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	2	0	5	40	32	—	0	3	17	3
Minnesota	—	0	35	172	173	—	0	9	75	66
Missouri	1	2	10	93	85	1	1	2	38	27
Nebraska§	1	1	3	46	25	—	0	2	9	18
North Dakota	—	0	3	12	24	—	0	2	8	1
South Dakota	—	0	2	23	12	1	0	1	11	1
S. Atlantic	10	21	37	1,115	1,264	1	6	16	307	349
Delaware	1	0	2	11	10	—	0	0	—	—
District of Columbia	—	0	4	23	17	—	0	1	2	3
Florida	—	5	10	266	309	—	1	4	70	71
Georgia	5	4	14	249	259	—	1	4	73	85
Maryland§	4	4	8	187	212	1	1	5	60	72
North Carolina	—	2	10	136	167	N	0	0	N	N
South Carolina§	—	1	5	75	101	—	1	4	52	58
Virginia§	—	3	9	134	162	—	0	6	39	52
West Virginia	—	0	3	34	27	—	0	1	11	8
E.S. Central	3	3	9	178	213	—	2	6	105	119
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	3	41	41	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	3	22	13
Tennessee§	3	3	6	137	172	—	1	5	83	106
W.S. Central	6	9	27	488	401	5	5	13	292	350
Arkansas§	—	0	2	5	19	—	0	2	7	19
Louisiana	—	0	2	16	16	—	0	2	13	39
Oklahoma	3	2	8	125	85	1	1	3	70	65
Texas§	3	6	20	342	281	4	3	13	202	227
Mountain	6	10	22	552	574	—	4	13	227	259
Arizona	3	3	9	197	208	—	2	8	113	128
Colorado	3	3	8	153	145	—	1	4	58	52
Idaho§	—	0	2	15	18	—	0	1	5	2
Montana§	N	0	0	N	N	—	0	1	4	1
Nevada§	—	0	1	12	2	N	0	0	N	N
New Mexico§	—	1	8	100	107	—	0	3	18	44
Utah	—	1	4	68	89	—	0	4	28	32
Wyoming§	—	0	2	7	5	—	0	1	1	—
Pacific	3	3	8	178	149	—	0	2	19	14
Alaska	1	1	4	41	25	N	0	0	N	N
California	—	0	0	—	—	N	0	0	N	N
Hawaii	2	2	8	137	124	—	0	2	19	14
Oregon§	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	—	0	12	30	4	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	14	—	0	0	—	—
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 3, 2009, and December 29, 2007 (53rd week)*

Reporting area	*Streptococcus pneumoniae*, invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages					Aged <5 years									
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	31	56	105	2,969	3,329	5	8	23	442	563	52	237	296	12,195	11,466
New England	—	1	48	103	156	—	0	5	13	21	2	5	13	295	279
Connecticut	—	0	48	55	99	—	0	5	5	11	—	0	3	31	39
Maine§	—	0	2	17	13	—	0	1	2	3	—	0	2	10	9
Massachusetts	—	0	0	—	2	—	0	0	—	2	2	4	11	213	155
New Hampshire	—	0	0	—	—	—	0	0	—	—	—	0	2	20	30
Rhode Island§	—	0	2	16	24	—	0	1	4	3	—	0	5	13	36
Vermont§	—	0	2	15	18	—	0	1	2	2	—	0	2	8	10
Mid. Atlantic	—	4	13	236	168	—	0	2	23	31	12	33	51	1,688	1,558
New Jersey	—	0	0	—	—	—	0	0	—	—	—	4	10	208	227
New York (Upstate)	—	1	4	65	58	—	0	1	8	12	—	2	7	141	155
New York City	—	1	6	72	—	—	0	0	—	—	12	20	36	1,071	913
Pennsylvania	—	1	9	99	110	—	0	2	15	19	—	5	12	268	263
E.N. Central	16	12	41	703	847	4	1	7	94	139	4	22	37	1,141	901
Illinois	—	0	16	71	225	—	0	3	14	49	—	7	17	362	464
Indiana	7	2	31	217	203	3	0	5	24	36	2	3	10	144	54
Michigan	—	0	3	19	3	—	0	1	2	2	—	2	21	228	123
Ohio	9	7	17	396	416	1	1	4	54	52	2	6	15	348	194
Wisconsin	—	0	0	—	—	—	0	0	—	—	—	1	4	59	66
W.N. Central	1	3	10	167	360	—	0	2	12	53	1	8	14	380	359
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	15	21
Kansas	1	1	5	72	90	—	0	1	6	10	1	0	5	31	28
Minnesota	—	0	0	—	186	—	0	0	—	35	—	2	5	101	59
Missouri	—	2	8	88	65	—	0	1	3	3	—	4	10	224	239
Nebraska§	—	0	0	—	2	—	0	0	—	—	—	0	1	8	4
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	1
South Dakota	—	0	1	7	17	—	0	1	3	5	—	0	1	1	7
S. Atlantic	5	22	53	1,275	1,349	1	3	13	224	249	6	52	104	2,747	2,784
Delaware	—	0	1	3	11	—	0	0	—	2	1	0	4	16	18
District of Columbia	—	0	3	19	21	—	0	1	1	1	—	2	9	135	178
Florida	—	14	30	770	726	—	3	12	150	134	3	19	37	1,003	913
Georgia	5	7	23	380	510	1	1	5	60	103	—	11	33	620	680
Maryland§	—	0	2	7	1	—	0	1	1	—	1	6	14	343	345
North Carolina	N	0	0	N	N	N	0	0	N	N	1	5	19	279	323
South Carolina§	—	0	0	—	—	—	0	0	—	—	—	2	6	90	91
Virginia§	N	0	0	N	N	N	0	0	N	N	—	5	16	259	230
West Virginia	—	1	9	96	80	—	0	2	12	9	—	0	1	2	6
E.S. Central	7	5	14	276	282	—	1	4	44	38	11	21	37	1,126	936
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	17	448	380
Kentucky	2	1	6	77	28	—	0	2	11	3	—	1	7	82	56
Mississippi	—	0	2	4	61	—	0	1	1	—	5	3	19	179	133
Tennessee§	5	3	11	195	193	—	0	3	32	35	6	8	19	417	367
W.S. Central	2	2	7	94	96	—	0	2	13	14	—	41	63	2,188	1,880
Arkansas§	2	0	4	22	6	—	0	1	4	2	—	2	19	169	122
Louisiana	—	1	6	72	90	—	0	2	9	12	—	10	31	588	533
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	5	55	65
Texas§	—	0	0	—	—	—	0	0	—	—	—	26	47	1,376	1,160
Mountain	—	2	15	113	68	—	0	4	17	15	11	8	16	429	543
Arizona	—	0	0	—	—	—	0	0	—	—	3	4	12	203	296
Colorado	—	0	0	—	—	—	0	0	—	—	—	1	7	93	57
Idaho§	N	0	0	N	N	N	0	0	N	N	—	0	2	6	1
Montana§	—	0	1	1	—	—	0	0	—	—	7	0	0	7	8
Nevada§	N	0	0	N	N	N	0	0	N	N	1	1	6	75	111
New Mexico§	—	0	1	2	—	—	0	0	—	—	—	1	4	40	46
Utah	—	1	14	106	51	—	0	4	17	12	—	0	2	2	20
Wyoming§	—	0	1	4	17	—	0	0	—	3	—	0	1	3	4
Pacific	—	0	1	2	3	—	0	1	2	3	5	44	64	2,201	2,226
Alaska	N	0	0	N	N	N	0	0	N	N	—	0	1	1	7
California	N	0	0	N	N	N	0	0	N	N	1	40	58	1,991	2,038
Hawaii	—	0	1	2	3	—	0	1	2	3	—	0	2	20	9
Oregon§	N	0	0	N	N	N	0	0	N	N	3	0	3	27	18
Washington	N	0	0	N	N	N	0	0	N	N	1	3	9	162	154
American Samoa	N	0	0	N	N	N	0	0	N	N	—	0	0	—	4
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	—	3	11	164	169
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 3, 2009, and December 29, 2007 (53rd week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive§				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	77	500	1,001	26,924	40,146	—	1	76	637	1,227	—	1	76	691	2,403
New England	8	11	22	548	2,551	—	0	2	6	5	—	0	1	3	6
Connecticut	—	0	0	—	1,440	—	0	2	5	2	—	0	1	3	2
Maine¶	—	0	0	—	357	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	1	1	—	—	0	0	—	3	—	0	0	—	3
New Hampshire	4	5	13	264	374	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	0	—	—	—	0	1	1	—	—	0	0	—	1
Vermont¶	4	5	17	283	380	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	—	45	81	2,272	4,680	—	0	8	46	22	—	0	5	19	11
New Jersey	N	0	0	N	N	—	0	1	3	1	—	0	1	4	—
New York (Upstate)	N	0	0	N	N	—	0	5	23	3	—	0	2	7	1
New York City	N	0	0	N	N	—	0	2	8	13	—	0	2	6	5
Pennsylvania	—	45	81	2,272	4,680	—	0	2	12	5	—	0	1	2	5
E.N. Central	38	137	312	7,087	11,309	—	0	8	41	113	—	0	3	20	65
Illinois	—	23	63	1,369	1,091	—	0	4	11	63	—	0	2	8	38
Indiana	—	0	0	—	444	—	0	1	2	14	—	0	1	1	10
Michigan	—	58	116	2,824	4,187	—	0	4	11	16	—	0	2	6	1
Ohio	38	47	106	2,406	4,536	—	0	3	14	13	—	0	1	1	10
Wisconsin	—	4	50	488	1,051	—	0	1	3	7	—	0	1	4	6
W.N. Central	6	21	71	1,306	1,733	—	0	6	43	249	—	0	20	155	739
Iowa	N	0	0	N	N	—	0	2	3	12	—	0	1	3	18
Kansas	4	6	40	471	586	—	0	2	8	14	—	0	4	30	26
Minnesota	—	0	0	—	—	—	0	2	2	44	—	0	4	8	57
Missouri	2	10	51	766	923	—	0	3	12	61	—	0	1	7	16
Nebraska¶	N	0	0	N	N	—	0	1	5	21	—	0	8	44	142
North Dakota	—	0	39	49	140	—	0	2	2	49	—	0	11	35	320
South Dakota	—	0	5	20	84	—	0	5	11	48	—	0	6	28	160
S. Atlantic	9	88	173	4,605	5,296	—	0	3	14	43	—	0	3	14	39
Delaware	—	1	5	45	49	—	0	0	—	1	—	0	1	1	—
District of Columbia	—	0	3	23	32	—	0	0	—	—	—	0	0	—	—
Florida	—	29	87	1,708	1,321	—	0	2	2	3	—	0	0	—	—
Georgia	N	0	0	N	N	—	0	1	4	23	—	0	1	4	27
Maryland¶	N	0	0	N	N	—	0	2	7	6	—	0	2	7	4
North Carolina	N	0	0	N	N	—	0	0	—	4	—	0	0	—	4
South Carolina¶	4	14	67	851	1,103	—	0	0	—	3	—	0	1	1	2
Virginia¶	—	21	81	1,296	1,582	—	0	0	—	3	—	0	1	1	2
West Virginia	5	12	36	682	1,209	—	0	1	1	—	—	0	0	—	—
E.S. Central	—	17	101	1,094	701	—	0	7	46	76	—	0	8	58	99
Alabama¶	—	17	101	1,081	699	—	0	3	11	17	—	0	3	10	7
Kentucky	N	0	0	N	N	—	0	1	3	4	—	0	0	—	—
Mississippi	—	0	2	13	2	—	0	4	22	50	—	0	7	41	86
Tennessee¶	N	0	0	N	N	—	0	1	10	5	—	0	3	7	6
W.S. Central	9	106	435	7,733	10,992	—	0	7	56	269	—	0	8	58	158
Arkansas¶	5	8	38	557	808	—	0	1	7	13	—	0	1	2	7
Louisiana	—	1	10	70	123	—	0	2	9	27	—	0	6	27	13
Oklahoma	N	0	0	N	N	—	0	1	2	59	—	0	1	5	48
Texas¶	4	99	422	7,106	10,061	—	0	6	38	170	—	0	4	24	90
Mountain	7	40	90	2,141	2,798	—	0	12	102	289	—	0	24	201	1,041
Arizona	—	0	0	—	—	—	0	10	61	50	—	0	8	50	47
Colorado	4	14	43	842	1,089	—	0	4	17	99	—	0	13	78	477
Idaho¶	N	0	0	N	N	—	0	1	3	11	—	0	6	30	121
Montana¶	3	5	27	340	424	—	0	0	—	37	—	0	2	5	165
Nevada¶	N	0	0	N	N	—	0	2	9	2	—	0	3	7	10
New Mexico¶	—	3	18	209	422	—	0	2	6	39	—	0	1	3	21
Utah	—	12	55	740	828	—	0	2	6	28	—	0	5	20	42
Wyoming¶	—	0	4	10	35	—	0	0	—	23	—	0	2	8	158
Pacific	—	2	8	138	86	—	0	38	283	161	—	0	24	163	245
Alaska	—	1	6	74	43	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	37	278	154	—	0	19	149	226
Hawaii	—	1	5	64	43	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	2	3	7	—	0	4	13	19
Washington	N	0	0	N	N	—	0	1	2	—	—	0	1	1	—
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	1	17	63	239	—	0	0	—	—	—	0	0	—	—
Puerto Rico	1	7	20	410	727	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE III. Deaths in 122 U.S. cities,* week ending January 3, 2009 (53rd week)

Reporting area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45–64	25–44	1–24	<1	
New England	511	365	106	30	2	8	45
Boston, MA	143	91	38	7	1	6	13
Bridgeport, CT	31	23	7	1	—	—	4
Cambridge, MA	12	11	—	1	—	—	2
Fall River, MA	13	11	2	—	—	—	—
Hartford, CT	51	35	12	3	—	1	1
Lowell, MA	22	19	2	1	—	—	1
Lynn, MA	3	2	1	—	—	—	—
New Bedford, MA	19	17	1	1	—	—	3
New Haven, CT	U	U	U	U	U	U	U
Providence, RI	60	45	11	4	—	—	9
Somerville, MA	5	4	1	—	—	—	—
Springfield, MA	52	37	12	3	—	—	4
Waterbury, CT	32	27	2	2	—	1	3
Worcester, MA	68	43	17	7	1	—	5
Mid. Atlantic	1,840	1,325	368	85	29	33	112
Albany, NY	58	43	11	1	3	—	8
Allentown, PA	26	21	4	1	—	—	1
Buffalo, NY	64	43	17	1	1	2	3
Camden, NJ	59	28	19	4	3	5	1
Elizabeth, NJ	18	11	4	3	—	—	2
Erie, PA	52	41	10	1	—	—	8
Jersey City, NJ	24	16	6	2	—	—	3
New York City, NY	1,019	756	188	46	16	13	51
Newark, NJ	20	7	10	2	—	1	1
Paterson, NJ	11	4	4	2	—	1	—
Philadelphia, PA	101	60	29	8	3	1	5
Pittsburgh, PA§	28	21	4	—	—	3	2
Reading, PA	51	44	5	2	—	—	5
Rochester, NY	124	88	26	7	2	1	12
Schenectady, NY	18	13	4	1	—	—	4
Scranton, PA	24	21	3	—	—	—	—
Syracuse, NY	88	64	17	3	1	3	4
Trenton, NJ	26	18	4	1	—	3	1
Utica, NY	15	14	1	—	—	—	1
Yonkers, NY	14	12	2	—	—	—	—
E.N. Central	1,838	1,264	414	93	31	35	114
Akron, OH	40	26	9	2	1	2	—
Canton, OH	44	34	10	—	—	—	2
Chicago, IL	312	209	58	26	9	9	19
Cincinnati, OH	U	U	U	U	U	U	U
Cleveland, OH	213	145	54	10	4	—	8
Columbus, OH	179	119	45	5	1	9	11
Dayton, OH	115	76	30	5	3	1	5
Detroit, MI	113	61	39	4	4	5	6
Evansville, IN	35	27	6	2	—	—	2
Fort Wayne, IN	58	48	6	4	—	—	2
Gary, IN	12	4	7	—	1	—	—
Grand Rapids, MI	63	36	21	4	—	2	8
Indianapolis, IN	169	121	30	11	5	2	25
Lansing, MI	52	37	11	3	1	—	2
Milwaukee, WI	62	46	11	4	1	—	3
Peoria, IL	48	32	12	4	—	—	5
Rockford, IL	87	63	18	3	—	3	4
South Bend, IN	52	35	16	—	1	—	3
Toledo, OH	119	94	17	6	—	2	4
Youngstown, OH	65	51	14	—	—	—	5
W.N. Central	640	438	141	34	7	19	33
Des Moines, IA	111	81	22	5	—	3	9
Duluth, MN	29	23	5	1	—	—	2
Kansas City, KS	26	17	7	—	—	1	—
Kansas City, MO	79	48	22	4	1	4	3
Lincoln, NE	31	18	9	3	1	—	1
Minneapolis, MN	66	49	12	3	—	2	7
Omaha, NE	77	62	11	3	1	—	4
St. Louis, MO	68	38	18	5	3	4	4
St. Paul, MN	66	48	11	5	—	2	3
Wichita, KS	87	54	24	5	1	3	—
S. Atlantic	882	575	203	58	30	16	54
Atlanta, GA	121	64	39	10	6	2	3
Baltimore, MD	125	77	36	4	7	1	12
Charlotte, NC	72	52	17	2	1	—	9
Jacksonville, FL	132	88	22	20	1	1	7
Miami, FL	92	61	21	6	3	1	2
Norfolk, VA	36	29	3	1	1	2	3
Richmond, VA	U	U	U	U	U	U	U
Savannah, GA	62	47	9	2	3	1	5
St. Petersburg, FL	42	25	14	1	—	2	3
Tampa, FL	93	67	17	5	2	2	7
Washington, D.C.	100	60	23	7	6	4	3
Wilmington, DE	7	5	2	—	—	—	—
E.S. Central	698	489	142	36	8	23	51
Birmingham, AL	155	108	34	4	3	6	18
Chattanooga, TN	54	41	10	2	—	1	4
Knoxville, TN	108	76	22	8	1	1	5
Lexington, KY	31	18	9	1	1	2	1
Memphis, TN	86	64	14	5	—	3	5
Mobile, AL	67	48	14	1	—	4	4
Montgomery, AL	30	22	6	2	—	—	2
Nashville, TN	167	112	33	13	3	6	12
W.S. Central	1,234	790	293	80	42	29	101
Austin, TX	98	65	22	9	1	1	7
Baton Rouge, LA	23	16	5	2	—	—	1
Corpus Christi, TX	46	36	8	1	1	—	5
Dallas, TX	163	89	42	18	10	4	12
El Paso, TX	48	39	6	2	1	—	2
Fort Worth, TX	107	68	29	6	3	1	7
Houston, TX	323	198	88	18	10	9	24
Little Rock, AR	93	63	17	6	4	3	8
New Orleans, LA¶	U	U	U	U	U	U	U
San Antonio, TX	191	116	47	11	8	9	20
Shreveport, LA	31	22	5	2	2	—	3
Tulsa, OK	111	78	24	5	2	2	12
Mountain	808	545	179	53	16	15	52
Albuquerque, NM	U	U	U	U	U	U	U
Boise, ID	33	24	4	3	1	1	3
Colorado Springs, CO	55	35	15	2	3	—	2
Denver, CO	62	40	13	5	1	3	1
Las Vegas, NV	214	145	55	11	2	1	14
Ogden, UT	35	26	7	2	—	—	3
Phoenix, AZ	159	98	38	17	2	4	10
Pueblo, CO	16	13	2	1	—	—	—
Salt Lake City, UT	105	65	27	8	3	2	12
Tucson, AZ	129	99	18	4	4	4	7
Pacific	1,488	1,016	334	77	31	30	131
Berkeley, CA	20	10	5	4	—	1	1
Fresno, CA	U	U	U	U	U	U	U
Glendale, CA	37	31	6	—	—	—	8
Honolulu, HI	66	52	10	2	1	1	9
Long Beach, CA	58	43	11	2	—	2	11
Los Angeles, CA	233	149	51	17	8	8	21
Pasadena, CA	28	21	4	2	—	1	2
Portland, OR	77	58	14	2	2	1	3
Sacramento, CA	190	126	46	9	5	4	19
San Diego, CA	128	87	29	7	1	4	8
San Francisco, CA	101	60	27	8	4	2	11
San Jose, CA	180	124	42	7	5	2	17
Santa Cruz, CA	31	24	7	—	—	—	3
Seattle, WA	138	87	39	8	3	1	10
Spokane, WA	83	57	18	5	—	3	5
Tacoma, WA	118	87	25	4	2	—	3
Total**	**9,939**	**6,807**	**2,180**	**546**	**196**	**208**	**693**

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.

¶ Because of Hurricane Katrina, weekly reporting of deaths has been temporarily disrupted.

** Total includes unknown ages.

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Recommended Adult Immunization Schedule — United States, 2009

The Advisory Committee on Immunization Practices (ACIP) annually reviews the recommended Adult Immunization Schedule to ensure that the schedule reflects current recommendations for the licensed vaccines. In October 2008, ACIP approved the Adult Immunization Schedule for 2009. No new vaccines were added to the schedule; however, several indications were added to the pneumococcal polysaccharide vaccine footnote, clarifications were made to the footnotes for human papillomavirus, varicella, and meningococcal vaccines, and schedule information was added to the hepatitis A and hepatitis B vaccine footnotes.

Additional information is available as follows: schedule (in English and Spanish) at http://www.cdc.gov/vaccines/recs/schedules/adult-schedule.htm; adult vaccination at http://www.cdc.gov/vaccines/default.htm; ACIP statements for specific vaccines at http://www.cdc.gov/vaccine/pubs/acip-list.htm; and reporting adverse events at http://www.vaers.hhs.gov or by telephone, 800-822-7967.

Changes for 2009

Format Changes (Figures 1 and 2)

To make the figures easier to understand, several formatting changes were implemented to both the age group–based schedule and the medical and other indications schedule. The changes include 1) increasing the number of age groups; 2) deleting the hatched yellow bar for tetanus, diphtheria, pertussis (Td/Tdap) vaccine while adding explanatory text to the Td/Tdap bar; 3) simplifying the figures by removing schedule text from the vaccine bars; 4) revising the order of the vaccines to more appropriately group the vaccines, and 5) adding a legend box to clarify the meaning of blank spaces in the table.

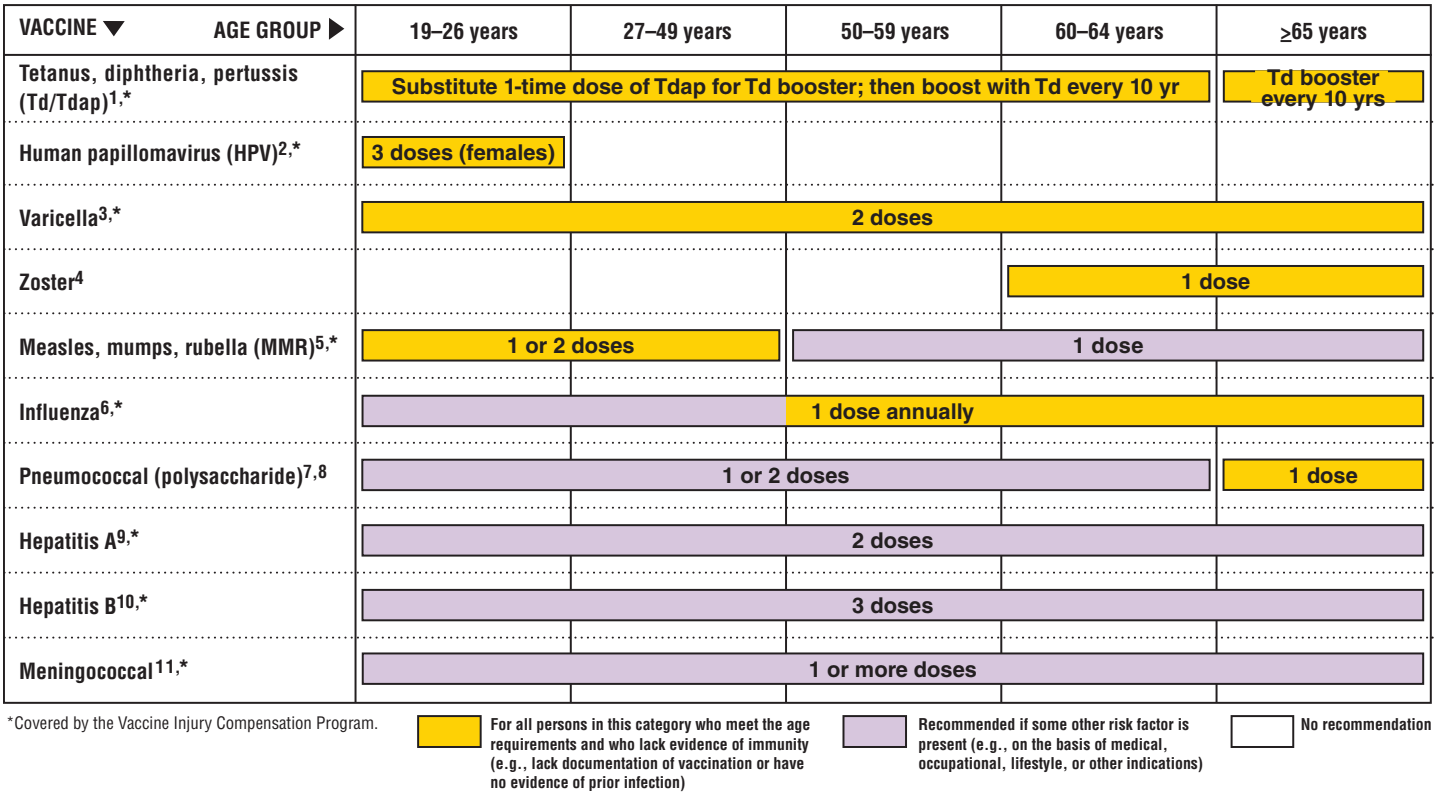
Footnote (Figures 1 and 2)

- The human papillomavirus (HPV) footnote (#2) has language added to indicate that health-care personnel are not at increased risk because of occupational exposure, but they should be vaccinated consistent with age-based recommendations. Also, text has been added to indicate that vaccination with HPV may begin at age 9 years.
- The varicella footnote (#3) has language added to clarify that adults who previously received only 1 dose of vaccine should receive a second dose.
- Asthma and cigarette smoking have been added as indications for pneumococcal polysaccharide vaccination (#7). Also, text has been added to clarify vaccine use in Alaska Natives and American Indians.
- The Hepatitis A footnote (#9) has additional schedule information for the 4-dose combined hepatitis A/hepatitis B vaccine.
- The Hepatitis B footnote (#10) has additional schedule information for the 4-dose combined hepatitis A/hepatitis B vaccine, and a clarification of schedule information for special formulation indications has been added.
- The meningococcal vaccine footnote (#11) clarifies that the revaccination interval is 5 years.

The Recommended Adult Immunization Schedule has been approved by the Advisory Committee on Immunization Practices, the American Academy of Family Physicians, the American College of Obstetricians and Gynecologists, and the American College of Physicians.

Suggested citation: Centers for Disease Control and Prevention. Recommended adult immunization schedule—United States, 2009. MMWR 2008;57(53).

FIGURE 1. Recommended adult immunization schedule by vaccine and age group — United Sates, 2009



NOTE: The above recommendations must be read along with the footnotes on pages Q2–Q4 of this schedule.

1. Tetanus, diphtheria, and acellular pertussis (Td/Tdap) vaccination

Tdap should replace a single dose of Td for adults aged 19 through 64 years who have not received a dose of Tdap previously

Adults with uncertain or incomplete history of primary vaccination series with tetanus and diphtheria toxoid–containing vaccines should begin or complete a primary vaccination series. A primary series for adults is 3 doses of tetanus and diphtheria toxoid–containing vaccines; administer the first 2 doses at least 4 weeks apart and the third dose 6–12 months after the second. However, Tdap can substitute for any one of the doses of Td in the 3-dose primary series. The booster dose of tetanus and diphtheria toxoid–containing vaccine should be administered to adults who have completed a primary series and if the last vaccination was received 10 or more years previously. Tdap or Td vaccine may be used, as indicated.

If a woman is pregnant and received the last Td vaccination 10 or more years previously, administer Td during the second or third trimester. If the woman received the last Td vaccination less than 10 years previously, administer Tdap during the immediate postpartum period. A dose of Tdap is recommended for postpartum women, close contacts of infants aged less than 12 months, and all health-care personnel with direct patient contact if they have not previously received Tdap. An interval as short as 2 years from the last Td is suggested; shorter intervals can be used. Td may be deferred during pregnancy and Tdap substituted in the immediate postpartum period, or Tdap may be administered instead of Td to a pregnant woman after an informed discussion with the woman.

Consult the ACIP statement for recommendations for administering Td as prophylaxis in wound management.

2. Human papillomavirus (HPV) vaccination

HPV vaccination is recommended for all females aged 11 through 26 years (and may begin at age 9 years) who have not completed the vaccine series. History of genital warts, abnormal Papanicolaou test, or positive HPV DNA test is not evidence of prior infection with all vaccine HPV types; HPV vaccination is recommended for persons with such histories.

Ideally, vaccine should be administered before potential exposure to HPV through sexual activity; however, females who are sexually active should still be vaccinated consistent with age-based recommendations. Sexually active females who have not been infected with any of the four HPV vaccine types receive the full benefit of the vaccination. Vaccination is less beneficial for females who have already been infected with one or more of the HPV vaccine types.

A complete series consists of 3 doses. The second dose should be administered 2 months after the first dose; the third dose should be administered 6 months after the first dose.

HPV vaccination is not specifically recommended for females with the medical indications described in Figure 2, "Vaccines that might be indicated for adults based on medical and other indications." Because HPV vaccine is not a live-virus vaccine, it may be administered to persons with the medical indications described in Figure 2. However, the immune response and vaccine efficacy might be less for persons with the medical indications described in Figure 2 than in persons who do not have the medical indications described or who are immunocompetent. Health-care personnel are not at increased risk because of occupational exposure, and should be vaccinated consistent with age-based recommendations.

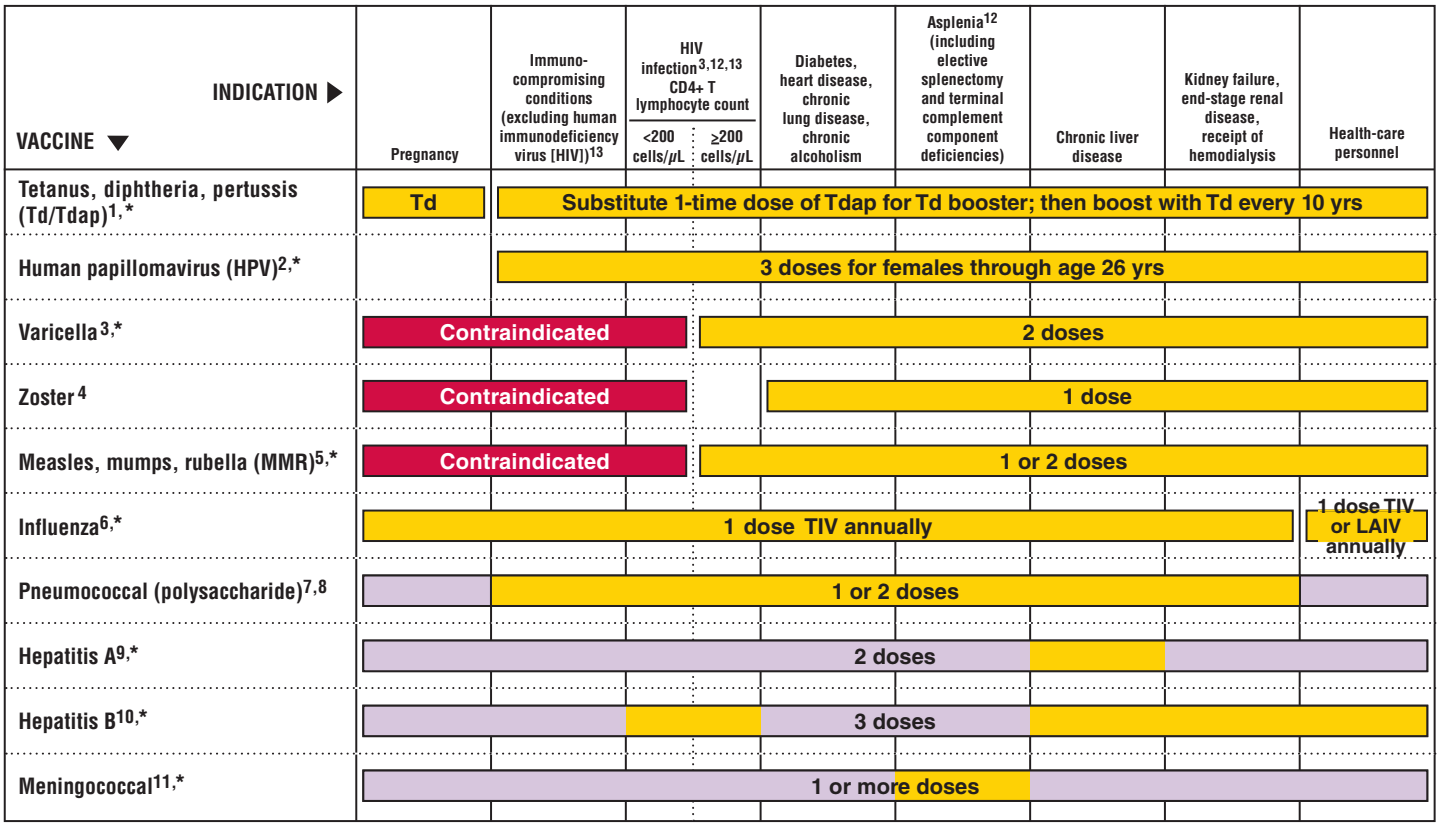
3. Varicella vaccination

All adults without evidence of immunity to varicella should receive 2 doses of single-antigen varicella vaccine if not previously vaccinated or the second dose if they have received only one dose, unless they have a medical contraindication. Special consideration should be given to those who 1) have close contact with persons at high risk for severe disease (e.g., health-care personnel and family contacts of persons with immunocompromising conditions) or 2) are at high risk for exposure or transmission (e.g., teachers; child care employees; residents and staff members of institutional settings, including correctional institutions; college students; military personnel; adolescents and adults living in households with children; nonpregnant women of childbearing age; and international travelers).

Evidence of immunity to varicella in adults includes any of the following: 1) documentation of 2 doses of varicella vaccine at least 4 weeks apart; 2) U.S.-born before 1980 (although for health-care personnel and pregnant women, birth before 1980 should not be considered evidence of immunity); 3) history of varicella based on diagnosis or verification of varicella by a health-care provider (for a patient reporting a history of or presenting with an atypical case, a mild case, or both, health-care providers should seek either an epidemiologic link to a typical varicella case or to a laboratory-confirmed case or evidence of laboratory confirmation, if it was performed at the time of acute disease); 4) history of herpes zoster based on health-care provider diagnosis or verification of herpes zoster by a health-care provider; or 5) laboratory evidence of immunity or laboratory confirmation of disease.

Pregnant women should be assessed for evidence of varicella immunity. Women who do not have evidence of immunity should receive the first dose

FIGURE 2. Vaccines that might be indicated for adults based on medical and other indications — United States, 2009



NOTE: The above recommendations must be read along with the footnotes on pages Q2–Q4 of this schedule.

of varicella vaccine upon completion or termination of pregnancy and before discharge from the health-care facility. The second dose should be administered 4–8 weeks after the first dose.

4. Herpes zoster vaccination

A single dose of zoster vaccine is recommended for adults aged 60 years and older regardless of whether they report a prior episode of herpes zoster. Persons with chronic medical conditions may be vaccinated unless their condition constitutes a contraindication.

5. Measles, mumps, rubella (MMR) vaccination

Measles component: Adults born before 1957 generally are considered immune to measles. Adults born during or after 1957 should receive 1 or more doses of MMR unless they have a medical contraindication, documentation of 1 or more doses, history of measles based on health-care provider diagnosis, or laboratory evidence of immunity.

A second dose of MMR is recommended for adults who 1) have been recently exposed to measles or are in an outbreak setting; 2) have been vaccinated previously with killed measles vaccine; 3) have been vaccinated with an unknown type of measles vaccine during 1963–1967; 4) are students in postsecondary educational institutions; 5) work in a health-care facility; or 6) plan to travel internationally.

Mumps component: Adults born before 1957 generally are considered immune to mumps. Adults born during or after 1957 should receive 1 dose of MMR unless they have a medical contraindication, history of mumps based on health-care provider diagnosis, or laboratory evidence of immunity.

A second dose of MMR is recommended for adults who 1) live in a community experiencing a mumps outbreak and are in an affected age group; 2) are students in postsecondary educational institutions; 3) work in a health-care facility; or 4) plan to travel internationally. For unvaccinated health-care personnel born before 1957 who do not have other evidence of mumps immunity, administering 1 dose on a routine basis should be considered and administering a second dose during an outbreak should be strongly considered.

Rubella component: 1 dose of MMR vaccine is recommended for women whose rubella vaccination history is unreliable or who lack laboratory evidence of immunity. For women of childbearing age, regardless of birth year, rubella immunity should be determined and women should be counseled regarding congenital rubella syndrome. Women who do not have evidence of immunity should receive MMR vaccine upon completion or termination of pregnancy and before discharge from the health-care facility.

6. Influenza vaccination

Medical indications: Chronic disorders of the cardiovascular or pulmonary systems, including asthma; chronic metabolic diseases, including diabetes mellitus, renal or hepatic dysfunction, hemoglobinopathies, or immunocompromising conditions (including immunocompromising conditions caused by medications or human immunodeficiency virus [HIV]); any condition that compromises respiratory function or the handling of respiratory secretions or that can increase the risk of aspiration (e.g., cognitive dysfunction, spinal cord injury, or seizure disorder or other neuromuscular disorder); and pregnancy during the influenza season. No data exist on the risk for severe or complicated influenza disease among persons with asplenia; however, influenza is a risk factor for secondary bacterial infections that can cause severe disease among persons with asplenia.

Occupational indications: All health-care personnel, including those employed by long-term care and assisted-living facilities, and caregivers of children less than 5 years old.

Other indications: Residents of nursing homes and other long-term care and assisted-living facilities; persons likely to transmit influenza to persons at high risk (e.g., in-home household contacts and caregivers of children aged less than 5 years old, persons 65 years old and older and persons of all ages with high-risk condition[s]); and anyone who would like to decrease their risk of getting influenza. Healthy, nonpregnant adults aged less than 50 years without high-risk medical conditions who are not contacts of severely immunocompromised persons in special care units can receive either intranasally administered live, attenuated influenza vaccine (FluMist®) or inactivated vaccine. Other persons should receive the inactivated vaccine.

7. Pneumococcal polysaccharide (PPSV) vaccination

Medical indications: Chronic lung disease (including asthma); chronic cardiovascular diseases; diabetes mellitus; chronic liver diseases, cirrhosis; chronic alcoholism, chronic renal failure or nephrotic syndrome; functional or anatomic asplenia (e.g., sickle cell disease or splenectomy [if elective splenectomy

is planned, vaccinate at least 2 weeks before surgery]); immunocompromising conditions; and cochlear implants and cerebrospinal fluid leaks. Vaccinate as close to HIV diagnosis as possible.

Other indications: Residents of nursing homes or other long-term care facilities and persons who smoke cigarettes. Routine use of PPSV is not recommended for Alaska Native or American Indian persons younger than 65 years unless they have underlying medical conditions that are PPSV indications. However, public health authorities may consider recommending PPSV for Alaska Natives and American Indians aged 50 through 64 years who are living in areas in which the risk of invasive pneumococcal disease is increased.

8. Revaccination with PPSV

One-time revaccination after 5 years is recommended for persons with chronic renal failure or nephrotic syndrome; functional or anatomic asplenia (e.g., sickle cell disease or splenectomy); and for persons with immunocompromising conditions. For persons aged 65 years and older, one-time revaccination if they were vaccinated 5 or more years previously and were aged less than 65 years at the time of primary vaccination.

9. Hepatitis A vaccination

Medical indications: Persons with chronic liver disease and persons who receive clotting factor concentrates.

Behavioral indications: Men who have sex with men and persons who use illegal drugs.

Occupational indications: Persons working with hepatitis A virus (HAV)–infected primates or with HAV in a research laboratory setting.

Other indications: Persons traveling to or working in countries that have high or intermediate endemicity of hepatitis A (a list of countries is available at http://wwwn.cdc.gov/travel/contentdiseases.aspx) and any person seeking protection from HAV infection.

Single-antigen vaccine formulations should be administered in a 2-dose schedule at either 0 and 6–12 months (Havrix®), or 0 and 6–18 months (Vaqta®). If the combined hepatitis A and hepatitis B vaccine (Twinrix®) is used, administer 3 doses at 0, 1, and 6 months; alternatively, a 4-dose schedule, administered on days 0, 7, and 21 to 30 followed by a booster dose at month 12 may be used.

10. Hepatitis B vaccination

Medical indications: Persons with end-stage renal disease, including patients receiving hemodialysis; persons with HIV infection; and persons with chronic liver disease.

Occupational indications: Health-care personnel and public-safety workers who are exposed to blood or other potentially infectious body fluids.

Behavioral indications: Sexually active persons who are not in a long-term, mutually monogamous relationship (e.g., persons with more than 1 sex partner during the previous 6 months); persons seeking evaluation or treatment for a sexually transmitted disease (STD);current or recent injection-drug users; and men who have sex with men.

Other indications: Household contacts and sex partners of persons with chronic hepatitis B virus (HBV) infection; clients and staff members of institutions for persons with developmental disabilities; international travelers to countries with high or intermediate prevalence of chronic HBV infection (a list of countries is available at http://wwwn.cdc.gov/travel/contentdiseases.aspx); and any adult seeking protection from HBV infection.

Hepatitis B vaccination is recommended for all adults in the following settings: STD treatment facilities; HIV testing and treatment facilities; facilities providing drug-abuse treatment and prevention services; health-care settings targeting services to injection-drug users or men who have sex with men; correctional facilities; end-stage renal disease programs and facilities for chronic hemodialysis patients; and institutions and nonresidential daycare facilities for persons with developmental disabilities.

If the combined hepatitis A and hepatitis B vaccine (Twinrix®) is used, administer 3 doses at 0, 1, and 6 months; alternatively, a 4-dose schedule, administered on days 0, 7, and 21 to 30 followed by a booster dose at month 12 may be used.

Special formulation indications: For adult patients receiving hemodialysis or with other immunocompromising conditions, 1 dose of 40 μg/mL (Recombivax HB®) administered on a 3-dose schedule or 2 doses of 20 μg/mL (Engerix-B®) administered simultaneously on a 4-dose schedule at 0,1, 2 and 6 months.

11. Meningococcal vaccination

Medical indications: Adults with anatomic or functional asplenia, or terminal complement component deficiencies.

Other indications: First-year college students living in dormitories; microbiologists routinely exposed to isolates of Neisseria meningitidis; military recruits; and persons who travel to or live in countries in which meningococcal disease is hyperendemic or epidemic (e.g., the "meningitis belt" of sub-Saharan Africa during the dry season [December–June]), particularly if their contact with local populations will be prolonged. Vaccination is required by the government of Saudi Arabia for all travelers to Mecca during the annual Hajj.

Meningococcal conjugate vaccine (MCV) is preferred for adults with any of the preceding indications who are aged 55 years or younger, although meningococcal polysaccharide vaccine (MPSV) is an acceptable alternative. Revaccination with MCV after 5 years might be indicated for adults previously vaccinated with MPSV who remain at increased risk for infection (e.g., persons residing in areas in which disease is epidemic).

12. Selected conditions for which Haemophilus influenzae type b (Hib) vaccine may be used

Hib vaccine generally is not recommended for persons aged 5 years and older. No efficacy data are available on which to base a recommendation concerning use of Hib vaccine for older children and adults. However, studies suggest good immunogenicity in patients who have sickle cell disease, leukemia, or HIV infection or who have had a splenectomy; administering 1 dose of vaccine to these patients is not contraindicated.

13. Immunocompromising conditions

Inactivated vaccines generally are acceptable (e.g., pneumococcal, meningococcal, and influenza [trivalent inactivated influenza vaccine]) and live vaccines generally are avoided in persons with immune deficiencies or immunocompromising conditions. Information on specific conditions is available at http://www.cdc.gov/vaccines/pubs/acip-list.htm.

These schedules indicate the recommended age groups and medical indications for which administration of currently licensed vaccines is commonly indicated for adults ages 19 years and older, as of January 1, 2009. Licensed combination vaccines may be used whenever any components of the combination are indicated and when the vaccine's other components are not contraindicated. For detailed recommendations on all vaccines, including those used primarily for travelers or that are issued during the year, consult the manufacturers' package inserts and the complete statements from the Advisory Committee on Immunization Practices (http://www.cdc.gov/vaccines/pubs/acip-list.htm).

Report all clinically significant postvaccination reactions to the Vaccine Adverse Event Reporting System (VAERS). Reporting forms and instructions on filing a VAERS report are available at http://www.vaers.hhs.gov or by telephone, 800-822-7967.

Information on how to file a Vaccine Injury Compensation Program claim is available at http://www.hrsa.gov/vaccinecompensation or by telephone, 800-338-2382. To file a claim for vaccine injury, contact the U.S. Court of Federal Claims, 717 Madison Place, N.W., Washington, D.C. 20005; telephone, 202-357-6400.

Additional information about the vaccines in this schedule, extent of available data, and contraindications for vaccination is also available at http://www.cdc.gov/vaccines or from the CDC-INFO Contact Center at 800-CDC-INFO (800-232-4636) in English and Spanish, 24 hours a day, 7 days a week.

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