



MMWRTM

Morbidity and Mortality Weekly Report

www.cdc.gov/mmwr

Weekly

May 2, 2008 / Vol. 57 / No. 17

Acute Renal Failure Associated with Cosmetic Soft-Tissue Filler Injections — North Carolina, 2007

Soft-tissue fillers are substances injected to augment or enhance the appearance of lips, breasts, buttocks, or other soft tissues. Previous reports have linked the administration of soft-tissue fillers, usually liquid silicone, by unlicensed practitioners to severe adverse events, including death (1–9). On December 27, 2007, the North Carolina Division of Public Health (NCDPH) was notified of three cases of renal failure occurring among women who had received cosmetic soft-tissue filler injections at a facility in North Carolina (facility A). This report summarizes the clinical findings for these cases and describes the subsequent public health investigation. All injections were administered by a practitioner with no medical training or supervision (practitioner A). Investigators were not able to identify the substances injected. Although records indicated that the injections contained liquid silicone, this substance has not been associated previously with renal failure. These findings underscore the risks posed by cosmetic injections administered by unlicensed practitioners. Public health officials should be alert for adverse events associated with these injections and take all necessary actions to prevent additional injuries.

Case Reports

Case 1. On December 8, 2007, a District of Columbia woman aged 42 years, who was previously healthy except for a history of anemia, received cosmetic soft-tissue filler injections in her buttocks at facility A. Records specifying the substance injected were unavailable. On December 22, the woman received additional injections at facility A. According to facility records, 300 mL of “dermal silicone/saline solution” were injected into each buttock (600 mL total) during the December 22 visit. The woman experi-

enced headache and vomiting within 30 minutes of these injections and noted that her urine looked like purple blood. She went to an emergency department (ED) in Maryland on December 24 with fatigue, vomiting, and headache and was found to be in acute renal failure, with a serum creatinine level of 4.2 mg/dL (normal: 0.8–1.4 mg/dL). Laboratory investigations, including urine testing for heavy metals, did not reveal a specific etiology. Her serum creatine phosphokinase (CPK) level was 411 U/L on the day of admission (normal: 25–200 U/L). She remained hospitalized for 10 days. Hemodialysis was not required, and her serum creatinine level subsequently returned to normal.

Case 2. On December 8, 2007, a previously healthy Illinois woman aged 26 years received cosmetic soft-tissue filler injections in her buttocks at facility A. Records indicated that she received 500 mL of “25% silicone dermal filler and 75% saline solution” in each buttock (1,000 mL total). She received additional injections at facility A on December 22. Records from December 22 indicate that 400 mL of a “50% concentration of silicone oil dermal filler and saline solution” were injected into each buttock

INSIDE

- 457 Syncope After Vaccination — United States, January 2005–July 2007
- 460 Human Rabies — Minnesota, 2007
- 462 Report from the Advisory Committee on Immunization Practices (ACIP): Decision Not to Recommend Routine Vaccination of All Children Aged 2–10 Years with Quadrivalent Meningococcal Conjugate Vaccine (MCV4)
- 465 Notices to Readers
- 467 QuickStats

The *MMWR* series of publications is published by the Coordinating Center for Health Information and Service, Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, Atlanta, GA 30333.

Suggested Citation: Centers for Disease Control and Prevention. [Article title]. *MMWR* 2008;57:[inclusive page numbers].

Centers for Disease Control and Prevention

Julie L. Gerberding, MD, MPH
Director

Tanja Popovic, MD, PhD
Chief Science Officer

James W. Stephens, PhD
Associate Director for Science

Steven L. Solomon, MD
Director, Coordinating Center for Health Information and Service

Jay M. Bernhardt, PhD, MPH
Director, National Center for Health Marketing

Katherine L. Daniel, PhD
Deputy Director, National Center for Health Marketing

Editorial and Production Staff

Frederic E. Shaw, MD, JD
Editor, MMWR Series

Teresa F. Rutledge
(Acting) Managing Editor, MMWR Series

Douglas W. Weatherwax
Lead Technical Writer-Editor

Donald G. Meadows, MA
Jude C. Rutledge
Writers-Editors

Peter M. Jenkins
(Acting) Lead Visual Information Specialist

Lynda G. Cupell
Malbea A. LaPete
Visual Information Specialists

Quang M. Doan, MBA
Erica R. Shaver
Information Technology Specialists

Editorial Board

William L. Roper, MD, MPH, Chapel Hill, NC, Chairman
Virginia A. Caine, MD, Indianapolis, IN
David W. Fleming, MD, Seattle, WA
William E. Halperin, MD, DrPH, MPH, Newark, NJ
Margaret A. Hamburg, MD, Washington, DC
King K. Holmes, MD, PhD, Seattle, WA
Deborah Holtzman, PhD, Atlanta, GA
John K. Iglehart, Bethesda, MD
Dennis G. Maki, MD, Madison, WI
Sue Mallonee, MPH, Oklahoma City, OK
Stanley A. Plotkin, MD, Doylestown, PA
Patricia Quinlisk, MD, MPH, Des Moines, IA
Patrick L. Remington, MD, MPH, Madison, WI
Barbara K. Rimer, DrPH, Chapel Hill, NC
John V. Rullan, MD, MPH, San Juan, PR
Anne Schuchat, MD, Atlanta, GA
Dixie E. Snider, MD, MPH, Atlanta, GA
John W. Ward, MD, Atlanta, GA

(800 mL total). Within 1 hour of these injections, she experienced headache and nausea and noted that her urine had a burgundy color. She went to an Illinois ED on December 23 with nausea, headache, and fatigue and was found to be in acute renal failure, with a serum creatinine level of 4.0 mg/dL. Serum CPK was 517 U/L on the day of admission. The patient's renal function worsened, and hemodialysis was initiated. A renal biopsy on December 27 revealed severe acute tubular necrosis with cast formation. The casts were not myoglobin or hemoglobin; pathologists were unable to determine their composition, despite the use of specialized stains. No heavy metals were identified in urine specimens, and no other specific etiology was identified. The woman remained in the hospital for 13 days. Hemodialysis was discontinued after 5 weeks, and the woman subsequently regained normal kidney function.

Case 3. A previously healthy Maryland woman aged 26 years received soft-tissue filler injections in her buttocks at facility A on December 8, 2007, and again on December 22. No records were available from either date. The woman developed abdominal pain, lightheadedness, and nausea within 1 hour after the second procedure. She went to an ED on December 26 with fatigue and vomiting and was found to have a serum creatinine level of 11 mg/dL. Hemodialysis was initiated. A renal biopsy on January 11, 2008, demonstrated acute interstitial nephritis with substantial numbers of eosinophils, consistent with a toxic or allergic etiology. Eosinophilia was not found on peripheral blood smears. No heavy metals were identified in urine specimens. She remained in the hospital for 14 days; hemodialysis was discontinued within 1 week after discharge, and her serum creatinine level subsequently returned to normal.

Public Health Investigation

On December 27, 2007, NCDPH was notified of these three cases by a District of Columbia nephrologist who had treated one of the patients. This patient was aware of a second ill patient, and the physician learned of the third after contacting practitioner A. Case investigations were conducted, including interviews with the three patients and their physicians and medical record reviews. Facility A was first inspected on December 28 to identify products and materials used in the procedures, evaluate infection-control practices, review records pertaining to facility A patients, and interview practitioner A. Subsequent inspections and interviews were conducted on January 3 and January 10, 2008. Other patients identified from facility

records and interviews with practitioner A as having received injections at facility A also were interviewed to identify additional cases.

All three of the index patients learned of facility A directly or indirectly through Internet chat rooms and had selected it based on price and a perception that the procedure as described presented a low risk for adverse effects because it was performed in a clinic. All three patients were told by practitioner A that she was under the supervision of a physician, although none had seen a physician during their visits. Two of the patients had traveled to facility A together; the third had no association with the others. None of the patients reported any illicit drug use or common exposures to food or drinks.

Representatives of the Guilford County Health Department and NCDPH interviewed practitioner A and conducted inspections of facility A with assistance from CDC, the Food and Drug Administration, the North Carolina Food and Drug Protection Division, the North Carolina Statewide Program for Infection Control and Epidemiology, and the North Carolina Medical Board. Multiple breaches of standard infection-control practice were noted at the facility. Records pertaining to facility A patients were available on-site. However, these records contained scant information regarding procedure techniques and materials used, and in some cases, conflicted with information obtained through patient interviews. All patients had signed forms labeled "Consent to Treatment." However, these forms did not mention soft-tissue filler procedures or the potential risks associated with these procedures. Although records from the patients in cases 1 and 2 indicated that they had received dermal silicone, investigators were not able to confirm which substances had been injected or how they had been procured. No residual products or materials used in the soft-tissue filler injections were available at the clinic. Practitioner A claimed that she had injected a specific brand of medical-grade silicone oil mixed with saline. However, she provided no invoices, ordering information, or other evidence to support this claim.

Practitioner A had trained as a radiology technician and was administering the soft-tissue filler injections without medical supervision. Signage and promotional materials available on the Internet and in facility A referred to the facility as a family medicine practice and used the name of a family medicine physician licensed in North Carolina. However, this physician had no recent affiliation with facility A and no involvement with the soft-tissue filler procedures. In addition to soft-tissue fillers, practitioner A was

administering small volumes of other injectable products purported to produce weight loss.

Investigators were unable to determine how long practitioner A had been administering soft-tissue filler injections or how many patients had received them. Practitioner A initially reported that 50 persons had received these injections at facility A over a 1-year period. However, only five additional recipients were identified through subsequent reviews of facility records and interviews with practitioner A. Investigators were able to contact four of these patients. All were women and had received injections during November 17–December 18, 2007. Three resided outside North Carolina. According to facility records, three had large volumes (540–1,000 mL) of silicone oil and saline injected in the buttocks; the fourth received small-volume facial injections. Practitioner A stated that all four of these women had received silicone oil from the same shipment as the index patients, although she provided no evidence to support this claim. One of the four patients had experienced pink urine transiently after the procedure, which she attributed to menstrual bleeding. None of the other three women reported adverse effects. All four women were encouraged to see their physicians and have their renal function tested; results of these evaluations are not known. Six persons identified from facility records as having received other types of injections during the same period were contacted; three did not report any adverse events associated with these injections, and three reported various symptoms, including nausea, bruising, diarrhea, and weight gain.

On December 28, 2007, notification regarding this cluster was posted on CDC's Epidemic Information Exchange (Epi-X) and distributed to nephrologists and toxicologists throughout the United States. No additional cases have been reported in response to these notifications. On January 16, 2008, NCDPH issued a press release. After reports appeared in the local media, the Guilford County Health Department received calls from five persons reporting adverse events after injections at facility A. Four callers reported injection-site reactions, including knots, inflammation, abscesses, and ulcers. The fifth caller reported being hospitalized for a pulmonary embolism approximately 3 weeks after her last injection. Each of these persons reported receiving small-volume injections of various substances purported to produce weight loss; none reported receiving silicone oil or other soft-tissue fillers.

On December 28, 2007, the Guilford County Health Director issued an abatement order prohibiting any owner or employee at facility A from administering injections

containing silicone oil. On January 3, 2008, this order was expanded to prohibit administration of all injections. The findings of this investigation were presented to the local district attorney; practitioner A subsequently was arrested and charged with practicing medicine without a license.

Reported by: M Branton, MD, AD Bivins, MD, District of Columbia. LTR Terrado, MD, Olympia Fields, Illinois. M Green, MPH, Guilford County Health Dept; R Langley, MD, D Campbell, MD, North Carolina Div of Public Health. M Sutter, MD, J Schier, MD, J Lando, MD, National Center for Environmental Health; PR Patel, MD, M Jhung, MD, National Center for Preparedness, Detection, and Control of Infectious Diseases; B Goode, MPH, Coordinating Office for Terrorism Preparedness and Emergency Response; ZS Moore, MD, EIS Officer, CDC.

Editorial Note: This report describes three cases of acute renal failure that were identified among patients receiving injections of an unknown substance from an unlicensed and unsupervised practitioner. These cases illustrate the dangers of receiving cosmetic injections from unlicensed practitioners.

The substance injected was reported to be silicone oil, although this could not be verified. The etiology of renal failure also could not be determined. Renal failure has not previously been associated with silicone injections, increasing the likelihood that another substance might have been involved in these cases. The lack of residual product or documentation and inconsistent information from the practitioner complicated efforts to investigate this possibility. Previous reports have indicated that products misidentified as silicone oil might contain other substances, such as mineral oil, linseed oil, or flax oil (2). No liquid silicone products are currently approved or cleared by the Food and Drug Administration for cosmetic injection. However, such products are licensed for other indications, and off-label use within a legitimate practitioner-patient relationship is not generally prohibited by federal law.*

Various adverse events have been reported in association with cosmetic silicone injections, including granuloma formation, infection, pneumonitis, pulmonary embolism, ulceration, product migration, and death (1–7). Most reported adverse events have occurred after injections by unlicensed practitioners using formulations not intended for medical use (2–7). These formulations often are administered in large volumes and might be intentionally adulterated with tissue irritants to increase swelling or unintentionally adulterated with microorganisms or other contaminants (2,3). Practitioners implicated in similar episodes have been convicted of offenses ranging from prac-

ticing medicine without a license to third-degree murder (4). Few data are available regarding the incidence of adverse events after administration of silicone oil soft-tissue fillers by licensed medical providers (1). No adverse events were reported among 77 patients in a recent pilot trial of highly purified silicone oil for treatment of human immunodeficiency virus–associated facial lipoatrophy (10).

Soft-tissue filler injections should be administered only by licensed providers with appropriate medical training. Laws governing medical procedures vary by state. In North Carolina, all injections are considered medical procedures and must be performed or supervised by licensed physicians. The cases described in this report and the other adverse events reported among clients of facility A serve to remind consumers and public health officials of the substantial risks associated with cosmetic procedures performed by unlicensed practitioners.

Acknowledgments

The findings in this report are based, in part, on contributions from D Pittman, North Carolina Medical Board; D Weber, MD, Univ of North Carolina School of Medicine; K Carter, RS, Guilford County Health Dept; D Ragan, RPh, J Reardon, North Carolina Dept of Agriculture and Consumer Svcs; D Bergmire-Sweat, MPH, North Carolina Div of Public Health; and T Berry, RPh, Food and Drug Admin.

References

1. Hexsel DM, Hexsel CL, Iyengar V. Liquid injectable silicone: history, mechanism of action, indications, technique, and complications. *Semin Cutan Med Surg* 2003;22:107–14.
2. Hage JJ, Kanhai RC, Oen AL, van Diest PJ, Karim RB. The devastating outcome of massive subcutaneous injection of highly viscous fluids in male-to-female transsexuals. *Plast Reconstr Surg* 2001;107:734–41.
3. Fox LP, Geyer AS, Husain S, Della-Latta P, Grossman ME. *Mycobacterium abscessus* cellulitis and multifocal abscesses of the breasts in a transsexual from illicit intramammary injections of silicone. *J Am Acad Dermatol* 2004;50:450–4.
4. Price EA, Schueler H, Perper JA. Massive systemic silicone embolism: a case report and review of the literature. *Am J Forensic Med Pathol* 2006;27:97–102.
5. Chastre J, Brun P, Soler P, et al. Acute and latent pneumonitis after subcutaneous injections of silicone in transsexual men. *Am Rev Respir Dis* 1987;135:236–40.
6. Chen YM, Lu CC, Perng RP. Silicone fluid-induced pulmonary embolism. *Am Rev Respir Dis* 1993;147:1299–302.
7. Duong T, Schonfeld AJ, Yungbluth M, Sloten R. Acute pneumopathy in a nonsurgical transsexual. *Chest* 1998;113:1127–9.
8. Toy BR, Frank PJ. Outbreak of *Mycobacterium abscessus* infection after soft tissue augmentation. *Dermatol Surg* 2003;29:971–3.
9. Rollins CE, Reiber G, Guinee DG, Lie JT. Disseminated lipogranulomas and sudden death from self-administered mineral oil injection. *Am J Forensic Med Pathol* 1997;18:100–3.
10. Jones DH, Carruthers A, Orentreich D, et al. Highly purified 1000-cSt silicone oil for treatment of human immunodeficiency virus-associated facial lipoatrophy: an open pilot trial. *Dermatol Surg* 2004;30:1279–86.

* Food and Drug Administration Modernization Act (FDAMA) of 1997. Public law 105–115, section 214. Available at <http://www.fda.gov/cder/guidance/105-115.htm>.

Syncope After Vaccination — United States, January 2005–July 2007

Syncope (vasovagal reaction), or fainting, can be triggered by various stimuli, including medical procedures (1–3). Syncope has been documented to occur after vaccination, most commonly among adolescents, and can result in hospitalization for a medical evaluation or because of injury (2,4). During 2005 and 2006, the Advisory Committee on Immunization Practices (ACIP) recommended use of three newly licensed vaccines for adolescents*: the quadrivalent human papillomavirus recombinant vaccine (HPV) (Gardasil[®], Merck & Co., Inc., Whitehouse Station, New Jersey) in a 3-dose series, the quadrivalent meningococcal conjugate vaccine (MCV4) (Menactra[®], Sanofi Pasteur, Inc., Swiftwater, Pennsylvania) in a single dose, and the tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine (Tdap) (Adacel[®], Sanofi Pasteur; Boostrix[®], GlaxoSmithKline Biologicals, Research Triangle Park, North Carolina) in a single dose. To describe trends in occurrence of postvaccination syncope, CDC and the Food and Drug Administration (FDA) analyzed data from the Vaccine Adverse Event Reporting System (VAERS) for January 1, 2005–July 31, 2007, and compared the results with VAERS reports received during January 1, 2002–December 31, 2004. The findings indicated that, since 2005, reports to VAERS regarding postvaccination syncope have increased, primarily among females aged 11–18 years, and rarely, subsequent serious injuries have occurred. To prevent syncope-related injuries, vaccine providers should follow the ACIP recommendation to strongly consider observing patients for 15 minutes after vaccination (4).

VAERS, a passive surveillance system operated jointly by FDA and CDC, receives reports of vaccine adverse events (VAEs) and is designed to generate, not test, vaccine-safety hypotheses (5).[†] Detecting new or rare VAEs, monitoring trends in known adverse events, and identifying risk factors for particular types of VAEs are the primary objectives of VAERS (5). Reports included in this analysis were those received by VAERS during January 1, 2005–July 31, 2007,

that had VAEs coded as “syncope” or “syncope vasovagal,” on the basis of coding terms from the *Medical Dictionary for Regulatory Activities* (MedDRA[®]).[§] Reports to VAERS typically involve multiple coding terms. Because vasovagal reactions have a relatively rapid onset and syncope is less likely to occur in young children, only reports of persons who had syncope onset after vaccination on the same date and were aged ≥ 5 years at the time of vaccination were included in the analysis. Persons with either unknown age or unknown date of syncope onset were excluded.

The rate of reports for postvaccination syncope was calculated by dividing the total number of reports by the net number of doses of vaccine distributed in the United States each year (CDC, unpublished data, 1991–2006). Patient characteristics, including age, sex, and vaccines received, were compiled. To assess trends, these variables were compared with VAERS reports of syncope during January 1, 2002–December 31, 2004. Adverse events were defined as serious if one or more of the following patient outcomes were indicated in the report: death, life-threatening illness, hospitalization, prolonged hospitalization, or permanent disability. For each serious event, the narrative descriptions of VAEs and medical records were reviewed by CDC medical officers to validate the diagnosis of syncope, determine the interval between vaccination and onset in minutes, and identify any syncope-related injuries.

Following are selected case reports of postvaccination syncope in adolescents.

Case 1. A girl aged 13 years fainted within 10 minutes of receiving HPV and MCV4 vaccinations. She fell backward and hit her head on the carpeted floor of the clinic. The girl was admitted to the pediatric intensive-care unit because of skull fractures and subarachnoid hemorrhage. When VAERS contacted her approximately 6 months after the injury, she had recovered completely.

Case 2. A girl aged 16 years felt dizzy and had pallor within 5 minutes of receiving an HPV vaccination. While being escorted back to an examination room, she fainted, but the physician caught her as she fell. She was observed for 30 minutes in the clinic and recovered completely.

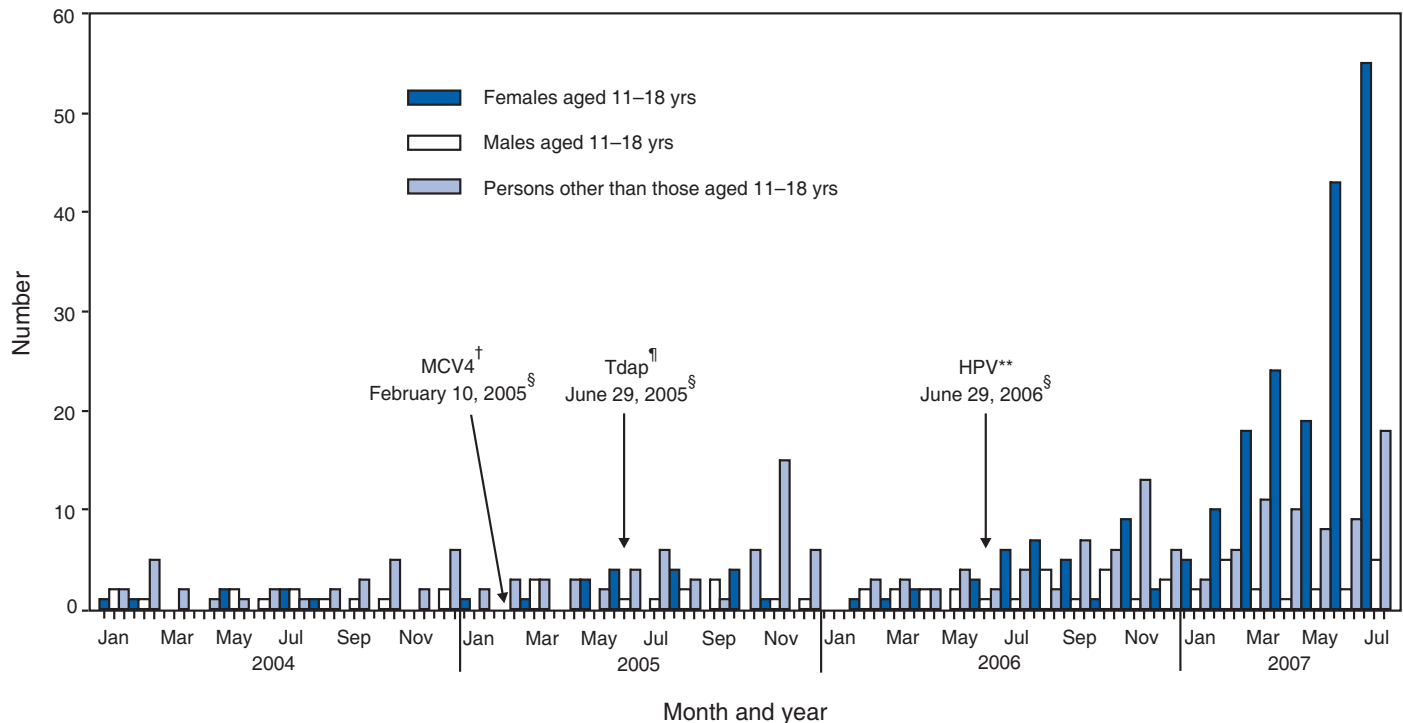
A total of 463 reports of postvaccination syncope during January 1, 2005–July 31, 2007 (Figure), were identified among persons aged ≥ 5 years, compared with 203 reports during 2002–2004. The rate of reports for postvaccination syncope among persons aged ≥ 5 years were as follows: 0.30 reports per million doses distributed in 2002, 0.35 per million doses distributed in 2003, 0.28 per million

* Additional information available at <http://www.cdc.gov/vaccines/recs/acip/meetings.htm#min>.

[†] Reports to VAERS can be made by anyone, including health-care providers, health departments, vaccine manufacturers, and members of the public. Any clinically significant adverse events after vaccination can be reported; no confirmed causal relationship to vaccination is required. Limited mandated reporting exists for health-care providers; however, vaccine manufacturers are required to report all adverse events that have been reported to them. Typically, such reports to manufacturers originate from health-care providers. Published studies indicate that underreporting to VAERS varies but that events judged by the reporter to be serious are more likely to be reported (6).

[§] Available at <http://www.meddrasso.com/mssoweb/index.htm>. Narrative descriptions of VAEs are coded using MedDRA coding terms.

FIGURE. Number of postvaccination syncope* episodes reported to the Vaccine Adverse Event Reporting System, by month and year of report — United States, January 1, 2004–July 31, 2007



* Includes persons aged ≥ 5 years who had syncope onset after vaccination on the same date.

† Meningococcal conjugate vaccine.

§ Date on which the Advisory Committee on Immunization Practices decided to add this newly licensed adolescent vaccine to the Vaccines for Children Program.

¶ Tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine.

** Quadrivalent human papillomavirus recombinant vaccine. HPV is licensed only for females.

doses distributed in 2004, 0.31 per million doses distributed in 2005, and 0.54 per million doses distributed in 2006.[¶] Compared with reports received during 2002–2004, those received during 2005–2007 were more likely to involve females (61.1% versus 77.5%) or persons aged 11–18 years (47.3% versus 62.0%) (Table). In 292 (63.1%) of the 463 reports during 2005–2007, syncope was associated with at least one of the following recently approved and recommended adolescent vaccines: MCV4, Tdap, and HPV.

Thirty-three (7.1%) of the 463 postvaccination syncope reports during 2005–2007 were coded as serious (Table); the percentage was not substantially different from the corresponding 20 (9.9%) serious reports during the earlier comparison period. After clinical review, seven of the reports coded as serious were excluded because they were either not compatible with the diagnosis of syncope ($n = 4$) or did not meet the criteria of seriousness ($n = 3$); 26 reports of serious adverse events were analyzed further.

The 26 patients ranged in age from 11 to 84 years (median: 18 years), and 20 (76.9%) were female. Similar to the findings for syncope reports overall, females aged 11–18 years accounted for the largest number of serious syncope reports ($n = 11$ [42.3%]). Among the 23 patients for whom times of vaccination and syncope onset were indicated, 12 (52.2%) occurred within 5 minutes of vaccination, and 16 (69.6%) occurred within 15 minutes. Ten of the 26 serious reports indicated that secondary injuries occurred after syncope, including head injuries ($n = 9$) after syncope-related falls and a motor-vehicle incident ($n = 1$) because the patient lost consciousness while driving. Seven (70.0%) of the 10 secondary injuries occurred within 15 minutes of vaccination.

Reported by: A Sutherland, MD, H Izurieta, MD, R Ball, MD, MM Braun, MD, Div of Epidemiology, Center for Biologics Evaluation and Research, Food and Drug Admin. ER Miller, MPH, KR Broder, MD, BA Slade, MD, JK Iskander, MD, Immunization Safety Office, Office of the Chief Science Officer; AT Kroger, MD, Immunization Svcs Div, National Center for Immunization and Respiratory Diseases; LE Markowitz, MD, Div of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention; WT Huang, MD, EIS Officer, CDC

[¶] 2007 data not yet available.

TABLE. Number and percentage of postvaccination syncope* episodes reported to the Vaccine Adverse Event Reporting System, by selected characteristics — United States, January 1, 2002–July 31, 2007

Characteristic	2002–2004 (N = 203)		2005–2007 (N = 463)	
	No.	(%)	No.	(%)
Sex				
Female	124	(61.1)	359	(77.5)
Male	79	(38.9)	96	(20.7)
Unknown	0	(0.0)	8	(1.8)
Age group (yrs)				
5–10	24	(11.8)	32	(6.9)
11–18	96 [†]	(47.3)	287 [§]	(62.0)
19–49	59	(29.1)	114	(24.6)
50–64	13	(6.4)	12	(2.6)
≥65	11	(5.4)	18	(3.9)
Severity				
Serious	20	(9.9)	33	(7.1)
Nonserious	183	(90.1)	430	(92.9)

* Including persons aged ≥5 years who had syncope onset interval after vaccination on the same date.

[†] Females: 49 (24.1%); males: 47 (23.1%).

[§] Females: 229 (50.3%); males: 58 (12.7%).

Editorial Note: During 2005–2007, ACIP decided to add several newly licensed adolescent vaccines to the routine immunization schedule and the Vaccines for Children Program. After these vaccines were licensed and recommended for use, the number of postvaccination syncope reports to VAERS increased, primarily among females aged 11–18 years. Although only 7% of the reports met the criteria for being classified as serious, potentially life-threatening injuries after postvaccination syncope were described, and one fatality was documented, resulting from intracranial hemorrhage caused by head trauma in a boy aged 15 years (7). ACIP and the American Academy of Pediatrics have published recommendations to prevent postvaccination syncope and related injuries (Box) (4,8). These preventive strategies apply to all ages and all types of vaccines. However, the observed increase in postvaccination syncope and secondary injuries suggests that adherence to the 15-minute postvaccination observation period and its efficacy in preventing syncope-related injuries should be evaluated systematically.

The findings in this report are subject to at least four limitations. First, because of underreporting and lack of age-specific data on vaccine doses administered, the rates calculated from VAERS data do not represent the actual incidence rates of postvaccination syncope. The rates might be underestimated in this report because the denominators used in the analysis were calculated from vaccine doses distributed, not doses administered, and syncope reports were excluded for children aged <5 years, the population

BOX. Recommendations and guidance on preventing postvaccination syncope and secondary injuries

- Vaccine providers should strongly consider observing patients for 15 minutes after they are vaccinated. If syncope develops, patients should be observed until symptoms resolve.*
- Personnel should be aware of presyncopal manifestations and take appropriate measures to prevent injuries if weakness, dizziness, or loss of consciousness occurs. The relative rapid onset of syncope after vaccination in most persons suggests that having vaccine recipients sit or lie down for 15 minutes after vaccination could prevent many syncopal episodes and secondary injuries. If syncope develops, patients should be observed until symptoms resolve.†

* CDC. General recommendations on immunization: recommendations of the Advisory Committee on Immunization Practices. MMWR 55(No. RR-15); 2006.

† American Academy of Pediatrics. Active immunization. In: Pickering LK, ed. 2006 red book: report of the Committee on Infectious Diseases. 27th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2006.

that receives the majority of vaccine doses. Second, hypotheses generated from VAERS need additional clinical and epidemiologic analysis (5). Although this report indicates that vaccines most commonly noted in VAERS syncope reports are universally recommended for adolescents, this age group also has a higher background rate of syncope than other age groups (9). The predominance of female patients in syncope reports could reflect an actual difference in the occurrence of syncope between the sexes (9). However, this predominance also could be a result of reporting bias; the currently licensed HPV was recommended in a 3-dose series for females only, and MCV4 and Tdap were each recommended for single-dose use in both sexes. Third, MedDRA coding terms might not accurately reflect the diagnosis of syncope. The number of postvaccination syncope reports might be either underestimated because certain syncope episodes might also be categorized as seizures or convulsions (2) or overestimated because certain near-syncope or nonsyncope reports might be misclassified as syncope. Finally, clinical details of nonserious reports were not reviewed; for example, although current recommendations suggest a 15-minute postvaccination observation period, data regarding distribution of minutes of time lapsed from vaccination to syncope were not reviewed for nonserious reports.

All providers administering vaccinations should be aware of the potential for syncope after vaccination and should

take appropriate measures to prevent potential injuries. If syncope develops, patients should be observed until symptoms resolve. In accordance with ACIP recommendations, providers should strongly consider observing patients for 15 minutes after they are vaccinated (4).

References

1. Ost LG, Sterner U, Lindahl IL. Physiologic responses in blood phobics. *Behav Res Ther* 1984;22:109–17.
2. Braun MM, Patriarca PA, Ellenberg SS. Syncope after immunization. *Arch Pediatr Adolesc Med* 1997;151:255–9.
3. Newman BH, Graves S. A study of 178 consecutive vasovagal syncopal reactions from the perspective of safety. *Transfusion* 2001;41:1475–9.
4. CDC. General recommendations on immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2006;55(No. RR-15).
5. Varricchio F, Iskander J, DeStefano F, et al. Understanding vaccine safety information from the Vaccine Adverse Event Reporting System. *Pediatr Infect Dis J* 2004;23:287–94.
6. Rosenthal S, Chen R. The reporting sensitivities of two passive surveillance systems for vaccine adverse events. *Am J Public Health* 1995;85:1706–9.
7. Woo EJ, Ball R, Braun MM. Fatal syncope-related fall after immunization. *Arch Pediatr Adolesc Med* 2005;159:1083.
8. American Academy of Pediatrics. Active immunization. In: Pickering LK, ed. 2006 red book: report of the committee on infectious diseases. 27th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2006.
9. Driscoll DJ, Jacobsen SJ, Porter CJ, Wollan PC. Syncope in children and adolescents. *J Am Coll Cardiol* 1997;29:1039–45.

Human Rabies — Minnesota, 2007

On October 20, 2007, a Minnesota resident died from rabies, approximately 1 month after initial symptoms of limb paresthesia, which progressed to flaccid weakness and ataxia. This was the only human rabies case reported in the United States in 2007. A presumptive diagnosis of idiopathic transverse myelitis was considered initially, because of abnormalities detected via spinal cord imaging studies and a lack of laboratory confirmation of a specific infectious etiology. The presumptive diagnosis subsequently was changed to include rabies, based on the patient's rapidly deteriorating neurologic status and elicitation of a history involving bat exposure during the month before illness onset. This report summarizes the medical and epidemiologic investigation by the Minnesota Department of Public Health and CDC and the ensuing public health response. The findings underscore the need for early inclusion of rabies in the differential diagnosis of rapidly progressive encephalitis, improved public awareness of the risks associated with animal bites, and appropriate rabies prophylaxis after exposure.

Case Report

On September 19, 2007, a man aged 46 years visited an outpatient facility with paresthesia in his right hand. During the next 3 days, the paresthesia spread proximally, and the patient developed flaccid weakness in the right upper extremity. Electromyography (EMG) performed at a local outpatient facility on September 24 revealed evidence of axonal nerve damage. Within 3 days, the patient developed paresthesia and weakness in his left upper extremity and gait unsteadiness. Magnetic resonance imaging (MRI) of the brain on September 28 was unremarkable, but MRI of the cervical spine showed central spinal cord T2-signal abnormalities with associated edema spanning the C3 to C6 levels, suggestive of an inflammatory process.

On September 29, the patient had a fever of 101.1°F (38.4°C) and was hospitalized. He developed double vision, tremulousness, and rapidly progressive respiratory failure, which required intubation and ventilator support the next morning. He had no laryngospasm or dysphagia. Analysis of cerebrospinal fluid (CSF) by lumbar puncture revealed a pleocytosis of 12 cells/mm³ (normal: 0–5 cells/mm³), 85% lymphocytes, elevated protein of 107 mg/dL (normal: 15–45 mg/dL), normal glucose, and negative bacterial culture and acid-fast bacilli screening. West Nile virus and herpes simplex virus testing of the CSF were negative by polymerase chain reaction (PCR). Additional CSF studies were negative for cryptococcal antigen, antibody for syphilis, and Lyme disease antibody. The patient's serum was negative for evidence of antinuclear antibodies, extractable nuclear antibodies, or antibody to West Nile virus, *Borrelia* sp., *Treponema pallidum*, *Mycoplasma pneumoniae*, human T-lymphotropic virus I and II, human immunodeficiency virus, and hepatitis A, B, and C viruses. Because his clinical and laboratory profiles were suggestive of idiopathic transverse myelitis, he was treated with intravenous methylprednisolone.

The patient's symptoms did not improve, and his fever reached 102.7°F (39.3°C). In three procedures, MRI of the brain did not demonstrate significant abnormalities, but MRI of the spinal cord revealed progressive extension of the previously detected cervical segment abnormalities. He became comatose on October 5 and had no clinical evidence of cranial nerve function except infrequent spontaneous respiration. A repeat lumbar puncture showed a normal white blood cell count of 1 cell/mm³, elevated protein of 75 mg/dL, normal glucose, and eight unique oligoclonal bands by electrophoresis (normal: none), indicative of immunoglobulin production by plasma cells and central nervous system disease. The CSF immunoglobulin G synthesis rate by spectrophotometry was border-

line elevated at 12.04 (normal: <12), consistent with an ongoing inflammatory process. Bacterial cultures of CSF remained negative, and additional CSF evaluation showed negative viral PCR tests for cytomegalovirus, Epstein-Barr virus, enterovirus, and herpes simplex virus. Analysis of CSF also was negative for neuromyelitis optica antibody, associated with Devic's disease. Repeat neuroimaging on October 7 revealed further caudal to rostral progression of the brainstem and spinal cord abnormalities observed on October 5. Because of progressive neurologic decline, the patient was transferred to a tertiary-care center.

On arrival at the tertiary-care center, the patient was comatose with a Glasgow coma score of 3 without demonstrable cranial nerve function. A neurologic examination revealed flaccid quadriplegia and hyporeflexia. EMG revealed severe, acute polyradiculoneuropathy. Auditory evoked potential testing indicated absent responses. With the presumptive diagnosis of idiopathic transverse myelitis, the patient was treated with methylprednisolone and plasmapheresis. On October 15, CSF analysis revealed a pleocytosis of 22 cells/mm³ (94% lymphocytes), red blood cell count of 2,519 cells/mm³ (normal: 0 cells/mm³), elevated protein of 235 mg/dL, normal glucose, and further elevated immunoglobulin G synthesis rate of 43 mg/24 hours (normal: -9.9 to 3.3 mg/24 hours). MRI of the brain revealed new symmetric T2-signal abnormalities within the basal ganglia and medial temporal lobes, with subtle leptomeningeal gadolinium enhancement. The ascending paralysis and coma appeared atypical of idiopathic transverse myelitis, and the patient's clinical progression and brain imaging abnormalities were noted to resemble those observed in rabies encephalitis (1).

Once rabies was suspected, the patient's family was interviewed on October 16 for a history of potential exposure. According to his family, the patient had handled a bat with his bare hands in a semi-open cabin porch in north-central Minnesota on August 19, 2007. He had reported feeling a needle prick sensation before releasing the bat. Because no blood or wound was visible, the patient concluded he had not been bitten and did not seek medical attention. Neither the patient nor his family was aware that this exposure constituted a rabies risk.

On October 17, specimens of the patient's serum, CSF, saliva, and a nuchal biopsy were sent to CDC. Rabies virus antibodies were detected in stored CSF and serum samples collected before plasma exchange, confirming the suspected diagnosis. However, no rabies virus antigens were detected in the skin biopsy using fluorescent microscopy, and no rabies virus amplicons were detected in saliva or skin

biopsy samples by reverse transcription-PCR; therefore, antigenic characterization and genetic sequencing of the rabies virus variant were not possible. Because of the poor prognosis, medical care was withdrawn after extended family discussions, and the patient died on October 20, the twenty-second day of hospitalization.

Public Health Investigation

After diagnosis of rabies, the Minnesota Department of Health assessed the need for rabies postexposure prophylaxis (PEP) among close contacts of the patient and health-care workers and searched the likely site of rabies exposure. Family members, other close contacts, and health-care workers were interviewed using a standard questionnaire to identify possible exposures to the patient's saliva. Three of 14 family contacts and 51 of 524 health-care workers who participated in the man's care received rabies PEP, administered chiefly at the respective hospital emergency departments. The Minnesota Department of Health received no information from health-care providers suggesting incomplete PEP administration or adverse events resulting from rabies vaccination. Although a search of the cabin site on October 26 revealed no evidence of bat infestation, given the reported bat exposure on August 19, initial symptoms on September 19, and an incubation period of approximately 1 month, investigators concluded that a bite from a bat was the most likely source of rabies virus infection.

Reported by: *AH Yee, DO, RT Merrell, MD, AY Zubkov, MD, PhD, AJ Aksamit, MD, WT Hu, MD, PhD, EM Manno, MD, Mayo Clinic, Rochester; J Scheftel, DVM, A DeVries, MD, D Neitzel, MS, R Danila, PhD, KE Smith, DVM, PhD, Minnesota Dept of Health. CE Rupperecht, VMD, PhD, Div of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases; S Holzbauer, DVM, EIS Officer, CDC.*

Editorial Note: This report describes the only reported case of human rabies in the United States in 2007 and the first case in Minnesota since 2000. Investigators determined that the likely source of rabies in this case was a bat. In Minnesota, bats and skunks are the only known reservoirs of rabies. In 2006, 42 rabid animals were reported in the state, including 17 bats and 20 skunks (2).

During 2000–2007, a total of 25 cases of human rabies were reported in the United States (2). Eighteen (28%) cases were associated with suspected exposure to rabid bats or infection with bat rabies virus variants. Most of these human cases occurred in late summer or early autumn, coincident with a seasonal increase in the prevalence of rabid bats detected in the United States (2). Despite repeated documentation of human rabies attributable to bat exposures and identification of 1,212–1,692 rabid bats

in the United States during 2000–2006, the significance of bat exposures often is ignored (3,4).

The animal contact, incubation period, clinical presentation, and laboratory findings for the patient described in this report were typical of human rabies cases reported in the United States. However, a diagnosis of rabies was not considered until the clinical course appeared atypical of the presumptive diagnosis of idiopathic transverse myelitis and brain imaging abnormalities resembled those observed in rabies. One unusual facet of this case was the inability to detect viral antigens or nucleic acids in patient samples, although rabies virus antibodies were identified in the serum and CSF. The only other human rabies case in the United States in which viral antigens or nucleic acids could not be detected, since such laboratory methods became more widely available in the early 1990s, was a 2004 Wisconsin patient, who survived rabies after a bat bite (1,5). However, the Wisconsin patient was an adolescent girl treated successfully with a drug-induced coma and antiviral drugs, and the significance of any similarities between that case and the Minnesota case is unclear.

This report underscores the need for increased public awareness of the risks of direct contact with bats and other wild animals. After exposure, human rabies is preventable with timely and appropriate PEP, consisting of proper wound care and prompt administration of rabies biologicals (4). Rabies PEP is recommended for all persons with direct transdermal or mucous membrane exposure to a bat, unless the animal is found not to have rabies. However, bite lesions from certain animals, including bats, can be difficult to detect. Consequently, proper tailoring of health communications to medical practitioners and the public remains a challenge to ensure that appropriate PEP is administered when indicated but not unnecessarily.

Rabies should be considered in the differential diagnosis of human cases involving acute, rapidly progressive encephalitis, especially when the clinical course and neuroimaging findings are compatible, regardless of history of animal exposure (1,4). If a patient is unresponsive, interview of family members and close contacts might reveal potential exposures. Prompt diagnosis of rabies can enable rapid case investigation, implementation of appropriate infection-control measures, and consideration of experimental therapy (5).

Acknowledgments

The findings in this report are based, in part, on contributions by M Junna, MD, A Frye, MD, Mayo Clinic, Rochester, Minnesota; and R Franka, DVM, PhD, M Niezgoda, MS, L Orciari, MS, and P Yager, Div of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases, CDC.

References

1. Hu WT, Willoughby RE Jr, Dhonau H, Mack KJ. Long-term follow-up after treatment of rabies by induction of coma. *N Engl J Med* 2007;357:945–6.
2. Blanton JD, Hanlon CA, Rupprecht CE. Rabies surveillance in the United States during 2006. *J Am Vet Med Assoc* 2007;231:540–56.
3. Liesener AL, Smith KE, Davis RD, et al. Circumstances of bat encounters and knowledge of rabies among Minnesota residents submitting bats for rabies testing. *Vector Borne Zoonotic Dis* 2006;6:213–20.
4. CDC. Human rabies prevention—United States, 1999: recommendations of the Advisory Committee on Immunization Practices. *MMWR* 1999;48(No. RR-1).
5. Willoughby RE Jr, Tieves KS, Hoffman GM, et al. Survival after treatment of rabies with induction of coma. *N Engl J Med*. 2005; 352:2508–14.

Report from the Advisory Committee on Immunization Practices (ACIP): Decision Not to Recommend Routine Vaccination of All Children Aged 2–10 Years with Quadrivalent Meningococcal Conjugate Vaccine (MCV4)

At its February 2008 meeting, the Advisory Committee on Immunization Practices (ACIP) decided not to recommend routine vaccination of children aged 2–10 years against meningococcal disease unless the child is at increased risk for the disease. This report summarizes the deliberations of ACIP and the rationale for its decision and restates existing recommendations for meningococcal vaccination among children aged 2–10 years at increased risk for meningococcal disease. ACIP continues to recommend routine vaccination against meningococcal disease for all persons aged 11–18 years and those persons aged 2–55 years who are at increased risk for meningococcal disease (1–3).

On October 17, 2007, the Food and Drug Administration added approval for use of quadrivalent meningococcal conjugate vaccine (MCV4) (Menactra[®], Sanofi Pasteur, Swiftwater, Pennsylvania) in children aged 2–10 years to existing approval for use in persons aged 11–55 years (4). Before licensure of MCV4, quadrivalent meningococcal polysaccharide vaccine (MPSV4) (Menomune[®], Sanofi Pasteur) was the only meningococcal vaccine available in the United States. MPSV4 was recommended for routine use only among persons at increased risk for meningococcal disease (1). Because clinical efficacy trials were not feasible in the United States, MCV4 licensure was based on clinical trials in which the safety and immunogenicity of MCV4 was compared with MPSV4. Immunogenicity was measured by serum bactericidal activity (SBA), a correlate

TABLE. Percentage of children aged 2–10 years in clinical trials with no detectable serum bactericidal activity (SBA) (titer <1:8) at day 0 who seroconverted (titer >1:32) by day 28 by using baby rabbit complement (rSBA), and rSBA geometric mean titer (GMT) 28 days after vaccination with meningococcal conjugate vaccine (MCV4) and meningococcal polysaccharide vaccine (MPSV4)* — United States

Serogroup	% who seroconverted				rSBA GMT			
	MCV4		MPSV4		MCV4		MPSV4	
	%	(95% CI) [†]	%	(95% CI)	No.	(95% CI)	No.	(95% CI)
A	98.6	(96.4–99.6)	94.7	(91.4–97.0)	1,700	(1,512–1,912)	893	(791–1,009)
C	87.9	(83.9–91.2)	80.1	(75.6–84.0)	354	(308–407)	231	(198–270)
Y	86.2	(77.2–92.7)	75.0	(65.1–83.3)	637	(563–720)	408	(362–460)
W-135	96.0	(93.6–97.7)	89.6	(86.1–92.4)	750	(657–855)	426	(372–487)

SOURCE: Pichichero M, Casey J, Blatter M, et al. Comparative trial of the safety and immunogenicity of quadrivalent (A, C, Y, and W-135) meningococcal polysaccharide-diphtheria conjugate vaccine versus quadrivalent polysaccharide vaccine in two-to-ten-year-old children. *Pediatr Infect Dis J* 2005;24:57–62.

*Numbers of subjects with titer <1:8 at baseline, MCV4 group = 279 for serogroup A, 338 for serogroup C, 87 for serogroup Y, and 400 for serogroup W-135. Numbers of subjects with titer <1:8 at baseline, MPSV4 group = 281 for serogroup A, 366 for serogroup C, 96 for serogroup Y, and 402 for serogroup W-135.

[†]Confidence interval.

of protection. Rates of most solicited local and systemic adverse events after MCV4 vaccination were comparable to rates observed after administration of MPSV4 (5). The proportion of children aged 2–10 years who did not have detectable SBA (titer <1:8) at day 0 and seroconverted (titer >1:32) by day 28 after MCV4 vaccination was 98.6% for serogroup A, 87.9% for serogroup C, 86.2% for serogroup Y, and 96.0% for serogroup W-135, similar to MPSV4 for all serogroups (Table) (5). Hence, MCV4 was found to be safe and noninferior to MPSV4 for all serogroups.

During June 2007–February 2008, the ACIP Meningococcal Vaccine Workgroup considered use of MCV4 among children aged 2–10 years by reviewing data on MCV4 immunogenicity and safety in this age group, the epidemiology and burden of meningococcal disease, cost-effectiveness of various vaccination strategies, and programmatic implications. These data, expert opinion of workgroup members, and feedback from partner organizations were presented by the workgroup to the full ACIP at the October 2007 and February 2008 ACIP meetings for its deliberation regarding a potential recommendation to vaccinate only those children at increased risk for meningococcal disease, among children aged 2–10 years.

Summary of ACIP Deliberations and Rationale

ACIP evaluated data to determine the anticipated duration of protection from a single dose of MCV4 in children aged 2–10 years. The duration of protection of MPSV4 is considered to be short (3–5 years), especially in young children, based on substantial declines in measurable levels of antibodies against group A and C polysaccharides by 3 years after vaccination (6,7). Although SBA titers at 28 days and 6 months after vaccination were significantly higher

in children aged 2–10 years who received MCV4 compared with children who received MPSV4 for all four serogroups ($p<0.001$) (5), the difference in magnitude of SBA titers between children in the two groups was not substantial (Table). Further, SBA activity among children aged 2–3 years who received MCV4 was lower than in children aged 4–10 years. Based on these data, ACIP concluded that evidence was insufficient to determine that 1 dose of MCV4 administered at age 2 years would provide protection against meningococcal disease through late adolescence and college entry.

ACIP also reviewed the burden of meningococcal disease among children aged 2–10 years. In the United States, during 1998–2007, overall rates of meningococcal disease were lower in children aged 2–10 years (0.68 per 100,000 population) than in infants aged <2 years and adolescents aged 11–19 years (3.9 and 0.81 per 100,000, respectively). Furthermore, 41% of cases in children aged 2–10 years occurred among children aged 2–3 years. In addition, among cases that occurred in children aged 2–10 years, 59% were caused by serogroups contained in MCV4 (A, C, Y, and W-135), compared with 77% of cases among youths aged 11–19 years. Annually, an estimated 160 cases of A/C/Y/W-135 disease and 13 deaths occur in children aged 2–10 years, compared with 250 cases and 15 deaths among youths aged 11–19 years (Active Bacterial Core Surveillance [ABCs], unpublished data, 1997–2006).

A cost-effectiveness analysis of vaccinating a cohort of U.S. children aged 2 years also was presented at the February 2008 ACIP meeting. A Monte Carlo simulation analysis was used in which multiple parameters were varied simultaneously over specified probability distributions. Data on age- and serogroup-specific meningococcal incidence rates during 1991–2005 and case-fatality ratios from ABCs were used, in addition to published estimates of meningococcal

disease complications (e.g., hearing loss and limb amputations) and vaccine efficacy (8). Duration of protection of 10 years from vaccination was assumed. Using standard cost-effectiveness methods, the analysis estimated that 205 meningococcal cases and 14 premature deaths could be prevented by vaccinating a cohort of 4 million children aged 2 years at a cost of \$160,000 per quality-adjusted life year (QALY) saved. For a program conducting routine vaccination of children aged 11 years, the analysis estimated a cost of \$90,000 per QALY saved. Hence, vaccinating children aged 2 years was determined to be less cost-effective than vaccinating children aged 11 years (8).

Because approximately 75% of cases of disease in children aged 2 years occur at age 24–29 months, the effectiveness of routine MCV4 vaccination of children aged 2 years in reducing the burden of disease is dependent on achieving high coverage at age 24 months (ABCs, unpublished data, 2008). However, achieving high coverage with MCV4 at age 24 months might be challenging. For example, during 1999–2006, before licensure of hepatitis A vaccine for use in children aged 12–23 months, ACIP recommended administration of hepatitis A vaccine to children at age 2 years in states with historically high rates of hepatitis A. After that recommendation was in effect for 5 years in the 11 states where vaccination was recommended, 1-dose coverage was 54.4% (range by state: 8.6%–74.4%) among children aged 24–35 months (9).

ACIP Decision and Continuing Recommendations

Based on reviews of safety and immunogenicity data, the epidemiology of meningococcal disease, a cost-effectiveness analysis, and programmatic considerations, ACIP decided not to recommend routine vaccination against meningococcal disease for all children aged 2–10 years at its February 2008 meeting. ACIP continues to recommend vaccination for children aged 2–10 years at increased risk for meningococcal disease. These children include travelers to or residents of countries in which meningococcal disease is hyperendemic or epidemic, children who have terminal complement deficiencies, and children who have anatomic or functional asplenia. Health-care providers also may elect to vaccinate children aged 2–10 years who are infected with human immunodeficiency virus (HIV).^{*} MCV4 is preferred to MPSV4 for children aged 2–10 years in these groups at increased risk and for control of meningococcal disease out-

breaks. In addition, if health-care providers or parents elect to provide meningococcal vaccination to other children in this age group, MCV4 is preferred to MPSV4. Recommendations for use of MCV4 in persons aged 11–55 years, including a recommendation for routine vaccination with MCV4 of persons aged 11–18 years, have been published previously and remain unchanged (1,3).

For children aged 2–10 years who have received MPSV4 and remain at increased risk for meningococcal disease, ACIP recommends vaccination with MCV4 at 3 years after receipt of MPSV4. Children who last received MPSV4 more than 3 years before and remain at increased risk for meningococcal disease should be vaccinated with MCV4 as soon as possible. For children at lifelong increased risk for meningococcal disease, subsequent doses of MCV4 likely will be needed. ACIP will monitor available data on duration of protection to determine whether recommendations for revaccination with MCV4 are indicated. Persons with a history of Guillain-Barré syndrome (GBS) might be at increased risk for GBS after MCV4 vaccination (3); therefore, a history of GBS is a precaution to administration of MCV4.

Effective meningococcal conjugate vaccines for infants might be available in the near future. Phase III clinical trials for meningococcal conjugate vaccine in infants are ongoing, and published data suggest these vaccines are safe and immunogenic (10). Vaccines that provide protection against meningococcal disease early in life have the potential to greatly reduce the burden of meningococcal disease, especially if they provide protection against serogroup B meningococcal disease.

References

1. CDC. Prevention and control of meningococcal disease: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2005;54(No. RR-7).
2. CDC. Recommendation from the Advisory Committee on Immunization Practices (ACIP) for use of quadrivalent meningococcal conjugate vaccine (MCV4) in children aged 2–10 years at increased risk for invasive meningococcal disease. *MMWR* 2007;56:1265–6.
3. CDC. Revised recommendations of the Advisory Committee on Immunization Practices to vaccinate all persons aged 11–18 years with meningococcal conjugate vaccine. *MMWR* 2007;56:794–5.
4. Food and Drug Administration. Product approval information-licensing action, package insert: Meningococcal (groups A, C, Y, W-135) polysaccharide diphtheria toxoid conjugate vaccine Menactra®. Rockville, MD: US Department of Health and Human Services, Food and Drug Administration; 2005. Available at <http://www.fda.gov/cber/label/menactralb.pdf>.
5. Pichichero M, Casey J, Blatter M, et al. Comparative trial of the safety and immunogenicity of quadrivalent (A, C, Y, W-135) meningococcal polysaccharide-diphtheria conjugate vaccine versus quadrivalent polysaccharide vaccine in two- to ten-year-old children. *Pediatr Infect Dis J* 2005;24:57–62.

^{*}Children with HIV infection likely are at increased risk for meningococcal disease, although not to the extent they are at risk for invasive *Streptococcus pneumoniae* infection. The efficacy of MCV4 among HIV-infected children is unknown.

6. Gold R, Lepow ML, Goldschneider I, Draper TF, Gotshlich EC. Kinetics of antibody production to group A and group C meningococcal polysaccharide vaccines administered during the first six years of life: prospects for routine immunization of infants and children. *J Infect Dis* 1979;140:690–7.
7. Borrow R, Goldblatt N, Andrews J, et al. Antibody persistence and immunological memory at age 4 years after meningococcal group C conjugate vaccination in children in the United Kingdom. *J Infect Dis* 2002;186:1353–7.
8. Shepard CW, Ortega-Sanchez IR, Scott RD II, Rosenstein NE, ABCs Team. Cost-effectiveness of conjugate meningococcal vaccination strategies in the United States. *Pediatrics* 2005;115:1220–32.
9. CDC. Prevention of hepatitis A through active or passive immunization. *MMWR* 2006;55(No. RR-7).
10. Snape M, Perrett K, Ford K, et al. Immunogenicity of a tetravalent meningococcal glycoconjugate vaccine in infants: a randomized controlled trial. *JAMA* 2008;299:173–84.

Notice to Readers

Healthy Vision Month — May 2008

May is Healthy Vision Month. The focus of this year's observance is raising awareness of sport-related eye injuries in children and the importance of using protective eyewear. Approximately 100,000 of the eye injuries that occur each year in the United States are sports related (1). Children aged <15 years account for nearly one third of all hospital admissions for eye trauma and 43% of all sports and recreational eye injuries (2). Proper use of protective eyewear could prevent most of these injuries (3).

Healthy People 2010 objectives include increasing the use of protective eyewear among children participating in recreational activities and hazardous home situations (e.g., cooking and yard work) (objective 28-9). Additional information to assist children, parents, coaches, and communities in reducing sport-related eye injuries is available from the National Eye Institute's Healthy Vision Month website at <http://www.healthyvision2010.nei.nih.gov/hvm>. Information regarding the Vision Health Initiative at CDC is available at <http://www.cdc.gov/diabetes/projects/vision.htm>.

References

1. Ducharme JF, Tsiaras W. Sports-related ocular injuries. *Med Health R I* 2000;83:45–51.
2. American Academy of Pediatrics, Committee on Sports Medicine and Fitness, American Academy of Ophthalmology, Eye Health and Public Information Task Force. Protective eyewear for young athletes. *Ophthalmology* 2004;111:600–3.
3. Sastry SM, Copeland RA Jr, Mezgebe HM, Siram SM, Spencer M, Cowan CL Jr. Consumer product-related ocular trauma. *J Natl Med Assoc* 1995;87:349–52.

Notice to Readers

National Drinking Water Week — May 4–10, 2008

This year marks the 100th anniversary of one of the most significant public health advances in U.S. history, the disinfection of drinking water. To highlight the importance of safe tap water and the need to reinvest in water infrastructure, the American Water Works Association and an alliance of other organizations are sponsoring National Drinking Water Week (1).

Safe drinking water is one of the most valuable resources of the United States. During the past century, many improvements in the health of the U.S. population, such as preventing tooth decay through community fluoridation and controlling infectious diseases, can be attributed to improvements in drinking water quality (2). Disinfection has played a critical role in the provision of safe drinking water in the United States since 1908 (3). During 1900–1920, the incidence of typhoid fever in the United States decreased substantially, from 100.0 to 33.8 cases per 100,000 population (4,5). By 2006, incidence of typhoid fever had decreased to 0.1 per 100,000 population (only 353 cases), and approximately 75% of these cases occurred among persons returning from international travel (6,7). This decrease in waterborne illness can be credited to advances in public health, including implementation of drinking water disinfection in community water systems.

The United States has one of the safest public water supplies in the world. Nonetheless, an estimated 4–33 million cases of gastrointestinal illness associated with public drinking water systems occur annually in the United States (8). These estimates do not include illnesses that occur in the estimated 45 million persons served by small or individual water systems (9) or illnesses other than gastrointestinal illness. The continued occurrence of drinking water-associated disease highlights the importance of maintaining and improving the nation's water infrastructure.

CDC activities related to National Drinking Water Week include promoting waterborne disease prevention, reducing the adverse health effects from contaminated drinking water, improving access to safe water internationally, addressing terrorism concerns related to waterborne pathogens, strengthening waterborne disease outbreak surveillance and investigations, and supporting water-related programs at local and state health departments. Additional information regarding CDC activities is available at <http://www.cdc.gov/health/water.htm>, <http://www.cdc.gov/ncidod/dpd/healthywater>, <http://www.cdc.gov/nceh/ehhe/water>, <http://www.cdc.gov/fluoridation>, <http://www.cdc.gov/>

safewater, and <http://www.cdc.gov/nceh/globalhealth/projects/waterplus.htm>. Additional information about National Drinking Water Week is available at <http://www.awwa.org/advocacy/dww>.

References

1. American Water Works Association. Only tap water delivers: Drinking Water Week 2007. Available at <http://www.awwa.org/advocacy/dww>.
2. CDC. Achievements in public health, 1900–1999: changes in the public health system. *MMWR* 1999;48:1141–7.
3. Haas CN. Disinfection. In: American Water Works Association. Water quality and treatment: a handbook of community water supplies. 5th ed. New York, NY: McGraw-Hill; 1999:14.22–14.30.
4. US Environmental Protection Agency. The history of drinking water treatment. Available at <http://www.epa.gov/safewater/consumer/pdf/hist.pdf>.
5. CDC. Achievements in public health, 1900–1999: safer and healthier foods. *MMWR* 1999;48:905.
6. CDC. Summary of notifiable diseases—United States, 2006. *MMWR* 2008;55:17.
7. US Census Bureau. Annual estimates of the population for the United States, regions, and states and for Puerto Rico: April 1, 2000 to July 1, 2007 (NST-EST2007-01). Available at <http://www.census.gov/popest/states/NST-ann-est.html>.
8. CDC. 2006 national estimate of waterborne disease associated with public drinking water. Available at <http://www.cdc.gov/ncidod/dpd/healthywater/estimate.htm>.
9. US Environmental Protection Agency. Private drinking water wells. Available at <http://www.epa.gov/safewater/privatewells/index2.html>.

Notice to Readers

Better Hearing and Speech Month — May 2008

Hearing loss affects one to three of 1,000 live-born infants annually (1,2). Without intervention at an early age, hearing loss can delay speech, language, social skills, and academic achievement. Therefore, all infants should be screened for hearing loss by age 1 month but preferably before leaving the birth hospital. All states and territories offer hearing screening for newborns. Any infant who does not pass the hearing screening should have a full hearing evaluation by age 3 months. If hearing loss is confirmed, the child should be referred for needed medical tests and

begin intervention services by age 6 months (3). Following this 1-, 3-, 6-month plan for these children can maximize communication and language development (4,5). Information on CDC's Early Hearing Detection and Intervention programs is available at <http://www.cdc.gov/ncbddd/ehdi>.

References

1. Finitzo T, Albright K, O'Neal J. The newborn with hearing loss: detection in the nursery. *Pediatrics* 1998;102:1452–60.
2. Van Naarden K, Decouflé P, Caldwell K. Prevalence and characteristics of children with serious hearing impairment in metropolitan Atlanta, 1991–1993. *Pediatrics* 1999;103:570–5.
3. Joint Committee on Infant Hearing. Year 2007 position statement: principles and guidelines for Early Hearing Detection and Intervention programs. *Pediatrics* 2007;120:898–921.
4. Kennedy C, McCann D, Campbell MJ, Kimm L, Thornton R. Universal newborn screening for permanent childhood hearing impairment: an 8-year follow-up of a controlled trial. *Lancet* 2005;366:660–2.
5. Moeller MP. Early intervention and language development in children who are deaf and hard of hearing. *Pediatrics* 2000;106:e43.

Errata: Vol. 55, Nos. 33 and 53

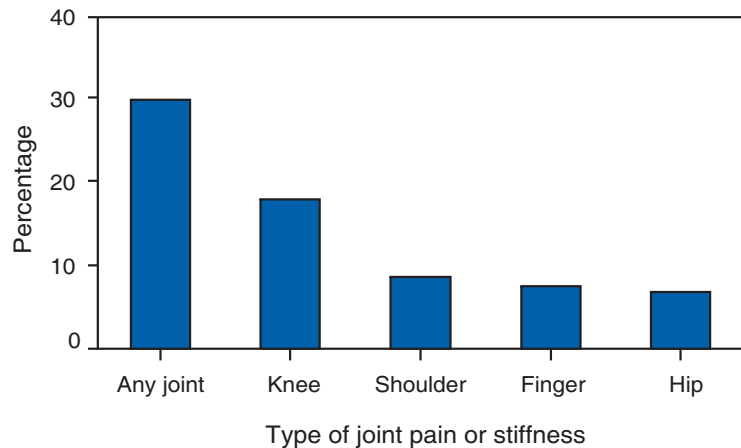
In Vol. 55, No. 33 (August 24, 2007), in the “Final 2006 Reports of Nationally Notifiable Infectious Diseases,” errors occurred in Table 2, “Reported cases of notifiable diseases, by geographic division and area — United States, 2006.” On page 855, under “Domestic arboviral diseases,” in the column, “California serogroup, nonneuroinvasive,” the number of cases should read as follows: United States, 5; Mid. Atlantic, 1; New York (upstate), 1; E.S. Central, 1; Mississippi, 1.

In Vol. 55, No. 53 (March 21, 2008, for 2006), in the “Summary of Notifiable Diseases — United States, 2006,” errors occurred in Table 2, “Reported cases of notifiable diseases, by geographic division and area — United States, 2006.” On page 24, under “Domestic arboviral diseases,” in the column, “California serogroup, neuroinvasive,” one case was incorrectly reported for Mississippi, which had zero cases. In the column, “California serogroup, nonneuroinvasive,” the number of cases should read as follows: Mid. Atlantic, 1; E.S. Central, 1; Mississippi, 1.

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage of Adults* Reporting Joint Pain or Stiffness,[†] — National Health Interview Survey,[§] United States, 2006



* Aged ≥ 18 years.

[†] In response to the questions: "During the past 30 days, have you had symptoms of pain, aching, or stiffness in or around a joint (exclude back or neck)?" and "Which joints are affected?" Respondents could report pain in more than one joint and in joints other than knee, shoulder, finger, and hip, which were the types reported most frequently.

[§] Estimates are based on household interviews with a sample of the civilian, noninstitutionalized U.S. population and are derived from the National Health Interview Survey sample adult component.

During 2006, approximately 30% of adults reported experiencing some type of joint pain during the preceding 30 days. Knee pain was reported by 18% of respondents, followed by pain in the shoulder (9%), finger (7%), and hip (7%). Joint pain can be caused by osteoarthritis, injury, prolonged abnormal posture, or repetitive motion.

SOURCE: National Health Interview Survey, 2006, public use data file. Available at <http://www.cdc.gov/nchs/nhis.htm>.

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending April 26, 2008 (17th Week)*

Disease	Current week	Cum 2008	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2007	2006	2005	2004	2003	
Anthrax	—	—	—	1	1	—	—	—	
Botulism:									
foodborne	—	1	0	32	20	19	16	20	
infant	1	20	1	84	97	85	87	76	NC (1)
other (wound & unspecified)	2	3	0	24	48	31	30	33	WA (1), CA (1)
Brucellosis	—	17	3	128	121	120	114	104	
Chancroid	1	17	1	30	33	17	30	54	VA (1)
Cholera	—	—	0	7	9	8	6	2	
Cyclosporiasis§	—	22	12	91	137	543	160	75	
Diphtheria	—	—	—	—	—	—	—	1	
Domestic arboviral diseases§¶:									
California serogroup	—	—	0	44	67	80	112	108	
eastern equine	—	—	—	4	8	21	6	14	
Powassan	—	—	—	1	1	1	1	—	
St. Louis	—	—	0	7	10	13	12	41	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§¶¶:									
<i>Ehrlichia chaffeensis</i>	—	18	3	751	578	506	338	321	
<i>Ehrlichia ewingii</i>	—	—	—	—	—	—	—	—	
<i>Anaplasma phagocytophilum</i>	—	5	4	719	646	786	537	362	
undetermined	—	—	1	133	231	112	59	44	
<i>Haemophilus influenzae</i> ††									
invasive disease (age <5 yrs):									
serotype b	—	11	0	22	29	9	19	32	
nonserotype b	2	49	3	175	175	135	135	117	MA (1), OH (1)
unknown serotype	1	72	4	189	179	217	177	227	NY (1)
Hansen disease§	—	27	1	73	66	87	105	95	
Hantavirus pulmonary syndrome§	—	3	0	32	40	26	24	26	
Hemolytic uremic syndrome, postdiarrheal§	1	25	3	277	288	221	200	178	CO (1)
Hepatitis C viral, acute	3	223	15	850	766	652	720	1,102	MI (1), KY (1), OR (1)
HIV infection, pediatric (age <13 yrs)§§	—	—	3	—	—	380	436	504	
Influenza-associated pediatric mortality§¶¶¶	—	68	2	76	43	45	—	N	
Listeriosis	4	142	10	784	884	896	753	696	NY (1), FL (1), OK (1), CA (1)
Measles***	—	29	1	42	55	66	37	56	
Meningococcal disease, invasive†††:									
A, C, Y, & W-135	—	104	6	306	318	297	—	—	
serogroup B	2	58	2	149	193	156	—	—	OK (2)
other serogroup	—	15	1	31	32	27	—	—	
unknown serogroup	12	245	16	578	651	765	—	—	OH (4), MI (1), OR (2), CA (4), AK (1)
Mumps	3	191	130	776	6,584	314	258	231	NY (1), OH (1), ND (1)
Novel influenza A virus infections	—	—	—	1	N	N	N	N	
Plague	—	1	0	7	17	8	3	1	
Poliomyelitis, paralytic	—	—	—	—	—	1	—	—	
Poliovirus infection, nonparalytic§	—	—	—	—	N	N	N	N	
Psittacosis§	—	1	0	11	21	16	12	12	
Q fever§,§§§ total:	—	15	3	174	169	136	70	71	
acute	—	11	—	—	—	—	—	—	
chronic	—	4	—	—	—	—	—	—	
Rabies, human	—	—	—	—	3	2	7	2	
Rubella¶¶¶	—	3	0	10	11	11	10	7	
Rubella, congenital syndrome	—	—	0	—	1	1	—	1	
SARS-CoV§,§§§§	—	—	—	—	—	—	—	8	

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

* Incidence data for reporting years 2007 and 2008 are provisional, whereas data for 2003, 2004, 2005, and 2006 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. Sixty-eight cases occurring during the 2007–08 influenza season have been reported.

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

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

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

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

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

TABLE I. (Continued) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending April 26, 2008 (17th Week)

Disease	Current week	Cum 2008	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2007	2006	2005	2004	2003	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	1	46	4	116	125	129	132	161	OH (1)
Syphilis, congenital (age <1 yr)	—	33	7	326	349	329	353	413	
Tetanus	—	1	0	24	41	27	34	20	
Toxic-shock syndrome (staphylococcal)§	—	18	2	86	101	90	95	133	
Trichinellosis	—	1	0	5	15	16	5	6	
Tularemia	—	5	1	122	95	154	134	129	
Typhoid fever	4	104	6	383	353	324	322	356	NY (1), ND (1), FL (1), CA (1)
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	—	3	0	28	6	2	—	N	
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	0	2	1	3	1	N	
Vibriosis (noncholera <i>Vibrio</i> species infections)§	3	42	2	361	N	N	N	N	GA (1), FL (2)
Yellow fever	—	—	—	—	—	—	—	—	

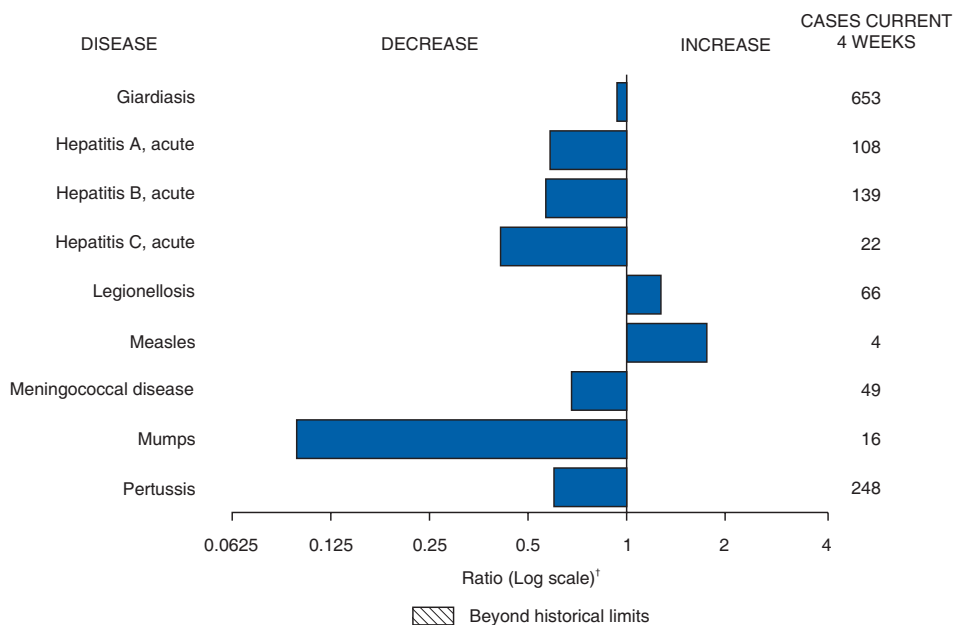
—: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts.

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

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals April 26, 2008, 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 Rosaline Dhara
 Willie J. Anderson Carol Worsham
 Lenee Blanton Pearl C. Sharp

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending April 26, 2008, and April 28, 2007 (17th Week)*

Reporting area	Chlamydia [†]					Coccidioidomycosis					Cryptosporidiosis				
	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	11,657	20,994	24,272	315,796	350,054	27	134	308	2,116	2,480	32	84	978	995	929
New England	590	680	1,517	11,072	10,665	—	0	1	1	1	—	5	16	65	93
Connecticut	—	214	1,093	2,659	2,635	N	0	0	N	N	—	0	5	5	42
Maine [§]	31	50	67	846	840	N	0	0	N	N	—	1	5	5	8
Massachusetts	479	311	661	5,926	5,181	N	0	0	N	N	—	2	11	28	19
New Hampshire	15	39	73	610	626	—	0	1	1	1	—	1	5	11	14
Rhode Island [§]	65	62	98	1,025	1,090	—	0	0	—	—	—	0	3	3	4
Vermont [§]	—	10	32	6	293	N	0	0	N	N	—	1	4	13	6
Mid. Atlantic	2,266	2,775	4,830	46,834	45,445	—	0	0	—	—	2	12	119	126	108
New Jersey	295	403	522	6,097	7,158	N	0	0	N	N	—	0	7	3	8
New York (Upstate)	599	557	2,044	8,529	7,844	N	0	0	N	N	2	4	20	37	29
New York City	1,247	959	3,206	19,114	16,572	N	0	0	N	N	—	2	10	24	24
Pennsylvania	125	796	1,754	13,094	13,871	N	0	0	N	N	—	6	103	62	47
E.N. Central	1,307	3,406	4,863	48,212	58,338	—	1	3	14	11	5	20	134	223	217
Illinois	—	1,016	2,209	9,695	16,172	N	0	0	N	N	—	3	13	21	25
Indiana	225	392	651	6,480	7,064	N	0	0	N	N	—	2	41	30	14
Michigan	954	734	1,168	14,738	12,745	—	0	2	10	9	—	4	11	54	50
Ohio	45	872	1,824	11,273	15,869	—	0	1	4	2	5	5	60	69	60
Wisconsin	83	383	611	6,026	6,488	N	0	0	N	N	—	7	59	49	68
W.N. Central	450	1,205	1,474	19,103	20,408	—	0	77	—	3	19	16	125	182	117
Iowa	108	164	251	2,794	2,814	N	0	0	N	N	—	3	61	38	21
Kansas	234	151	393	2,311	2,576	N	0	0	N	N	2	2	16	18	13
Minnesota	4	258	324	3,916	4,423	—	0	77	—	—	5	4	34	46	31
Missouri	—	464	551	7,270	7,562	—	0	1	—	3	12	3	14	42	21
Nebraska [§]	42	89	183	1,387	1,618	N	0	0	N	N	—	2	24	22	6
North Dakota	—	32	65	506	609	N	0	0	N	N	—	0	6	1	1
South Dakota	62	52	81	919	806	N	0	0	N	N	—	2	16	15	24
S. Atlantic	2,617	3,756	6,544	58,170	67,292	—	0	1	2	2	5	20	65	210	212
Delaware	74	64	144	1,230	1,135	—	0	0	—	—	—	0	4	5	2
District of Columbia	—	113	200	1,607	1,843	—	0	0	—	—	—	0	3	5	3
Florida	945	1,275	1,556	21,666	15,635	N	0	0	N	N	3	9	35	102	99
Georgia	8	357	1,502	423	13,603	N	0	0	N	N	2	4	15	59	50
Maryland [§]	375	466	675	7,057	5,599	—	0	1	2	2	—	0	3	3	9
North Carolina	188	206	4,656	7,374	9,405	N	0	0	N	N	—	1	18	9	13
South Carolina [§]	458	506	3,123	8,709	10,800	N	0	0	N	N	—	1	15	11	14
Virginia [§]	553	485	1,061	9,099	8,241	N	0	0	N	N	—	1	5	11	20
West Virginia	16	63	96	1,005	1,031	N	0	0	N	N	—	0	5	5	2
E.S. Central	568	1,490	2,393	24,198	28,235	—	0	0	—	—	—	4	65	32	45
Alabama [§]	—	479	605	6,479	8,352	N	0	0	N	N	—	1	14	15	17
Kentucky	—	203	357	3,326	2,412	N	0	0	N	N	—	1	40	4	14
Mississippi	—	296	1,048	5,314	7,884	N	0	0	N	N	—	0	11	3	8
Tennessee [§]	568	503	715	9,079	9,587	N	0	0	N	N	—	1	18	10	6
W.S. Central	2,026	2,621	3,784	45,738	38,164	—	0	1	1	—	—	6	28	55	49
Arkansas [§]	262	212	455	4,692	2,952	N	0	0	N	N	—	0	8	6	3
Louisiana	257	311	851	3,840	6,445	—	0	1	1	—	—	1	4	3	16
Oklahoma	206	244	418	4,028	4,204	N	0	0	N	N	—	1	11	13	11
Texas [§]	1,301	1,778	3,398	33,178	24,563	N	0	0	N	N	—	3	16	33	19
Mountain	109	1,358	1,830	10,534	23,989	15	88	171	1,435	1,655	1	9	571	84	67
Arizona	66	419	668	901	7,648	15	84	169	1,406	1,610	—	1	4	12	12
Colorado	21	300	488	1,653	5,945	N	0	0	N	N	1	2	26	16	18
Idaho [§]	—	56	233	1,085	1,383	N	0	0	N	N	—	2	72	20	3
Montana [§]	—	48	363	871	928	N	0	0	N	N	—	1	7	10	4
Nevada [§]	22	179	291	2,224	3,092	—	1	6	16	15	—	0	6	3	3
New Mexico [§]	—	159	394	2,016	2,994	—	0	3	10	11	—	2	9	9	19
Utah	—	124	216	1,773	1,593	—	0	7	3	19	—	1	488	8	1
Wyoming [§]	—	18	34	11	406	—	0	1	—	—	—	0	8	6	7
Pacific	1,724	3,359	4,055	51,935	57,518	12	40	217	663	808	—	2	20	18	21
Alaska	87	91	137	1,308	1,567	N	0	0	N	N	—	0	2	1	—
California	1,320	2,751	3,464	45,307	45,142	12	40	217	663	808	—	0	0	—	—
Hawaii	—	111	143	1,716	1,883	N	0	0	N	N	—	0	4	1	—
Oregon [§]	317	189	403	3,491	3,059	N	0	0	N	N	—	2	16	16	21
Washington	—	118	613	113	5,867	N	0	0	N	N	—	0	0	—	—
American Samoa	—	0	32	56	41	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	6	34	40	258	—	0	0	—	—	—	0	0	—	—
Puerto Rico	337	110	612	2,121	2,590	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	3	9	—	69	—	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 years 2007 and 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 April 26, 2008, and April 28, 2007 (17th Week)*

Reporting area	Giardiasis					Gonorrhea					<i>Haemophilus influenzae</i> , 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	136	294	1,110	3,983	4,688	2,975	6,533	7,948	89,556	113,341	24	44	148	920	911
New England	5	24	54	347	355	58	101	227	1,524	1,721	4	3	8	53	62
Connecticut	—	6	18	79	97	—	42	199	559	592	—	0	8	2	17
Maine [§]	—	3	10	35	46	3	2	8	33	23	—	0	3	5	6
Massachusetts	4	9	29	150	159	49	49	127	784	868	4	1	6	34	33
New Hampshire	—	1	4	21	4	4	2	6	38	52	—	0	2	5	5
Rhode Island [§]	1	1	15	24	12	2	6	14	110	168	—	0	2	4	1
Vermont [§]	—	3	8	38	37	—	0	5	—	18	—	0	1	3	—
Mid. Atlantic	23	59	119	690	836	394	661	1,004	10,114	11,553	4	9	29	174	201
New Jersey	—	6	15	22	111	53	118	175	1,882	2,009	—	1	7	26	30
New York (Upstate)	21	24	100	299	265	109	129	518	1,914	1,870	4	2	20	48	55
New York City	2	15	29	180	282	202	174	533	2,902	3,589	—	1	6	32	40
Pennsylvania	—	14	30	189	178	30	232	550	3,416	4,085	—	3	9	68	76
E.N. Central	18	43	91	574	749	440	1,299	1,787	17,342	23,699	3	6	24	142	125
Illinois	—	13	33	125	222	—	378	772	2,928	5,824	—	2	7	39	44
Indiana	N	0	0	N	N	79	159	308	2,651	2,846	—	1	20	34	16
Michigan	2	10	22	129	212	328	298	644	5,780	5,432	—	0	3	6	12
Ohio	16	15	37	256	211	10	361	914	4,200	7,338	3	2	6	57	46
Wisconsin	—	6	21	64	104	23	121	214	1,783	2,259	—	0	4	6	7
W.N. Central	12	23	582	447	289	94	353	446	4,866	6,511	—	3	24	69	47
Iowa	1	4	23	76	62	14	31	56	435	664	—	0	1	1	1
Kansas	2	3	11	41	38	60	40	102	588	743	—	0	2	6	4
Minnesota	—	0	575	135	6	4	64	90	930	1,136	—	0	21	13	18
Missouri	6	8	23	126	127	—	181	235	2,367	3,442	—	1	6	35	18
Nebraska [§]	2	4	8	45	31	13	26	57	430	396	—	0	3	11	5
North Dakota	1	0	3	9	6	—	2	6	31	33	—	0	2	3	1
South Dakota	—	1	6	15	19	3	5	10	85	97	—	0	0	—	—
S. Atlantic	27	54	102	643	827	866	1,532	2,552	20,245	26,825	7	11	30	240	228
Delaware	—	1	6	11	9	18	24	44	410	463	—	0	1	2	5
District of Columbia	—	0	6	22	17	—	44	71	573	757	—	0	2	6	2
Florida	21	22	47	326	361	327	482	619	7,491	6,611	2	3	10	68	67
Georgia	6	12	24	117	184	1	161	621	160	5,593	4	2	8	55	51
Maryland [§]	—	4	18	53	78	87	129	235	1,933	1,830	—	2	5	45	40
North Carolina	N	0	0	N	N	96	166	1,825	3,318	4,873	1	0	9	25	18
South Carolina [§]	—	2	6	33	23	186	202	1,361	3,167	4,498	—	1	3	18	21
Virginia [§]	—	9	40	64	145	145	127	485	2,949	1,930	—	1	23	14	17
West Virginia	—	0	8	17	10	6	17	38	244	270	—	0	3	7	7
E.S. Central	3	10	23	123	150	178	571	940	8,752	10,408	2	3	8	50	48
Alabama [§]	—	5	11	63	77	—	206	282	2,665	3,525	—	0	3	6	11
Kentucky	N	0	0	N	N	—	80	161	1,263	845	—	0	1	1	2
Mississippi	N	0	0	N	N	—	133	401	2,039	2,794	—	0	2	8	3
Tennessee [§]	3	4	16	60	73	178	174	261	2,785	3,244	2	2	6	35	32
W.S. Central	2	6	21	65	98	632	1,007	1,347	15,498	15,865	2	2	15	43	37
Arkansas [§]	—	2	9	32	42	82	77	138	1,517	1,378	—	0	2	1	2
Louisiana	—	2	14	11	31	103	176	384	2,000	3,772	—	0	2	3	5
Oklahoma	2	3	9	22	25	64	90	172	1,506	1,730	2	1	8	38	28
Texas [§]	N	0	0	N	N	383	643	961	10,475	8,985	—	0	3	1	2
Mountain	11	31	68	292	433	54	253	339	2,007	4,332	1	5	13	113	110
Arizona	—	3	11	30	61	15	93	130	254	1,580	—	2	11	61	48
Colorado	11	10	26	86	142	35	58	91	542	1,105	—	1	4	9	23
Idaho [§]	—	3	19	37	36	—	4	19	48	93	—	0	1	1	4
Montana [§]	—	2	8	22	25	—	1	48	28	32	—	0	1	1	—
Nevada [§]	—	3	8	32	37	4	43	85	575	735	1	0	1	7	5
New Mexico [§]	—	2	5	18	40	—	29	64	376	524	—	1	4	13	17
Utah	—	7	33	56	80	—	14	39	184	242	—	1	6	21	12
Wyoming [§]	—	1	3	11	12	—	1	5	—	21	—	0	1	—	1
Pacific	35	60	228	802	951	259	654	800	9,208	12,427	1	2	7	36	53
Alaska	2	1	5	24	19	9	10	24	132	166	1	0	4	7	4
California	29	42	84	580	683	213	578	693	8,438	10,493	—	0	5	2	14
Hawaii	—	1	4	8	26	—	12	23	169	222	—	0	1	6	3
Oregon [§]	4	8	19	131	134	37	24	63	452	359	—	1	4	21	32
Washington	—	8	137	59	89	—	13	130	17	1,187	—	0	3	—	—
American Samoa	—	0	0	—	—	—	0	1	2	2	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	1	—	1	—	2	13	18	26	—	0	1	—	—
Puerto Rico	—	5	31	7	82	7	4	23	78	117	—	0	1	—	1
U.S. Virgin Islands	—	0	0	—	—	—	1	2	—	18	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 years 2007 and 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 April 26, 2008, and April 28, 2007 (17th 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	32	53	148	741	870	34	80	238	983	1,351	14	48	99	533	478
New England	—	3	6	40	23	—	1	5	14	26	1	2	14	25	23
Connecticut	—	0	3	9	5	—	0	5	6	15	1	0	4	6	3
Maine [§]	—	0	1	2	—	—	0	2	3	1	—	0	2	1	—
Massachusetts	—	1	5	18	11	—	0	1	2	1	—	0	2	1	13
New Hampshire	—	0	3	2	4	—	0	1	1	4	—	0	2	3	—
Rhode Island [§]	—	0	2	9	3	—	0	3	1	4	—	0	5	10	6
Vermont [§]	—	0	1	—	—	—	0	1	1	1	—	0	2	4	1
Mid. Atlantic	2	9	21	87	133	2	9	17	122	193	2	14	37	109	121
New Jersey	—	2	6	14	45	—	2	7	34	65	—	2	11	12	20
New York (Upstate)	2	1	6	22	27	2	2	7	22	24	2	4	15	29	34
New York City	—	3	9	23	44	—	2	7	15	46	—	2	11	13	24
Pennsylvania	—	2	6	28	17	—	3	8	51	58	—	5	21	55	43
E.N. Central	2	6	13	89	99	2	8	15	107	171	2	11	30	131	117
Illinois	—	2	6	22	44	—	1	5	17	55	—	2	12	18	25
Indiana	—	0	4	5	4	—	0	8	9	11	—	1	7	6	7
Michigan	2	2	7	47	22	—	2	6	38	44	—	3	11	39	34
Ohio	—	1	3	10	22	2	2	6	40	49	2	4	17	64	44
Wisconsin	—	0	2	5	7	—	0	1	3	12	—	0	1	4	7
W.N. Central	8	3	24	98	47	1	2	7	25	37	1	2	9	27	15
Iowa	—	1	5	34	11	—	0	2	6	11	—	0	2	6	2
Kansas	3	0	3	8	—	—	0	2	4	4	—	0	1	1	—
Minnesota	—	0	23	9	24	—	0	5	—	4	1	0	6	3	2
Missouri	1	0	3	16	4	1	1	4	13	11	—	1	3	9	8
Nebraska [§]	4	1	4	30	5	—	0	1	2	4	—	0	2	7	2
North Dakota	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
South Dakota	—	0	1	1	3	—	0	1	—	3	—	0	1	1	1
S. Atlantic	3	9	22	97	159	9	18	60	255	341	3	8	30	106	112
Delaware	—	0	1	1	1	—	0	2	1	5	—	0	2	2	1
District of Columbia	—	0	1	—	13	—	0	0	—	1	—	0	3	7	—
Florida	2	2	8	46	53	8	7	12	115	109	2	3	12	49	50
Georgia	1	1	5	13	24	1	2	6	33	48	1	1	3	7	13
Maryland [§]	—	1	4	12	25	—	2	7	23	34	—	1	5	17	23
North Carolina	—	0	9	9	7	—	0	16	25	52	—	0	7	7	9
South Carolina [§]	—	0	4	3	4	—	1	6	22	25	—	0	2	2	5
Virginia [§]	—	1	5	11	30	—	2	16	26	48	—	1	6	12	8
West Virginia	—	0	2	2	2	—	0	30	10	19	—	0	3	3	3
E.S. Central	1	2	5	13	28	1	7	15	102	102	1	2	6	24	23
Alabama [§]	—	0	4	3	6	—	2	6	27	36	—	0	1	2	2
Kentucky	—	0	2	4	5	—	2	7	30	10	—	1	3	13	10
Mississippi	—	0	1	—	4	—	0	3	11	10	—	0	0	—	—
Tennessee [§]	1	1	3	6	13	1	2	8	34	46	1	1	4	9	11
W.S. Central	—	5	46	63	66	11	18	112	203	237	—	2	12	12	17
Arkansas [§]	—	0	1	1	4	—	1	3	8	24	—	0	3	1	1
Louisiana	—	0	3	4	9	—	1	6	14	27	—	0	2	—	1
Oklahoma	—	0	8	3	3	2	1	38	21	10	—	0	2	—	—
Texas [§]	—	4	45	55	50	9	12	94	160	176	—	2	12	11	15
Mountain	2	4	10	53	85	—	3	7	47	81	—	2	6	24	21
Arizona	—	2	10	24	67	—	1	4	12	39	—	1	5	8	6
Colorado	2	0	3	5	7	—	0	3	6	11	—	0	2	1	4
Idaho [§]	—	0	3	11	1	—	0	2	4	4	—	0	1	1	1
Montana [§]	—	0	2	—	1	—	0	1	—	—	—	0	1	2	1
Nevada [§]	—	0	1	2	5	—	1	3	13	19	—	0	2	3	2
New Mexico [§]	—	0	2	7	1	—	0	2	4	4	—	0	1	2	2
Utah	—	0	2	2	2	—	0	2	7	4	—	0	3	7	3
Wyoming [§]	—	0	1	2	1	—	0	1	1	—	—	0	1	—	2
Pacific	14	12	44	201	230	8	9	30	108	163	4	3	16	75	29
Alaska	—	0	1	2	1	—	0	2	5	3	—	0	0	—	—
California	14	9	34	166	213	3	6	19	77	128	4	2	13	64	22
Hawaii	—	0	2	3	2	—	0	2	3	—	—	0	1	2	1
Oregon [§]	—	1	3	12	6	1	1	3	10	21	—	0	2	4	1
Washington	—	1	8	18	8	4	1	10	13	11	—	0	2	5	5
American Samoa	—	0	0	—	—	—	0	13	—	14	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	1	—	1	—	0	0	—	—
Puerto Rico	—	0	4	2	30	—	1	5	4	22	—	0	1	—	3
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

* Incidence data for reporting years 2007 and 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 April 26, 2008, and April 28, 2007 (17th Week)*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All serogroups				
	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	13	328	1,327	1,480	2,416	9	24	115	201	307	14	19	53	422	426
New England	—	44	301	93	208	—	1	24	3	13	—	1	3	14	18
Connecticut	—	12	214	—	37	—	0	17	—	—	—	0	1	1	3
Maine§	—	6	61	33	15	—	0	2	—	3	—	0	1	1	3
Massachusetts	—	0	31	20	70	—	0	3	2	9	—	0	3	12	8
New Hampshire	—	8	88	32	78	—	0	4	1	1	—	0	0	—	1
Rhode Island§	—	0	79	—	—	—	0	7	—	—	—	0	1	—	1
Vermont§	—	1	13	8	8	—	0	2	—	—	—	0	1	—	2
Mid. Atlantic	7	174	692	786	1,205	1	7	18	43	80	—	2	6	45	50
New Jersey	—	42	219	169	433	—	1	4	—	15	—	0	1	1	8
New York (Upstate)	7	54	224	125	180	1	1	8	6	14	—	1	3	16	12
New York City	—	5	27	4	52	—	4	9	30	45	—	0	4	7	12
Pennsylvania	—	54	326	488	540	—	1	4	7	6	—	1	5	21	18
E.N. Central	—	10	169	27	105	—	2	7	37	47	5	3	8	71	70
Illinois	—	1	16	2	7	—	1	6	16	24	—	1	3	20	24
Indiana	—	0	7	2	1	—	0	2	1	1	—	0	4	12	12
Michigan	—	0	5	6	3	—	0	2	6	7	1	0	2	13	12
Ohio	—	0	4	4	3	—	0	3	12	8	4	1	3	20	15
Wisconsin	—	8	149	13	91	—	0	1	2	7	—	0	2	6	7
W.N. Central	1	3	728	52	45	3	0	8	14	14	—	2	8	42	28
Iowa	—	1	11	5	10	—	0	1	1	2	—	0	3	9	7
Kansas	—	0	2	1	3	—	0	1	1	—	—	0	1	1	2
Minnesota	—	0	728	44	32	1	0	8	4	7	—	0	7	15	8
Missouri	1	0	4	2	—	2	0	1	4	2	—	0	3	10	8
Nebraska§	—	0	1	—	—	—	0	2	4	2	—	0	2	5	1
North Dakota	—	0	2	—	—	—	0	1	—	—	—	0	1	1	1
South Dakota	—	0	0	—	—	—	0	0	—	1	—	0	1	1	1
S. Atlantic	3	61	215	444	791	—	5	15	51	57	—	3	7	58	59
Delaware	2	12	34	127	144	—	0	1	1	2	—	0	1	—	—
District of Columbia	—	0	8	39	3	—	0	1	—	2	—	0	0	—	—
Florida	1	1	11	7	8	—	1	7	16	14	—	1	5	21	22
Georgia	—	0	3	—	—	—	1	3	10	5	—	0	3	7	7
Maryland§	—	31	133	235	529	—	1	5	20	18	—	0	2	4	14
North Carolina	—	0	8	2	6	—	0	4	2	4	—	0	4	3	4
South Carolina§	—	0	4	2	4	—	0	1	1	—	—	0	3	9	5
Virginia§	—	17	63	29	93	—	1	7	1	11	—	0	3	12	7
West Virginia	—	0	9	3	4	—	0	1	—	1	—	0	1	2	—
E.S. Central	—	0	5	1	10	—	0	3	3	10	—	1	3	23	22
Alabama§	—	0	3	1	1	—	0	1	2	1	—	0	1	1	5
Kentucky	—	0	2	—	—	—	0	1	1	1	—	0	2	5	2
Mississippi	—	0	1	—	—	—	0	1	—	1	—	0	2	7	4
Tennessee§	—	0	4	—	9	—	0	2	—	7	—	0	2	10	11
W.S. Central	—	1	8	8	17	—	1	56	8	24	2	2	11	38	43
Arkansas§	—	0	1	—	—	—	0	1	—	—	—	0	2	3	5
Louisiana	—	0	0	—	2	—	0	1	—	11	—	0	3	12	13
Oklahoma	—	0	0	—	—	—	0	2	1	1	2	0	4	8	9
Texas§	—	1	8	8	15	—	1	55	7	12	—	1	6	15	16
Mountain	—	1	3	3	7	—	1	5	8	18	—	1	3	22	35
Arizona	—	0	1	1	—	—	0	1	2	4	—	0	1	2	8
Colorado	—	0	1	2	—	—	0	2	2	9	—	0	2	4	12
Idaho§	—	0	2	—	1	—	0	2	—	—	—	0	2	2	2
Montana§	—	0	2	—	1	—	0	1	—	1	—	0	1	3	1
Nevada§	—	0	2	—	5	—	0	3	4	1	—	0	2	5	3
New Mexico§	—	0	2	—	—	—	0	1	—	1	—	0	1	3	1
Utah	—	0	2	—	—	—	0	3	—	2	—	0	2	2	6
Wyoming§	—	0	1	—	—	—	0	0	—	—	—	0	1	1	2
Pacific	2	3	11	66	28	5	3	9	34	44	7	4	20	109	101
Alaska	—	0	2	—	2	—	0	0	—	2	1	0	1	1	1
California	2	3	9	65	26	5	2	8	27	30	4	3	17	84	75
Hawaii	N	0	0	N	N	—	0	1	1	2	—	0	2	—	3
Oregon§	—	0	1	1	—	—	0	2	3	9	2	1	2	13	11
Washington	—	0	7	—	—	—	0	3	3	1	—	0	8	11	11
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	—	1	—	0	1	—	4
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 years 2007 and 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 April 26, 2008, and April 28, 2007 (17th 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	39	163	695	1,814	3,016	38	86	156	1,033	1,383	3	32	147	64	215
New England	2	20	45	246	471	3	9	22	91	159	—	0	1	—	2
Connecticut	—	0	5	—	20	3	4	10	53	67	—	0	0	—	—
Maine†	—	1	5	14	32	—	1	5	12	26	N	0	0	N	N
Massachusetts	2	16	33	210	377	N	0	0	N	N	—	0	1	—	2
New Hampshire	—	1	5	7	24	—	1	4	10	12	—	0	1	—	—
Rhode Island†	—	0	8	10	2	N	0	0	N	N	—	0	0	—	—
Vermont†	—	0	6	5	16	—	2	13	16	54	—	0	0	—	—
Mid. Atlantic	6	22	42	234	444	13	18	31	199	274	—	1	6	7	20
New Jersey	—	3	8	3	73	—	0	0	—	—	—	0	3	2	3
New York (Upstate)	6	7	24	80	219	13	9	20	113	119	—	0	1	—	—
New York City	—	2	7	18	50	—	0	2	5	24	—	0	3	3	10
Pennsylvania	—	8	23	133	102	—	7	23	81	131	—	0	2	2	7
E.N. Central	4	22	186	489	573	2	2	39	7	5	—	1	4	1	11
Illinois	—	2	8	24	71	N	0	0	N	N	—	0	3	1	7
Indiana	—	0	12	15	11	—	0	1	—	—	—	0	2	—	1
Michigan	2	3	16	46	104	1	1	28	5	4	—	0	1	—	1
Ohio	2	12	176	404	259	1	1	11	2	1	—	0	2	—	2
Wisconsin	—	0	14	—	128	N	0	0	N	N	—	0	0	—	—
W.N. Central	9	12	136	154	223	9	4	13	26	62	—	4	33	4	24
Iowa	—	2	8	26	61	—	0	3	2	7	—	0	4	—	1
Kansas	—	2	5	21	57	—	0	7	—	38	—	0	2	—	4
Minnesota	2	0	131	5	43	4	0	6	14	3	—	0	4	—	—
Missouri	5	2	16	80	23	—	0	3	1	3	—	3	25	4	18
Nebraska†	2	1	12	19	8	—	0	0	—	—	—	0	2	—	—
North Dakota	—	0	4	—	4	5	0	5	7	6	—	0	0	—	—
South Dakota	—	0	7	3	27	—	0	2	2	5	—	0	1	—	1
S. Atlantic	7	14	50	190	320	6	40	62	593	744	1	14	111	31	99
Delaware	—	0	2	2	2	—	0	0	—	—	—	0	2	1	5
District of Columbia	—	0	2	4	2	—	0	0	—	—	—	0	1	1	1
Florida	7	3	9	52	93	—	0	22	41	124	1	0	3	2	5
Georgia	—	0	3	—	15	—	6	15	93	67	—	0	6	—	11
Maryland†	—	2	5	23	48	—	9	18	120	122	—	1	6	8	13
North Carolina	—	3	38	59	91	6	9	19	147	148	—	2	96	11	46
South Carolina†	—	1	22	20	27	—	0	11	—	35	—	0	7	2	8
Virginia†	—	2	11	29	36	—	12	27	162	224	—	2	11	5	9
West Virginia	—	0	12	1	6	—	0	11	30	24	—	0	3	1	1
E.S. Central	—	6	35	62	90	—	3	7	34	46	—	5	16	9	48
Alabama†	—	1	6	16	25	—	0	0	—	—	—	1	10	4	12
Kentucky	—	0	4	7	8	—	0	3	8	7	—	0	2	—	1
Mississippi	—	3	32	24	15	—	0	1	1	—	—	0	3	1	2
Tennessee†	—	1	4	15	42	—	2	6	25	39	—	2	10	4	33
W.S. Central	—	19	144	59	206	—	1	23	26	27	2	1	30	10	6
Arkansas†	—	2	17	20	36	—	1	3	15	9	—	0	15	1	—
Louisiana	—	0	2	2	9	—	0	0	—	—	—	0	2	2	1
Oklahoma	—	0	26	2	1	—	0	22	11	18	2	0	20	2	—
Texas†	—	16	134	35	160	—	0	0	—	—	—	1	7	5	5
Mountain	5	19	48	219	416	—	2	8	15	1	—	0	4	1	4
Arizona	—	2	8	28	122	N	0	0	N	N	—	0	1	—	1
Colorado	3	5	13	31	102	—	0	0	—	—	—	0	2	—	—
Idaho†	—	0	4	9	15	—	0	4	—	—	—	0	1	—	1
Montana†	1	1	11	56	14	—	0	3	—	—	—	0	1	—	—
Nevada†	1	0	7	12	8	—	0	2	—	—	—	0	0	—	—
New Mexico†	—	1	7	3	17	—	0	2	11	—	—	0	1	1	—
Utah	—	5	38	78	124	—	0	2	—	1	—	0	0	—	—
Wyoming†	—	0	2	2	14	—	0	4	4	—	—	0	2	—	2
Pacific	6	16	243	161	273	5	4	10	42	65	—	0	2	1	1
Alaska	—	1	6	23	10	—	0	3	9	27	N	0	0	N	N
California	—	7	32	23	178	5	3	8	32	38	—	0	2	1	1
Hawaii	—	0	2	3	9	—	0	0	—	—	N	0	0	N	N
Oregon†	—	2	14	37	34	—	0	3	1	—	—	0	1	—	—
Washington	6	3	209	75	42	—	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	—	—	—	0	5	13	17	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N

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

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

* Incidence data for reporting years 2007 and 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 April 26, 2008, and April 28, 2007 (17th Week)*

Reporting area	Salmonellosis					Shiga toxin-producing <i>E. coli</i> (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	303	870	1,968	7,758	10,121	22	79	240	846	774	155	360	1,104	4,245	3,723
New England	6	31	128	388	808	—	3	11	38	121	—	3	11	48	107
Connecticut	—	0	100	100	431	—	0	6	6	71	—	0	10	10	44
Maine [§]	1	2	14	35	30	—	0	4	3	12	—	0	2	1	8
Massachusetts	4	21	58	204	276	—	2	10	18	27	—	2	8	30	50
New Hampshire	1	2	10	17	37	—	0	4	7	7	—	0	1	1	4
Rhode Island [§]	—	1	15	20	19	—	0	2	2	1	—	0	9	5	1
Vermont [§]	—	1	5	12	15	—	0	3	2	3	—	0	1	1	—
Mid. Atlantic	26	109	190	856	1,398	1	9	196	285	103	12	21	79	465	176
New Jersey	—	19	48	73	280	—	1	7	2	25	—	4	14	66	28
New York (Upstate)	25	26	63	255	348	1	3	192	259	30	11	4	37	158	33
New York City	1	24	52	251	343	—	0	5	8	13	1	7	33	208	92
Pennsylvania	—	34	69	277	427	—	2	11	16	35	—	2	66	33	23
E.N. Central	40	104	255	851	1,414	—	9	35	64	90	11	58	134	747	353
Illinois	—	29	188	220	507	—	1	13	5	15	—	15	29	221	181
Indiana	—	10	34	84	125	—	1	12	7	5	—	6	83	241	19
Michigan	14	19	43	189	224	—	2	8	18	17	—	1	7	14	13
Ohio	26	24	64	270	302	—	2	9	25	34	11	22	104	239	79
Wisconsin	—	11	50	88	256	—	2	11	9	19	—	3	13	32	61
W.N. Central	40	50	103	598	644	3	12	38	92	87	13	25	80	273	650
Iowa	—	9	18	86	106	—	2	13	21	18	—	2	6	23	20
Kansas	6	7	20	66	102	1	1	4	8	7	1	0	3	6	12
Minnesota	15	13	39	175	152	—	3	15	16	27	6	4	11	62	86
Missouri	13	14	29	166	191	1	3	12	33	18	5	16	72	106	506
Nebraska [§]	2	6	13	71	40	—	1	6	9	16	—	0	3	—	7
North Dakota	4	0	9	11	8	1	0	1	1	—	1	0	5	18	6
South Dakota	—	3	11	23	45	—	0	5	4	1	—	1	30	58	13
S. Atlantic	92	229	446	2,134	2,534	9	13	39	148	159	43	81	152	911	1,190
Delaware	1	3	8	31	33	1	0	2	3	6	1	0	2	2	4
District of Columbia	—	0	4	19	8	—	0	2	4	—	—	0	4	11	4
Florida	58	87	181	1,083	1,057	5	3	18	54	43	15	32	75	307	751
Georgia	22	32	86	266	389	—	1	6	7	19	24	29	85	343	335
Maryland [§]	—	15	44	132	187	—	1	5	21	23	—	2	7	19	28
North Carolina	9	23	228	239	378	3	1	24	17	23	3	0	12	34	19
South Carolina [§]	2	18	51	192	210	—	0	3	11	4	—	6	21	167	21
Virginia [§]	—	22	50	131	236	—	3	9	26	40	—	4	14	25	27
West Virginia	—	4	25	41	36	—	0	3	5	1	—	0	61	3	1
E.S. Central	10	60	144	488	626	2	4	26	56	32	35	49	177	551	303
Alabama [§]	—	16	50	143	183	—	1	19	25	7	—	14	43	136	119
Kentucky	2	10	23	86	129	1	1	12	7	10	24	8	35	81	31
Mississippi	2	13	57	101	103	—	0	1	2	1	3	18	111	156	88
Tennessee [§]	6	17	34	158	211	1	2	12	22	14	8	8	32	178	65
W.S. Central	13	97	833	611	701	—	4	13	42	49	24	48	665	753	386
Arkansas [§]	4	13	50	85	93	—	0	3	11	10	7	2	13	75	32
Louisiana	—	16	44	58	145	—	0	0	—	3	—	8	22	58	116
Oklahoma	9	9	43	91	85	—	0	3	3	8	3	3	8	31	15
Texas [§]	—	51	790	377	378	—	3	11	28	28	14	34	645	589	223
Mountain	21	51	83	681	697	4	9	42	78	70	1	18	40	174	222
Arizona	2	17	39	197	234	—	2	8	21	19	—	10	30	78	103
Colorado	11	10	47	213	181	2	1	17	8	15	1	2	6	13	36
Idaho [§]	—	3	10	35	37	—	2	16	19	4	—	0	2	3	4
Montana [§]	—	1	10	21	30	2	0	3	12	—	—	0	2	—	9
Nevada [§]	7	5	12	66	66	—	0	3	4	7	—	2	10	64	11
New Mexico [§]	—	5	13	67	65	—	1	3	8	15	—	1	6	10	39
Utah	—	5	17	64	62	—	1	9	4	10	—	0	5	3	6
Wyoming [§]	1	1	5	18	22	—	0	1	2	—	—	0	5	3	14
Pacific	55	114	391	1,151	1,299	3	9	38	43	63	16	27	70	323	336
Alaska	—	1	5	7	26	—	0	1	1	—	—	0	1	—	6
California	50	85	230	906	1,018	2	5	33	27	35	15	23	61	277	271
Hawaii	—	5	14	55	72	—	0	4	2	4	—	0	3	13	13
Oregon [§]	2	6	16	76	75	—	1	11	3	9	—	1	6	14	13
Washington	3	12	152	107	108	1	1	17	10	15	1	2	21	19	33
American Samoa	—	0	1	1	—	—	0	0	—	—	—	0	1	1	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	5	4	4	—	0	0	—	—	—	0	3	5	5
Puerto Rico	—	13	55	40	236	—	0	1	—	—	—	0	2	—	12
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 years 2007 and 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 April 26, 2008, and April 28, 2007 (17th Week)*

Reporting area	Streptococcal disease, invasive, group A					<i>Streptococcus pneumoniae</i> , 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	68	95	215	2,106	2,115	18	34	154	579	601
New England	2	5	24	125	169	—	2	5	38	52
Connecticut	—	0	22	13	36	—	0	4	—	8
Maine§	—	0	3	11	7	—	0	1	1	1
Massachusetts	1	3	9	75	94	—	1	4	29	40
New Hampshire	1	0	2	15	21	—	0	1	7	—
Rhode Island§	—	0	3	5	—	—	0	1	—	2
Vermont§	—	0	2	6	11	—	0	1	1	1
Mid. Atlantic	10	17	41	422	451	4	5	38	68	102
New Jersey	—	3	9	57	98	—	1	6	16	24
New York (Upstate)	10	6	20	149	126	4	2	14	37	43
New York City	—	4	10	73	108	—	1	35	15	35
Pennsylvania	—	5	16	143	119	N	0	0	N	N
E.N. Central	15	16	59	445	401	5	5	22	115	96
Illinois	—	4	14	113	133	—	1	6	22	21
Indiana	—	2	11	63	46	—	0	14	16	5
Michigan	—	3	10	64	92	3	1	5	32	37
Ohio	15	4	12	131	108	2	1	5	22	27
Wisconsin	—	0	38	74	22	—	0	9	23	6
W.N. Central	3	6	39	192	138	2	2	23	49	37
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	2	0	6	31	20	1	0	2	8	1
Minnesota	—	0	35	83	60	—	0	21	15	20
Missouri	1	2	10	45	38	1	0	2	17	12
Nebraska§	—	0	3	16	7	—	0	3	3	3
North Dakota	—	0	3	7	10	—	0	0	—	1
South Dakota	—	0	2	10	3	—	0	1	6	—
S. Atlantic	16	23	50	420	457	1	5	10	87	87
Delaware	—	0	2	6	1	—	0	0	—	—
District of Columbia	—	0	6	18	4	—	0	2	3	—
Florida	6	6	16	102	99	1	1	4	26	25
Georgia	7	4	10	77	101	—	0	0	—	—
Maryland§	—	4	9	77	83	—	1	5	30	30
North Carolina	3	2	22	54	50	N	0	0	N	N
South Carolina§	—	1	6	24	44	—	1	4	18	10
Virginia§	—	2	12	50	66	—	0	4	7	20
West Virginia	—	0	3	12	9	—	0	1	3	2
E.S. Central	4	4	13	68	76	—	2	11	36	33
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	1	1	3	15	20	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	3	11	2
Tennessee§	3	3	13	53	56	—	2	9	25	31
W.S. Central	10	7	70	176	127	4	5	60	94	100
Arkansas§	—	0	1	3	11	—	0	2	4	6
Louisiana	—	0	1	3	13	—	0	2	1	22
Oklahoma	2	1	9	55	36	1	1	4	35	19
Texas§	8	5	61	115	67	3	3	56	54	53
Mountain	7	10	25	216	250	2	4	12	91	90
Arizona	—	3	9	77	86	1	2	8	55	48
Colorado	6	2	9	50	67	1	1	4	19	19
Idaho§	—	0	2	8	6	—	0	1	2	2
Montana§	N	0	0	N	N	—	0	1	—	—
Nevada§	—	0	2	5	2	N	0	0	N	N
New Mexico§	1	2	8	47	43	—	0	3	9	17
Utah	—	1	5	27	43	—	0	4	6	4
Wyoming§	—	0	1	2	3	—	0	0	—	—
Pacific	1	3	7	42	46	—	0	1	1	4
Alaska	1	0	3	12	7	N	0	0	N	N
California	—	0	0	—	—	N	0	0	N	N
Hawaii	—	2	5	30	39	—	0	1	1	4
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	13	4	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N

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

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

* Incidence data for reporting years 2007 and 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 (NNDS 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 April 26, 2008, and April 28, 2007 (17th Week)*

Reporting area	<i>Streptococcus pneumoniae</i> , invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages					Age <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	46	215	1,072	1,125	6	9	27	173	226	111	221	287	3,275	3,243
New England	1	1	18	19	68	—	0	4	3	8	3	6	14	86	68
Connecticut	—	0	16	—	43	—	0	3	—	4	—	0	6	6	8
Maine§	1	0	2	8	5	—	0	1	1	1	—	0	2	2	1
Massachusetts	—	0	0	—	—	—	0	0	—	—	3	3	10	72	41
New Hampshire	—	0	0	—	—	—	0	0	—	—	—	0	3	4	7
Rhode Island§	—	0	2	5	10	—	0	1	1	2	—	0	3	2	10
Vermont§	—	0	2	6	10	—	0	1	1	1	—	0	5	—	1
Mid. Atlantic	—	2	7	58	70	—	0	2	12	19	34	32	45	566	523
New Jersey	—	0	0	—	—	—	0	0	—	—	1	4	10	70	64
New York (Upstate)	—	1	4	18	24	—	0	1	4	8	2	3	10	42	41
New York City	—	0	0	—	—	—	0	0	—	—	28	18	30	358	327
Pennsylvania	—	1	6	40	46	—	0	2	8	11	3	5	12	96	91
E.N. Central	7	14	46	318	301	1	2	14	49	51	13	16	27	268	273
Illinois	—	3	13	51	57	—	0	6	11	21	—	6	14	29	132
Indiana	—	3	28	97	54	—	1	11	13	7	2	1	6	47	14
Michigan	—	0	1	4	—	—	0	1	1	—	4	2	17	65	39
Ohio	7	7	17	166	190	1	1	4	24	23	7	4	14	112	67
Wisconsin	—	0	0	—	—	—	0	0	—	—	—	1	3	15	21
W.N. Central	1	3	91	87	86	—	0	2	3	10	—	8	15	125	87
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	4	4
Kansas	—	1	5	37	49	—	0	1	2	2	—	0	5	11	7
Minnesota	—	0	90	—	—	—	0	2	—	6	—	1	4	28	19
Missouri	1	1	8	50	30	—	0	1	1	—	—	5	10	79	57
Nebraska§	—	0	0	—	2	—	0	0	—	—	—	0	1	3	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	1	—	5	—	0	1	—	2	—	0	3	—	—
S. Atlantic	19	19	43	438	477	5	3	9	76	115	31	49	152	656	660
Delaware	—	0	1	2	4	—	0	1	—	1	—	0	3	1	3
District of Columbia	—	0	5	19	4	—	0	0	—	—	—	2	10	26	56
Florida	8	11	26	247	258	—	2	6	46	61	13	18	35	279	203
Georgia	11	6	15	134	184	5	1	4	25	47	—	7	131	12	89
Maryland§	—	0	2	3	1	—	0	1	1	—	6	6	14	119	103
North Carolina	N	0	0	N	N	N	0	0	N	N	11	5	18	107	107
South Carolina§	—	0	0	—	—	—	0	0	—	—	1	1	11	26	29
Virginia§	N	0	0	N	N	N	0	0	N	N	—	4	17	86	66
West Virginia	—	1	8	33	26	—	0	2	4	6	—	0	1	—	4
E.S. Central	3	4	12	121	64	—	1	4	19	11	2	20	32	312	246
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	17	131	82
Kentucky	1	0	3	28	14	—	0	2	6	1	—	1	6	20	28
Mississippi	—	0	0	—	—	—	0	0	—	—	—	2	15	36	43
Tennessee§	2	4	12	93	50	—	1	3	13	10	2	8	14	125	93
W.S. Central	—	1	5	21	40	—	0	2	7	5	24	39	56	624	493
Arkansas§	—	0	1	4	1	—	0	1	3	—	4	2	10	30	40
Louisiana	—	1	4	17	39	—	0	2	4	5	4	11	22	113	117
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	5	20	22
Texas§	—	0	0	—	—	—	0	0	—	—	16	26	46	461	314
Mountain	—	1	6	10	19	—	0	2	3	7	2	8	28	61	144
Arizona	—	0	0	—	—	—	0	0	—	—	—	4	20	2	68
Colorado	—	0	0	—	—	—	0	0	—	—	1	1	7	27	17
Idaho§	N	0	0	N	N	N	0	0	N	N	—	0	1	1	1
Montana§	—	0	0	—	—	—	0	0	—	—	—	0	3	—	1
Nevada§	N	0	0	N	N	N	0	0	N	N	1	2	6	21	33
New Mexico§	—	0	1	—	—	—	0	0	—	—	—	1	3	10	19
Utah	—	0	6	10	14	—	0	2	3	6	—	0	2	—	4
Wyoming§	—	0	2	—	5	—	0	1	—	1	—	0	1	—	1
Pacific	—	0	0	—	—	—	0	1	1	—	2	41	65	577	749
Alaska	N	0	0	N	N	N	0	0	N	N	—	0	1	—	3
California	N	0	0	N	N	N	0	0	N	N	2	38	58	512	697
Hawaii	—	0	0	—	—	—	0	1	1	—	—	0	2	8	2
Oregon§	N	0	0	N	N	N	0	0	N	N	—	0	2	6	5
Washington	N	0	0	N	N	N	0	0	N	N	—	3	13	51	42
American Samoa	N	0	0	N	N	N	0	1	N	N	—	0	4	—	4
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	5	2	10	45	45
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 years 2007 and 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 April 26, 2008, and April 28, 2007 (17th Week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Neuroinvasive					Nonneuroinvasive§				
		Med	Max			Current week	Med	Max	Cum 2008	Cum 2007	Current week	Med	Max	Cum 2008	Cum 2007
United States	453	619	1,417	10,590	16,491	—	1	141	—	4	—	2	299	—	1
New England	5	12	31	186	289	—	0	2	—	—	—	0	2	—	—
Connecticut	—	0	1	—	1	—	0	2	—	—	—	0	1	—	—
Maine¶	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	0	—	—	—	0	2	—	—	—	0	2	—	—
New Hampshire	2	6	18	91	129	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Vermont¶	3	5	21	95	159	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	—	61	145	838	2,175	—	0	3	—	—	—	0	3	—	—
New Jersey	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
New York (Upstate)	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
New York City	N	0	0	N	N	—	0	3	—	—	—	0	3	—	—
Pennsylvania	—	61	145	838	2,175	—	0	1	—	—	—	0	1	—	—
E.N. Central	147	157	358	2,398	4,738	—	0	18	—	—	—	0	12	—	1
Illinois	13	4	49	273	69	—	0	13	—	—	—	0	8	—	—
Indiana	—	0	222	—	—	—	0	4	—	—	—	0	2	—	—
Michigan	52	62	154	1,019	1,881	—	0	5	—	—	—	0	0	—	—
Ohio	82	61	208	1,089	2,282	—	0	4	—	—	—	0	3	—	1
Wisconsin	—	4	80	17	506	—	0	2	—	—	—	0	2	—	—
W.N. Central	69	22	58	536	880	—	0	41	—	—	—	1	117	—	—
Iowa	N	0	0	N	N	—	0	4	—	—	—	0	3	—	—
Kansas	9	5	36	219	346	—	0	3	—	—	—	0	7	—	—
Minnesota	—	0	0	—	—	—	0	9	—	—	—	0	12	—	—
Missouri	21	12	53	261	407	—	0	9	—	—	—	0	3	—	—
Nebraska¶	N	0	0	N	N	—	0	5	—	—	—	0	15	—	—
North Dakota	39	0	1	40	84	—	0	11	—	—	—	0	49	—	—
South Dakota	—	1	14	16	43	—	0	9	—	—	—	0	32	—	—
S. Atlantic	64	102	180	1,842	2,106	—	0	12	—	—	—	0	6	—	—
Delaware	—	1	4	9	14	—	0	1	—	—	—	0	0	—	—
District of Columbia	—	0	8	14	—	—	0	0	—	—	—	0	0	—	—
Florida	49	28	87	756	477	—	0	1	—	—	—	0	0	—	—
Georgia	N	0	0	N	N	—	0	8	—	—	—	0	5	—	—
Maryland¶	N	0	0	N	N	—	0	2	—	—	—	0	2	—	—
North Carolina	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
South Carolina¶	4	13	52	276	552	—	0	2	—	—	—	0	1	—	—
Virginia¶	5	25	81	497	551	—	0	1	—	—	—	0	1	—	—
West Virginia	6	17	66	290	512	—	0	0	—	—	—	0	0	—	—
E.S. Central	—	15	82	428	186	—	0	11	—	4	—	0	14	—	—
Alabama¶	—	15	82	421	184	—	0	2	—	—	—	0	1	—	—
Kentucky	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	2	7	2	—	0	7	—	3	—	0	12	—	—
Tennessee¶	N	0	0	N	N	—	0	1	—	1	—	0	2	—	—
W.S. Central	133	172	842	3,606	4,764	—	0	34	—	—	—	0	18	—	—
Arkansas¶	—	11	42	233	287	—	0	5	—	—	—	0	2	—	—
Louisiana	—	1	8	27	60	—	0	5	—	—	—	0	3	—	—
Oklahoma	N	0	0	N	N	—	0	11	—	—	—	0	7	—	—
Texas¶	133	159	825	3,346	4,417	—	0	18	—	—	—	0	10	—	—
Mountain	35	38	120	744	1,333	—	0	36	—	—	—	1	143	—	—
Arizona	—	0	0	—	—	—	0	8	—	—	—	0	10	—	—
Colorado	31	13	40	261	523	—	0	17	—	—	—	0	65	—	—
Idaho¶	N	0	0	N	N	—	0	3	—	—	—	0	22	—	—
Montana¶	3	6	40	141	169	—	0	10	—	—	—	0	30	—	—
Nevada¶	N	0	0	N	N	—	0	1	—	—	—	0	3	—	—
New Mexico¶	1	5	20	94	216	—	0	8	—	—	—	0	6	—	—
Utah	—	8	72	247	410	—	0	8	—	—	—	0	8	—	—
Wyoming¶	—	0	9	1	15	—	0	4	—	—	—	0	33	—	—
Pacific	—	0	4	12	20	—	0	18	—	—	—	0	23	—	—
Alaska	—	0	4	12	20	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	17	—	—	—	0	21	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	3	—	—	—	0	4	—	—
Washington	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	2	13	21	136	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	11	37	84	269	—	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 years 2007 and 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 April 26, 2008 (17th Week)

Reporting Area	All causes, by age (years)							P&I [†] Total	Reporting Area	All causes, by age (years)							P&I [†] Total
	All Ages	≥65	45-64	25-44	1-24	<1	All Ages			≥65	45-64	25-44	1-24	<1			
New England	496	359	87	24	13	6	44	S. Atlantic	1,245	793	282	88	37	44	86		
Boston, MA	123	73	26	7	8	2	14	Atlanta, GA	122	69	28	10	2	13	4		
Bridgeport, CT	27	16	9	1	1	—	1	Baltimore, MD	200	110	62	19	2	7	22		
Cambridge, MA	16	16	—	—	—	—	2	Charlotte, NC	106	70	23	6	5	2	6		
Fall River, MA	28	26	2	—	—	—	—	Jacksonville, FL	162	110	30	10	9	2	8		
Hartford, CT	51	35	9	5	1	1	3	Miami, FL	103	64	21	9	5	4	13		
Lowell, MA	29	19	6	4	—	—	3	Norfolk, VA	46	34	10	—	—	2	2		
Lynn, MA	8	7	1	—	—	—	1	Richmond, VA	49	30	15	1	1	2	—		
New Bedford, MA	22	17	3	—	—	2	1	Savannah, GA	71	51	11	6	3	—	8		
New Haven, CT	26	16	5	3	2	—	5	St. Petersburg, FL	64	48	11	2	1	2	2		
Providence, RI	32	24	7	1	—	—	1	Tampa, FL	208	135	45	16	6	6	16		
Somerville, MA	2	2	—	—	—	—	—	Washington, D.C.	98	60	24	7	3	4	3		
Springfield, MA	34	27	5	1	1	—	4	Wilmington, DE	16	12	2	2	—	—	2		
Waterbury, CT	36	31	4	1	—	—	3	E.S. Central	882	590	204	47	18	23	77		
Worcester, MA	62	50	10	1	—	1	6	Birmingham, AL	169	101	45	12	3	8	15		
Mid. Atlantic	2,323	1,628	489	129	48	28	144	Chattanooga, TN	109	74	27	4	1	3	12		
Albany, NY	47	35	8	1	2	1	2	Knoxville, TN	92	79	10	2	1	—	4		
Allentown, PA	33	27	5	1	—	—	1	Lexington, KY	73	54	15	3	—	1	10		
Buffalo, NY	69	48	17	1	1	2	2	Memphis, TN	140	89	37	10	2	2	13		
Camden, NJ	29	20	6	—	1	2	—	Mobile, AL	119	64	29	11	9	6	5		
Elizabeth, NJ	18	12	5	1	—	—	—	Montgomery, AL	34	23	9	1	—	1	5		
Erie, PA	61	50	9	2	—	—	3	Nashville, TN	146	106	32	4	2	2	13		
Jersey City, NJ	20	9	5	3	3	—	1	W.S. Central	1,517	946	380	117	37	37	77		
New York City, NY	1,054	725	238	64	16	11	55	Austin, TX	97	63	23	6	5	—	9		
Newark, NJ	64	28	22	9	3	2	3	Baton Rouge, LA	48	25	8	15	—	—	—		
Paterson, NJ	26	13	9	3	—	—	4	Corpus Christi, TX	55	32	19	4	—	—	4		
Philadelphia, PA	429	300	87	24	13	5	31	Dallas, TX	194	118	44	16	8	8	11		
Pittsburgh, PA [‡]	32	20	5	4	2	1	1	El Paso, TX	131	93	26	4	8	—	3		
Reading, PA	32	22	7	2	1	—	3	Fort Worth, TX	130	79	35	10	3	3	7		
Rochester, NY	133	110	19	2	2	—	16	Houston, TX	382	218	109	38	3	14	21		
Schenectady, NY	24	19	4	1	—	—	3	Little Rock, AR	86	48	30	4	3	1	1		
Scranton, PA	25	18	5	2	—	—	2	New Orleans, LA [†]	U	U	U	U	U	U	U		
Syracuse, NY	151	115	21	9	2	4	14	San Antonio, TX	157	112	29	7	3	6	6		
Trenton, NJ	34	22	10	—	2	—	—	Shreveport, LA	96	68	22	3	1	2	10		
Utica, NY	15	13	2	—	—	—	3	Tulsa, OK	141	90	35	10	3	3	5		
Yonkers, NY	27	22	5	—	—	—	—	Mountain	1,128	728	257	92	30	20	89		
E.N. Central	2,147	1,459	471	134	50	33	171	Albuquerque, NM	98	53	28	15	2	—	7		
Akron, OH	47	29	13	1	1	3	3	Boise, ID	31	21	7	2	1	—	2		
Canton, OH	43	30	13	—	—	—	6	Colorado Springs, CO	61	40	12	7	—	2	—		
Chicago, IL	324	200	81	31	7	5	25	Denver, CO	121	75	29	8	4	5	11		
Cincinnati, OH	110	72	24	7	5	2	22	Las Vegas, NV	305	196	84	21	3	1	29		
Cleveland, OH	238	168	51	12	4	3	5	Ogden, UT	26	15	7	2	2	—	1		
Columbus, OH	236	173	44	12	5	2	24	Phoenix, AZ	165	100	36	14	8	6	11		
Dayton, OH	135	97	24	12	2	—	14	Pueblo, CO	42	30	10	1	1	—	1		
Detroit, MI	147	93	37	9	4	4	8	Salt Lake City, UT	121	78	23	11	5	4	11		
Evansville, IN	58	42	13	1	1	1	3	Tucson, AZ	158	120	21	11	4	2	16		
Fort Wayne, IN	82	53	13	12	3	1	2	Pacific	1,746	1,183	375	104	47	37	145		
Gary, IN	17	8	9	—	—	—	—	Berkeley, CA	17	13	2	1	—	1	1		
Grand Rapids, MI	47	32	6	4	3	2	8	Fresno, CA	108	71	22	9	2	4	11		
Indianapolis, IN	204	136	44	14	6	4	19	Glendale, CA	20	17	1	1	1	—	4		
Lansing, MI	40	34	4	2	—	—	4	Honolulu, HI	75	54	14	5	1	1	10		
Milwaukee, WI	107	61	34	4	4	4	11	Long Beach, CA	59	38	11	7	2	1	3		
Peoria, IL	47	30	13	3	—	1	6	Los Angeles, CA	244	173	45	10	11	5	38		
Rockford, IL	51	40	6	2	3	—	2	Pasadena, CA	23	16	4	1	1	1	2		
South Bend, IN	41	32	7	2	—	—	1	Portland, OR	145	103	29	7	2	4	14		
Toledo, OH	109	79	23	5	2	—	6	Sacramento, CA	223	156	48	13	5	1	11		
Youngstown, OH	64	50	12	1	—	1	2	San Diego, CA	163	96	46	10	3	8	10		
W.N. Central	650	434	145	26	28	17	59	San Francisco, CA	111	72	28	7	2	2	8		
Des Moines, IA	45	33	12	—	—	—	6	San Jose, CA	201	145	41	9	3	3	8		
Duluth, MN	28	23	3	—	—	2	4	Santa Cruz, CA	33	16	12	4	—	1	—		
Kansas City, KS	15	9	5	—	—	1	1	Seattle, WA	134	87	30	10	5	2	9		
Kansas City, MO	123	84	30	5	2	2	18	Spokane, WA	72	57	9	2	2	2	9		
Lincoln, NE	49	36	7	2	3	1	3	Tacoma, WA	118	69	33	8	7	1	7		
Minneapolis, MN	71	42	15	3	6	5	4	Total	12,134**	8,120	2,690	761	308	245	892		
Omaha, NE	82	57	14	5	3	3	7										
St. Louis, MO	81	42	31	2	5	1	5										
St. Paul, MN	68	47	10	5	5	1	5										
Wichita, KS	88	61	18	4	4	1	6										

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.

The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format. To receive an electronic copy each week, send an e-mail message to listserv@listserv.cdc.gov. The body content should read *SUBscribe mmwr-toc*. Electronic copy also is available from CDC's Internet server at <http://www.cdc.gov/mmwr> or from CDC's file transfer protocol server at <ftp://ftp.cdc.gov/pub/publications/mmwr>. Paper copy subscriptions are available through the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone 202-512-1800.

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Data are compiled in the National Center for Public Health Informatics, Division of Integrated Surveillance Systems and Services. Address all inquiries about the *MMWR* Series, including material to be considered for publication, to Editor, *MMWR* Series, Mailstop E-90, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333 or to mmwrq@cdc.gov.

All material in the *MMWR* Series is in the public domain and may be used and reprinted without permission; citation as to source, however, is appreciated.

Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

References to non-CDC sites on the Internet are provided as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of these sites. URL addresses listed in *MMWR* were current as of the date of publication.