



MMWR™

Morbidity and Mortality Weekly Report

Weekly

January 31, 2003 / Vol. 52 / No. 4

Neurologic Impairment in Children Associated with Maternal Dietary Deficiency of Cobalamin — Georgia, 2001

During 2001, neurologic impairment resulting from cobalamin (vitamin B₁₂) deficiency was diagnosed in two children in Georgia. The children were breastfed by mothers who followed vegetarian diets*. This report summarizes the two cases and provides guidance for health-care providers on identifying and preventing cobalamin deficiency among breastfed infants of vegetarian mothers.

Case 1

During August 2001, a girl aged 15 months was hospitalized for lethargy and failure to thrive. She was born after a full-term pregnancy complicated by prolonged nausea and vomiting. She was breastfed for 8 months, but the extent (exclusivity) of breast milk consumed relative to other food was unknown. Her mother reported following a vegan diet during the preceding 7 years and took nutritional and vitamin supplements. The cobalamin content of the supplements was unknown. When the child was aged approximately 8 months, organic whole-grain cereals and fruit shakes were introduced, but she had a poor appetite and vomited regularly. Her parents became concerned about her growth and development, and she was evaluated by a pediatrician at age 15 months. The pediatrician diagnosed failure to thrive, developmental delay, and severe macrocytic anemia. The child was hospitalized, and cobalamin deficiency was diagnosed (marked elevation [not quantified] of urine methylmalonic acid; serum B₁₂:100 pg/mL [normal range: 210–911 pg/mL]) (Table 1).

*Vegetarian diets vary. For example, vegan diets generally do not include food of animal origin, whereas lacto-ovo-vegetarian diets include dairy products and eggs. In this report, the term “vegetarian” refers to all diets that limit food of animal origin.

The child received supplementary food by mouth and by nasogastric tube. She also received 2 mg of cyanocobalamin and 3 mg of hydroxocobalamin intramuscularly (IM) over 3 days. Three days later, she had partial complex seizures, which stopped without anticonvulsants. A brain MRI indicated global cerebral atrophy. The mother was treated with 1 mg of cobalamin IM.

At age 16 months, the child was seen in a genetics clinic to eliminate possible genetic causes of her neurologic deficiency. At age 28 months, her developmental skills ranged from 9 months for fine motor skills to 18 months for gross motor skills. Her expressive language was at 10 months, and her receptive language was at 12 months. At age 32 months, she had made developmental progress but continued to have developmental delays, especially in speech and language. She was prescribed daily sublingual cobalamin supplements.

INSIDE



New Feature

Recommended Childhood and Adolescent Immunization Schedule United States, 2002

- 64 Pneumococcal Conjunctivitis at an Elementary School — Maine, September 20–December 6, 2002
- 66 Lower Extremity Amputation Episodes Among Persons with Diabetes — New Mexico, 2000
- 68 Facilitating Influenza and Pneumococcal Vaccination Through Standing Orders Programs
- 69 Notices to Readers

The *MMWR* series of publications is published by the Epidemiology Program Office, 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* 2003;52:[inclusive page numbers].

Centers for Disease Control and Prevention

Julie L. Gerberding, M.D., M.P.H.
Director

David W. Fleming, M.D.
Deputy Director for Science and Public Health

Dixie E. Snider, Jr., M.D., M.P.H.
Associate Director for Science

Epidemiology Program Office

Stephen B. Thacker, M.D., M.Sc.
Director

Office of Scientific and Health Communications

John W. Ward, M.D.
Director

Editor, MMWR Series

Suzanne M. Hewitt, M.P.A.
Managing Editor, MMWR Series

David C. Johnson
(Acting) Lead Technical Writer/Editor

Jude C. Rutledge
Teresa F. Rutledge
Jeffrey D. Sokolow, M.A.
Writers/Editors

Lynda G. Cupell
Malbea A. Heilman
Visual Information Specialists

Quang M. Doan
Erica R. Shaver
Information Technology Specialists

Division of Public Health Surveillance and Informatics

Notifiable Disease Morbidity and 122 Cities Mortality Data

Robert F. Fagan
Deborah A. Adams
Felicia J. Connor
Lateka Dammond
Patsy A. Hall
Pearl C. Sharp

Case 2

During March 2001, a boy aged 30 months with failure to thrive and mild global developmental delays was taken to a genetics clinic. He was born after a full-term pregnancy and breastfed exclusively until age 9 months. The mother reported following a vegetarian diet during the preceding 20 years, with negligible amounts of meat, fish, and dairy products. She reported intermittent intake of a vitamin supplement (TwinLab® Stress B Complex Caps, containing 250 mcg of "cobalamin concentrate," according to the label). When the boy was age 9 months, the health-care provider and his parents became concerned about the child's growth and development (Table 1). His diet was supplemented with fruit and dry cereals to improve growth. When this was unsuccessful, he underwent a frenectomy at age 11 months to free tongue movements and improve coordination of swallowing and chewing. Despite this intervention, growth was inadequate. His diet was supplemented with soy- and cow's milk-based formulas. He tolerated neither and started a multigrain non-dairy formula (Multigrain Milk®) in addition to fruit, vegetables, chicken, an unknown vitamin supplement, and a product called Greens Plus® (no cobalamin content listed on label). Because of poor motor and speech development at age 11 months, the child was evaluated by a developmental pediatrician, who ordered genetic and metabolic studies and prescribed speech, occupational, and physical therapies. The child had persistent elevation of urine methylmalonic acid on three occasions but received no treatment for cobalamin deficiency until after the third measurement, which was ordered for a genetics clinic evaluation.

After diagnosis of cobalamin deficiency was confirmed at the genetics clinic (moderate peak [not quantified] of urine methylmalonic acid; serum B₁₂: 149 pg/mL) (Table 1), the child was treated with 1 mg of hydroxocobalamin IM (2 weeks apart) and 1 mg sublingual doses daily. The mother also was treated with 1 mg of oral cobalamin daily. At the genetics clinic visit, the child had no frank neurologic signs but exhibited delays in speech. He experienced catch-up development in motor skills and completed physical therapy but continued speech, language, and occupational therapies. Approximately 6 months after beginning treatment, the child exhibited slight speech and fine motor skill delays but had age-appropriate gross motor skills. The parents reported that the child was administered a 1 mg cobalamin sublingual preparation every other day.

Reported by: R Muhammad, MD, P Fernhoff, MD, Dept of Pediatrics, Emory Univ, Atlanta, Georgia. S Rasmussen, MD, Div of Birth Defects and Developmental Disabilities; B Bowman, PhD, Div of Diabetes Translation; K Scanlon, PhD, L Grummer-Strawn, PhD, L Kettel Khan,

TABLE 1. Metabolic studies* and anthropometric measurements† of two children with cobalamin deficiency and the mother of one of the children — Georgia, 2001

Tests/Measurements	Patient 1, female	Patient 2, male	Mother of patient 2 [§]
Metabolic studies			
Age	15 months	30 months	38 years
Urine methylmalonic acid	Marked elevation	Moderate peak	Mildly increased
Urine methylcitrate	Marked elevation	Not detected	—
Plasma homocysteine	8.2 $\mu\text{mol/L}$ (3.3–8.3)	12.4 $\mu\text{mol/L}$ (3.3–8.3)	13.5 $\mu\text{mol/L}$ (7.7–13.3)
Serum B ₁₂	100 pg/mL (210–911)	149 pg/mL (210–911)	253 pg/mL (210–911)
Serum folate	30 $\mu\text{g/mL}$ (2.8–40)	12.8 $\mu\text{g/mL}$ (5.4–40)	Normal
Red cell folate	584 ng/mL (145–903)	452 ng/mL (280–903)	Normal
Hematocrit	18.6% (33–39)	32% (33–39)	—
Mean corpuscular volume	115.7 fL (77–86)	103.2 fL (77–86)	—
Brain MRI	Global cerebral atrophy	—	—
Anthropometric measurements¶			
Age at first measurement	15 months	9 months	—
Length-for-age	69 cm (2.5 cm below the 3rd percentile)	72 cm (54th percentile)	—
Weight-for-age	6.34 kg (2.2 kg below the 3rd percentile)	5.95 kg (1.5 kg below the 3rd percentile)	—
Head circumference	43 cm (0.5 cm below the 3rd percentile)	39.5 cm (3.1 cm below the 3rd percentile)	—
Age at second measurement	16 months	30 months	—
Length-for-age	64.6 cm (7.5 cm below the 3rd percentile)	85 cm (3rd percentile)	—
Weight-for-age	6.34 kg (2.4 kg below the 3rd percentile)	12.5 kg (24th percentile)	—
Head circumference	41.7 cm (2 cm below the 3rd percentile)	49.5 cm (56th percentile)	—

* Reported laboratory qualitative or quantitative values and laboratory-specific reference ranges in parentheses.

† First measurement for patient 1 is from the medical chart at the hospital; the second is from the medical chart at the genetics clinic. First measurement for patient 2 is from the medical chart at the pediatrician's office; the second is from the medical chart at the genetics clinic.

§ No metabolic studies performed for mother of patient 1 before treatment.

¶ Derived from CDC growth charts (1).

PhD, Div of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion; M Jefferds, PhD, EIS Officer, CDC.

Editorial Note: The most common cause of cobalamin deficiency in infants and young children is maternal dietary deficiency (2), which generally manifests in breastfed infants at age 4–8 months (3). This deficiency is difficult to diagnose because of nonspecific symptoms (4). The two children described in this report had cobalamin deficiency and manifested multiple symptoms of undernutrition, particularly growth failure. After treatment for cobalamin deficiency, both children showed marked improvement in cobalamin status and development. In some cases, irreversible neurologic damage results from prolonged cobalamin deficiency, but the extent and degree of disability depends on the deficiency severity and duration (4). Seizures after treatment have been reported previously in children with cobalamin deficiency, although whether these are secondary to the treatment or to the underlying condition is unknown (5).

The prevalence of cobalamin deficiency is unknown for children aged <4 years. No clinical practice guidelines exist for diagnosing cobalamin deficiency in young children. Methylmalonic acid is a sensitive and specific indicator of cobalamin deficiency; holotranscobalamin II, total homocysteine, and serum B₁₂ also are useful indicators (2,4,6). Macrocytic anemia and other hematologic indices are not appropriate screening tools (4).

Persons who follow vegetarian diets should ensure adequate cobalamin intake. The only reliable unfortified sources are animal products, including meat, dairy products, and eggs. Most naturally occurring plant sources of cobalamin are not bioavailable; however, plant foods fortified with cobalamin, such as some cereals, meat analogs, soy or rice beverages, and nutritional yeast (7), can be reliable and regular sources. The content of fortified food is usually listed on the food label and ingredient list. Fortified food and supplements made from cobalamin (e.g., cyanocobalamin) provide cobalamin that is physiologically active in humans (6). Products whose labels do not specify cobalamin and list only vitamin B₁₂ might include nonbioavailable sources. Vegetarians, particularly women during pregnancy and lactation, should be knowledgeable about the cobalamin content of their food or seek nutritional advice. Few of the common infant-toddler cereals are fortified with cobalamin (8). Breast milk from mothers with adequate nutritional status, infant formula, cow's milk, or a cobalamin-fortified soy or rice beverage provide a cobalamin source for infants and children. If it is not possible to acquire the recommended dietary intake of cobalamin through food, a daily supplement should be taken that contains at least the recommended dietary intake of cobalamin from a reliable source (Table 2).

Health-care providers should be vigilant about the potential for cobalamin deficiency in breastfed children of vegetarian mothers. Potential cobalamin deficiency should be

TABLE 2. Recommended intake of vitamin B₁₂, by population subgroup

Population subgroup	µg/day
Infants aged <6 months*	0.4
Infants aged 7–12 months*	0.5
Children aged 1–3 years†	0.9
Children aged 4–8 years†	1.2
Children aged 9–13 years†	1.8
Children aged 14–18 years†	2.4
Adults aged ≥19 years†	2.4
Pregnant women aged 14–50 years†	2.6
Lactating women aged 14–50 years†	2.8

* Adequate intake.

† Recommended dietary allowance.

Source: Institute of Medicine (9).

included in the differential diagnosis when assessing young children of vegetarian mothers who have symptoms consistent with cobalamin deficiency, including failure to thrive, developmental delay, neurologic/psychiatric manifestations, and hematologic abnormalities (4).

Health-care providers who care for mothers in the preconceptional, prenatal, and postpartum periods and their young children should ask pregnant and lactating mothers about their diets to identify those who are vegetarians. Pregnant and lactating women should eat foods rich in cobalamin or take a daily supplement containing at least the recommended dietary intake of cobalamin (Table 2). For those eating no or very limited food of animal origin or a known cobalamin source, a cobalamin assessment is indicated. If lactating mothers are cobalamin deficient, their infants should be evaluated for cobalamin deficiency and treated appropriately.

References

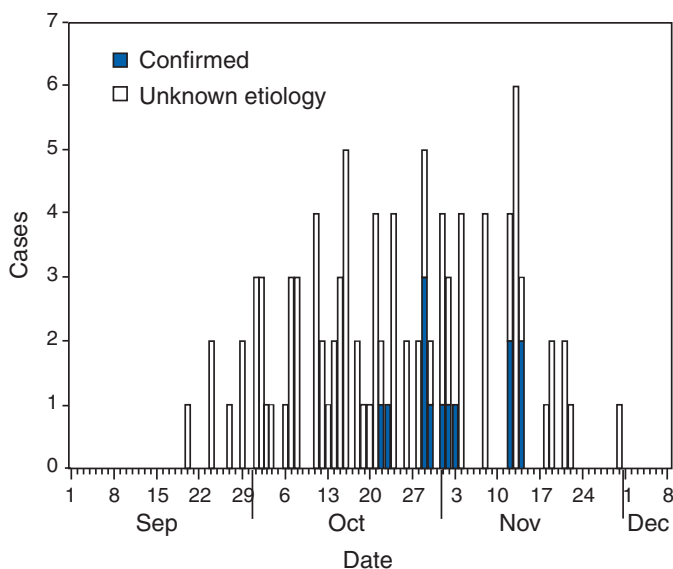
- Kuczmariski RJ, Ogden CL, Guo SS, et al. 2000 CDC growth charts for the United States: methods and development. *Vital Health Stat* 2000;1(246).
- Rosenblatt DS, Whitehead VM. Cobalamin and folate deficiency: acquired and hereditary disorders in children. *Semin Hematol* 1999;36:19–34.
- Allen LH. Vitamin B₁₂ metabolism and status during pregnancy, lactation, and infancy. In: Allen L, King J, Lonnerdal B, eds. *Nutrient regulation during pregnancy, lactation, and infant growth*. New York, New York: Plenum Press, 1994:173–86.
- Rasmussen SA, Fernhoff PM, Scanlon KS. Vitamin B₁₂ deficiency in children and adolescents. *J Pediatr* 2001;138:10–7.
- Grattan-Smith PJ, Wilcken B, Procopis PG, Wise GA. The neurological syndrome of infantile cobalamin deficiency: developmental regression and involuntary movements. *Move Disord* 1997;12:39–46.
- Hermann W, Geisel J. Vegetarian lifestyle and monitoring vitamin B₁₂ status. *Clin Chim Acta* 2002;326:47–59.
- Messina V, Mangels AR. Considerations in planning vegan diets: children. *J Am Diet Assoc* 2001;101:661–9.
- Bowes AD. *Bowes and Church's Food Values of Portions Commonly Used*, 17th ed. Philadelphia, Pennsylvania: Lippincott Williams & Wilkins Publishers, 1998.
- Institute of Medicine. *Vitamin B12*. In: *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline*. Washington, DC: National Academy Press, 1998:306–56.

Pneumococcal Conjunctivitis at an Elementary School — Maine, September 20–December 6, 2002

On October 18, 2002, the nurse at an elementary school in Westbrook, Maine, notified the Maine Bureau of Health (MBOH) of an increase in the number of students with conjunctivitis. During September 23–October 18, a total of 31 students in kindergarten and in first and second grades either were reported by parents to the nurse as having conjunctivitis or had conjunctivitis diagnosed by the nurse at school. Conjunctival swab cultures from five (38%) of the 13 students who were tested initially grew *Streptococcus pneumoniae*. This report documents additional cases in the community and summarizes preliminary results of the investigation of this outbreak, which indicated that the outbreak was caused by the same nontypeable strain of pneumococcus that caused an outbreak of conjunctivitis among college students in New Hampshire during January–March 2002 (1). This is the first time that this strain has been reported as the cause of a conjunctivitis outbreak among schoolchildren. Health-care providers and public health officials should be aware that nontypeable *S. pneumoniae* can cause outbreaks of conjunctivitis in school-age children and college students; outbreaks should be reported to state health departments and CDC.

School nurses and child care center managers were asked to report to MBOH any children or staff member who had onset of conjunctivitis during September 20–December 6. Reported episodes of conjunctivitis were considered culture-confirmed if *S. pneumoniae* was isolated from eye secretions. A questionnaire to identify children and family members with conjunctivitis was sent home with all children attending the index elementary school. Among 361 students, 101 (28%) (median age: 6 years; range: 5–8 years) had at least one episode of conjunctivitis, and 11 (55%) of 20 students tested had an episode of culture-confirmed pneumococcal conjunctivitis (Figure). The attack rate was highest among first-grade students (51 [38%] of 136), followed by morning kindergarten (20 [29%] of 70), second-grade (28 [26%] of 108), and afternoon kindergarten students (two [4%] of 47). Among school staff, three (13%) of 23 classroom teachers and three (15%) of 20 other staff members had conjunctivitis during the study period. Of 709 family members who did not attend the school, 37 (5%) (median age: 4 years; range: <1–42 years) reported conjunctivitis; 28 (76%) of the 37 were household contacts of students who were ill previously. Of 221 household contacts of students with conjunctivitis, 28 (13%) reported having conjunctivitis with onset after the student's illness.

FIGURE. Number* of culture-confirmed pneumococcal conjunctivitis cases and reported cases of unknown etiology among students at an elementary school, by date of onset — Maine, September 20–November 30, 2002



* n = 101.

A second questionnaire was distributed to all students in selected classrooms. Among 65 students with conjunctivitis who responded, the symptoms reported most commonly were red eyes (55 [85%]); itchy, painful, or burning eyes (45 [69%]); crusty eyes in the morning (42 [65%]); grey or yellow discharge from eyes (42 [65%]); and swelling of the eyelids (30 [46%]). Redness in both eyes was reported for 35 (64%) of the 55 students who had red eyes. The median duration of symptoms was 3 days (range: 1–14 days). Of the 65 students, 53 (82%) missed school during their illness, with a median absence from school of 2 days (range: 1–7 days). Symptoms of systemic pneumococcal infections were not identified in any of the students or contacts.

School nurses and child care staff in the community reported an additional 77 students who had conjunctivitis with onset during September 20–December 2, including 53 (4%) of 1,313 students, ranging from kindergarten through grade 12 at four schools, and 24 (9%) of 271 children attending three community child care centers. Among the 53 students with conjunctivitis at other schools, 10 (19%) had a family member at the index school, and seven (29%) of 24 ill child care attendees had a sibling at the index school.

Of 20 conjunctival specimens collected from students at the index school and 15 collected from students at other schools, 11 (55%) and five (33%), respectively, grew *S. pneumoniae*. All seven isolates that were tested for

antimicrobial susceptibility were resistant to erythromycin but susceptible to penicillin and third-generation cephalosporins. Nine isolates were sent to CDC for serotyping; eight could not be typed by using CDC antisera, and one isolate from a conjunctival swab collected from an index school student was serotype 38. Nontypeable isolates, but not the serotype 38 isolate, produced identical electrophoretic patterns by pulsed field gel electrophoresis to pneumococcal isolates from an outbreak of conjunctivitis on a college campus in New Hampshire during January–March 2002 (1). Viral cell cultures of specimens from 30 students were negative for adenovirus (i.e., no cytopathic effect in cell culture was identified after 10 days' incubation).

To prevent transmission at the school, students and teachers were encouraged to wash hands frequently with soap and water and to clean and limit the sharing of objects in the classroom. In addition, symptomatic children were excluded from school. Implementing prevention measures in this setting was difficult. Teachers reported that increased hand washing at school was disruptive to classes, and excluding symptomatic students from school placed a burden on parents. One student from the index school was reported as having conjunctivitis during Thanksgiving recess (November 25–29), and no children were reported with conjunctivitis after the recess. Five students at other schools were reported to have had conjunctivitis after the recess. Surveillance for additional cases of conjunctivitis at area schools is continuing.

Reported by: C Leighton, Westbrook School District, Westbrook; D Piper, MS, NorDx Laboratories, Scarborough; J Gunderman-King, V Rea, MPH, K Gensheimer, MD, J Randolph, R Danforth, L Webber, E Pritchard, MS, G Beckett, MPH, Maine Bur of Health. V Shinde, MPH, R Facklam, PhD, C Whitney, MD, Div of Bacterial and Mycotic Diseases, National Center for Infectious Diseases; N Hayes, MD, Div of Applied Public Health Training, Epidemiology Program Office; B Flannery, PhD, EIS Officer, CDC.

Editorial note: This report describes an outbreak in an elementary school of conjunctivitis attributed to a nontypeable strain of *S. pneumoniae*. Nontypeable pneumococci have been implicated previously in outbreaks of conjunctivitis among university students (1,2) and military recruits (2,3) and in sporadic cases of conjunctivitis (4). This is the first report of an outbreak of conjunctivitis caused by nontypeable pneumococci involving young children, with documented transmission to persons in the community outside the institutional setting. Although children were not seriously ill, the outbreak resulted in lost school days for ill children and in economic losses and inconvenience for parents of ill children for health-care provider visits and missed work.

The effectiveness of prevention measures for interrupting the transmission of conjunctivitis is not known. Person-to-person transmission of the outbreak strain is believed to occur through contact with eye secretions or respiratory droplets. In schools, ensuring regular hand washing might improve hygiene among students but might not be sufficient to stop transmission of a highly contagious organism, especially one transmitted through respiratory droplets. Use of alcohol-based hand gels has been shown to prevent the transfer of pathogens in health-care settings (5), but their use in schools has not yet been evaluated. Although the effectiveness of excluding students with symptoms of conjunctivitis from school to limit a recognized outbreak is not known, such exclusion is recommended during the acute phase of symptoms (6). In the absence of clinical signs of systemic infection, the American Academy of Pediatrics recommends readmission of school children with conjunctivitis after therapy is initiated (7). Although antibiotic eye drops are prescribed commonly as empiric therapy for conjunctivitis, the effect of topical antibiotic therapy on transmission of pneumococcal conjunctivitis is unknown. The results from one trial indicated that persons treated with bacitracin/polymyxin ophthalmic ointment were more likely to have eradication of eye pathogens at 3–5 days than persons treated with a placebo (8).

Health-care providers who see a substantial increase in visits for conjunctivitis should consider obtaining bacterial and viral cultures of eye secretions to determine the etiology. CDC is interested in evaluating the effectiveness of control measures and the usefulness of topical antibiotic therapy in future outbreaks caused by *S. pneumoniae*. Outbreaks of *S. pneumoniae* conjunctivitis should be reported to state health departments, which may contact CDC, telephone 404-639-2215, for additional assistance.

Acknowledgments

This report is based on data contributed by J Flaherty, P Sanfino, L Allen, E Greaterex, D Bruns, Westbrook School District; A Hebert, T Levesque, D Porter, Westbrook; local health-care providers, Cumberland County, Maine. J Elliott, PhD, D Jackson, MS, R Besser, MD, Div of Bacterial and Mycotic Diseases; W Trick, MD, S Fridkin, MD, Div of Healthcare Quality Promotion, National Center for Infectious Diseases, CDC.

References

1. CDC. Outbreak of bacterial conjunctivitis at a college—New Hampshire, January–March, 2002. *MMWR* 2002;51:205–7.
2. Shayegani M, Parsons LM, Gibbons WE Jr, Campbell D. Characterization of nontypable *Streptococcus pneumoniae*-like organisms isolated from outbreaks of conjunctivitis. *J Clin Microbiol* 1982;16:8–14.
3. Ertugrul N, Rodriguez-Barradas MC, Musher DM, et al. BOX-polymerase chain reaction-based DNA analysis of nonserotypeable *Streptococcus pneumoniae* implicated in outbreaks of conjunctivitis. *J Infect Dis* 1997;176:1401–5.
4. Barker JH, Musher DM, Silberman R, et al. Genetic relatedness among nontypeable pneumococci implicated in sporadic cases of conjunctivitis. *J Clin Microbiol* 1999;37:4039–41.
5. CDC. Guideline for hand hygiene in health-care settings: recommendations of the healthcare infection control practices advisory committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. *MMWR* 2002;51(No. RR-16).
6. Chin J, ed. *Control of Communicable Diseases Manual*, 17th ed. Washington, DC: American Public Health Association, 2000:121.
7. American Academy of Pediatrics. *School Health*. In: Pickering LK, ed. 2000 Red Book: Report of the Committee on Infectious Diseases, 25th ed. Elk Grove Village, Illinois: American Academy of Pediatrics, 2000.
8. Gigliotti F, Hendley JO, Morgan J, et al. Efficacy of topical antibiotic therapy in acute conjunctivitis in children. *J Pediatr* 1984;104:623–6.

Lower Extremity Amputation Episodes Among Persons with Diabetes — New Mexico, 2000

Lower extremity amputation (LEA) is one of the most disabling complications of diabetes (1). Lower extremity problems tend to recur among persons because of underlying complications, including the loss of “protective” sensation (2,3). To define the burden of LEA among persons with diabetes in New Mexico, the New Mexico Diabetes Prevention and Control Program (DPCP) analyzed data from the Hospital Inpatient Discharge Database (HIDD) and the Santa Fe Indian Hospital (SFIH) from 2000 by linking hospital discharges to persons to create “episodes” of LEA. This report summarizes the findings of that analysis, which indicated that the age-adjusted rate of LEA by episode was approximately 3.5 times higher for American Indians (AIs) (11.4 per 1,000 persons with diabetes) than for non-Hispanic whites (3.3). To address this disparity, DPCP is collaborating with the Indian Health Service (IHS) to determine the needs for foot-care resources and education in AI communities.

HIDD is maintained by the New Mexico Health Policy Commission and includes data on discharges from all nonfederal licensed hospitals in the state. Persons with at least one discharge from a hospital in which a nontraumatic LEA (*International Classification of Diseases, Ninth Revision, Clinical Modifications* [ICD-9-CM] codes 84.10–84.19) was performed during 2000 were identified; traumatic LEA codes 895–897 were excluded. Diabetes-related LEA discharges were identified by ICD-9-CM codes 250.0–250.9 listed at the time of LEA or any other hospitalization during the calendar year. Discharges were linked by unique identifiers, allowing analyses at the individual level to distinguish between persons who had LEA hospitalizations for treatment of the same lesion and persons who had a new and potentially preventable lesion. For multiple discharges, an interval between discharge and

readmission of ≤ 14 days was considered a single episode; an interval of >14 days was considered a separate episode. For persons with multiple LEAs within an episode, the highest level of amputation was used; LEAs were categorized as minor (i.e., at or below the foot) or major (i.e., above the foot). These same methods were used with discharge data provided by SFIH, a federal hospital operated by IHS, to supplement HIDD data. HIDD does not include LEAs performed at IHS hospitals. Race/ethnicity of patients in HIDD was self-reported to hospitals. All patients from SFIH were classified as AIs.

The number of persons with diabetes at risk for LEA in 2000 was estimated by multiplying race/ethnicity-specific prevalence rates from the Behavioral Risk Factor Surveillance System (BRFSS) by the appropriate New Mexico adult population for that year according to the U.S. Bureau of the Census. BRFSS is a state-based, random-digit-dialed telephone survey of the noninstitutionalized U.S. population aged ≥ 18 years. Because the sample size of AIs in BRFSS is small, estimates of AIs with diabetes were based on IHS outpatient data for the same year. The IHS outpatient database contains clinical and demographic information from IHS and tribal health-care facilities in New Mexico. Unique patient identifiers were used to exclude duplicate records, and geographic location was determined according to where patients received services most recently. BRFSS data for 1998–2000 were aggregated to estimate the age-specific diabetes prevalence for non-Hispanic whites and Hispanics. Age adjustment was performed by using the direct method and the 2000 U.S. standard population (4).

In 2000, a total of 307 persons with diabetes had 354 LEA episodes; 265 persons had a single episode and 42 had two or more episodes. The median age of persons was 66 years (range: 28–92 years) (95% confidence interval [CI] = 64.6–67.4). Among the episodes, 193 (55%) were minor, and 161 (45%) were major.

The incidence of LEA was twice as high for men as for women (4.5 episodes per 1,000 persons with diabetes versus 2.1; $p < 0.05$) and increased with age (Table). The age-adjusted LEA rate was 3.5 times higher for AIs than for non-Hispanic whites (11.4 versus 3.3; $p < 0.05$). The difference in rates was not statistically significant for non-Hispanic whites and Hispanics (3.3 versus 2.6). Overall, the age-adjusted LEA rate was 3.4 per 1,000 persons with diabetes (95% CI = 2.9–3.9).

Reported by: H Krapfl, MS, D Gohdes, MD, New Mexico Dept of Health. NR Burrows, MPH, Div of Diabetes Translation, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: Approximately one third of persons with diabetes are at high risk for LEA (2,3). Risk factors for LEA include having had a previous ulcer or amputation. Foot

TABLE. Number and rate* of lower extremity amputation (LEA) episodes† among persons with diabetes, by selected characteristics — New Mexico, 2000

Characteristic	No. LEA episodes	LEA rate	(95% CI [§])
Sex			
Men	223	4.5	(3.8– 5.1)
Women	131	2.1	(1.5– 2.7)
Age group (yrs)			
18–44	31	2.2	(1.5– 3.0)
45–64	123	3.5	(2.9– 4.1)
65–74	120	6.1	(5.0– 7.2)
≥ 75	80	7.9	(6.2– 9.6)
Race/Ethnicity[¶]			
White, non-Hispanic	104	3.3	(2.4– 4.2)
Hispanic	158	2.6	(2.0– 3.3)
American Indian	59	11.4	(9.7–13.1)
Total	354	3.4	(2.9– 3.9)

* Per 1,000 persons with diabetes. All rates are age adjusted to the 2000 U.S. standard population (except for age-specific rates).

† An episode is a discharge for an LEA that occurs for a person. For multiple discharges, an interval between a discharge and readmission of ≤ 14 days is considered a single episode; an interval of >14 days is considered a separate episode.

§ Confidence interval.

¶ Racial/ethnic groups too small for meaningful analysis were not included; therefore, episodes do not add up to total.

Source: Hospital Inpatient Discharge Database, and the Santa Fe Indian Hospital.

ulcers usually precede amputation and are caused by several underlying problems, including neuropathy and reduced circulation, which lead to injury and poor healing (1). LEA surveillance is conducted typically by analyzing hospital discharges without knowing how many persons are represented (5–8). Conducting surveillance of LEAs at the individual level helps to monitor the success of LEA prevention efforts. Similar to other studies of LEA among persons with diabetes, the findings in this report indicate that the rate of LEA is higher among men than among women (5–8) and higher among non-Hispanic whites than among Hispanics (5). AIs had the highest rate of LEAs among the groups analyzed. Age-adjusted rates of LEA found in this analysis were lower than those reported previously in other areas (5,6,8) because persons with multiple discharges were counted only once.

The findings in this report are subject to at least six limitations. First, the number of LEA discharges and persons undergoing LEAs probably were underestimated because Veterans Health Administration data, which contain a high percentage of persons aged ≥ 65 years with a high prevalence of diabetes, and complete IHS data could not be obtained. However, only two additional IHS facilities exist that perform LEAs in New Mexico. Second, race/ethnicity for 24 persons in HIDD were classified as “unknown” or “other”, which could influence LEA rates among racial/ethnic groups. Third, the number of procedures that occurred among persons with diabetes might have been underestimated because coexisting

diabetes was not always coded on hospital discharge records. Fourth, denominator data were based on a self-reported diagnosis of diabetes; however, diagnosis of diabetes has been reported accurately in BRFSS (9). Because this denominator data were based on telephone surveys and some areas in New Mexico have low telephone coverage, these areas were underrepresented in BRFSS. Fifth, because of the small sample size of AIs in BRFSS, IHS outpatient data were used to determine diabetes prevalence among AIs. Using survey and outpatient data might introduce some bias; however, this bias does not account completely for the large difference in rates between AIs and other racial/ethnic groups because of the likely underestimation of LEAs among AIs. Finally, the definition of an episode for a person readmitted ≤ 14 days of the initial hospitalization might be arbitrary because surgical philosophies differ regarding how much healing time should be allowed before further amputation. However, in the absence of data, 14 days was considered a conservative time interval for a lesion to heal, and the majority of repeat hospitalizations within 14 days probably were related to the original lesion.

Regular comprehensive foot examinations are important for early detection of foot problems, and efforts to prevent recurring problems can be effective in reducing the number of persons with diabetes who undergo LEA (1). The New Mexico DPCP collaborates with health-care providers and professionals to provide standardized practice guidelines and provider education in several areas related to diabetes, including foot care. During this process, DPCP has become a key partner in "New Mexico Healthcare Takes on Diabetes," a broad collaborative effort of New Mexico's health-care professionals, health plans, and the New Mexico Medical Review Association. Radio messages on foot care also are broadcast in English, Spanish, and Navajo.

As a result of the findings of this study, DPCP is collaborating with the Albuquerque Area IHS. A survey of AI communities was conducted on various topics, including 1) level of knowledge about foot care among health-care providers, community health representatives, and patients; 2) access to a podiatrist; and 3) barriers encountered in providing foot care. As part of this process, DPCP is exploring surveillance at other IHS facilities. Continued surveillance of LEA episodes will be useful in expanding and tailoring future interventions and in tracking the success of prevention efforts.

References

1. Reiber GE, Boyko EJ, Smith DG. Lower extremity foot ulcers and amputation in individuals with diabetes. In: Harris MI, Cowie CC, Stern MP, et al., eds. *Diabetes in America*, 2nd ed. Washington, DC: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, 1995; DHHS publication no. 95-1468.

2. Rith-Najarian S, Stolusky T, Gohdes D. Identifying diabetic patients at high risk for lower extremity amputations in a primary health care setting. *Diabetes Care* 1992;15:1386-9.
3. Manes N, Papazoglou E, Sossidou K, et al. Prevalence of diabetic neuropathy and foot ulceration: identification of potential risk factors—a population-based study. *Wounds* 2002;14:11-5.
4. Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. Hyattsville, Maryland: U.S. Department of Health and Human Services, CDC, National Center for Health Statistics, 2001; Healthy People Statistical Notes, no. 20.
5. CDC. Hospital discharge rates for nontraumatic lower extremity amputation by diabetes status, 1997 — United States, MMWR 2001;50:954-8.
6. CDC. Lower extremity amputations among persons with diabetes mellitus—Washington, 1988. MMWR 1991;40:737-9.
7. CDC. Diabetes-related amputations of lower extremities in the Medicare population—Minnesota, 1993-1995. MMWR 1998;47:649-52.
8. Most RS, Sinnock P. The epidemiology of lower extremity amputation in diabetic individuals. *Diabetes Care* 1983;6:87-91.
9. Nelson DE, Holtzman D, Bolen J, Stanwyck CA, Mack KA. Reliability and validity of measures from the Behavioral Risk Factor Surveillance System (BRFSS). *Soz Präventivmed* 2001;46:S3-S42.

Notice to Readers

Facilitating Influenza and Pneumococcal Vaccination Through Standing Orders Programs

Influenza and pneumococcal vaccines are underused for persons in the United States aged ≥ 65 years (66% receive influenza vaccine and 55% pneumococcal vaccine) (1), even among patients in nursing homes (68% for influenza and 38% for pneumococcal vaccine) (2). Systematic literature reviews by the Task Force on Community Preventive Services and the Southern California Evidence-Based Practice Center-RAND have shown that standing orders programs improve vaccination rates (3,4). Standing orders programs authorize nurses and pharmacists, where allowed by state law, to administer vaccinations according to an institution- or physician-approved protocol without the need for a physician's examination or direct order. Several studies have shown improved influenza and pneumococcal vaccination rates through standing orders programs specifically in long-term care facilities (LTCFs) and hospitals (5,6). Based on the strength of available evidence, the Advisory Committee on Immunization Practices recommends the use of standing orders programs in both outpatient and inpatient settings (7).

As a result of this recommendation, on October 2, 2002, the Centers for Medicare and Medicaid published an interim final rule (8) that removes the physician signature requirement for influenza and pneumococcal vaccinations from the Conditions of Participation for Medicare and Medicaid participating hospitals, LTCFs, and home health agencies (HHAs). The Conditions of Participation for these types of

facilities require orders for drugs and biologicals to be in writing and signed by the practitioner(s) responsible for the care of the patient, with the exception of influenza and pneumococcal polysaccharide vaccines, which can be administered per physician-approved facility or agency policy after an assessment for contraindications. State agencies should be informed about this change so that appropriate policy revisions can be implemented (9).

This modification will improve access to influenza and pneumococcal vaccination in hospitals, LTCFs, and HHAs as allowed by state law, consistent with standing orders programs already allowed in community and physician's outpatient office settings. If implemented rapidly, this change will facilitate achievement of the national health objective for 2010 of vaccinating at least 90% of the institutionalized and noninstitutionalized population aged ≥ 65 years (10).

References

1. National Center for Health Statistics. Early release of selected estimates from the 2002 National Health Interview Surveys. Available at <http://www.cdc.gov/NCHS/about/major/nhis/released200209.htm>.
2. Buikema AR, Singleton JA, Sneller VP, Strikas RA. Influenza and pneumococcal vaccination in nursing homes, U.S., 1995–1999. [Abstract]. Presented at the 35th National Immunization Conference. Atlanta, Georgia; 2001.
3. Task Force on Community Preventive Services. Recommendations regarding interventions to improve vaccination coverage in children, adolescents, and adults. *Am J Prev Med* 2000;18:92–140.
4. Health Care Financing Administration. Evidence report and evidence-based recommendations: interventions that increase the utilization of Medicare-funded preventive service for persons age 65 and older. Baltimore, Maryland: U.S. Department of Health and Human Services, Health Care Financing Administration, October 1999; HCFA publication no. HCFA-02151.
5. Crouse BJ, Nichol K, Peterson DC, Grimm MB. Hospital-based strategies for improving influenza vaccination rates. *J Fam Prac* 1994;38:258–61.
6. Stevenson KB, McMahon JW, Harris J, Hilman JR, Helgerson SD. Increasing pneumococcal vaccination rates among residents of long-term-care facilities: provider-based improvement strategies implemented by peer-review organizations in four western states. *Infect Control Hosp Epidemiol* 2000;21:705–10.
7. CDC. Use of standing orders programs to increase adult vaccination rates: recommendations of the Advisory Committee on Immunization Practices. *MMWR* 2000;49(No. RR-1).
8. Centers for Medicare and Medicaid Services. Medicare and Medicaid programs: conditions of participation: immunization standards for hospitals, long-term care facilities, and home health agencies. Washington, DC: U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2002. Available at <http://www.cms.gov/providerupdate/regs/cms3160fc.pdf>.
9. Centers for Medicare and Medicaid Services, Center for Medicaid and State Operations. Program memorandum: change in requirement for signed physician's order for influenza and pneumonia vaccine. Washington, DC: U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2002; publication no. S&C-03-02.
10. U.S. Department of Health and Human Services. *Healthy people 2010*, 2nd ed. With understanding and improving health and objectives for improving health (2 vols). Washington, DC: U.S. Department of Health and Human Services, 2000.

Notice to Readers

National Child Passenger Safety Week, February 9–15, 2003

In 2001, a total of 1,579 children aged <15 years died as occupants in motor-vehicle crashes in the United States, an average of 30 deaths per week (1). National Child Passenger Safety Week, February 9–15, 2003, will focus on efforts to improve the safety of children riding in motor vehicles, especially the importance of appropriate restraints such as child safety seats for infants and toddlers, booster seats for children aged 4–8 years who have outgrown their forward facing seats, and safety belts for children who have outgrown their booster seats (2). Additional steps to improve the safety of children riding in vehicles include placing children in the back seat when possible and avoiding placing children in rear-facing child seats in the front seat of vehicles equipped with passenger-side airbags (1).

The proper restraint of child passengers is improved through the combination of increased public education, strong child passenger safety laws, and rigorous enforcement of these laws. Additional information about National Child Passenger Week activities and child passenger safety is available from the National Highway Traffic Safety Administration (NHTSA), Office of Communications and Outreach, 400 Seventh St., SW, NTS-21, Washington, DC 20590; fax 202-493-2062, <http://www.nhtsa.dot.gov>; and from CDC at <http://www.cdc.gov/ncipc>.

References

1. U.S. Department of Transportation, National Highway Traffic Safety Administration. *Traffic safety facts 2001*; publication no. DOT HS 809 471.
2. CDC. National child passenger safety week—February 14–20, 1999. *MMWR* 1999;48:83–4.

Notice to Readers

Introduction of *MMWR QuickGuide*

This issue introduces the *MMWR QuickGuide* as a feature of the *MMWR* series of publications. *MMWR QuickGuide* provides prevention and treatment guidelines and related information in a compact, detachable design for educational purposes and as a ready reference. Each *MMWR QuickGuide* will have a suggested citation and will be available on line as a PDF file at <http://www.cdc.gov/mmwr>.



Recommended Childhood and Adolescent Immunization Schedule

United States, 2003

Weekly

January 31, 2003 / Vol. 52 / No. 4

Each year, CDC's Advisory Committee on Immunization Practices (ACIP) reviews the recommended childhood and adolescent immunization schedule to ensure that it is current with changes in manufacturers' vaccine formulations and contains revised recommendations for the use of licensed vaccines, including those newly licensed. The recommended childhood immunization schedule for 2003 has remained the same in content and format since January 2002 (Figure 1) (1). The recommendations and format have been approved by ACIP, the American Academy of Family Physicians, and the American Academy of Pediatrics.

Catch-Up Childhood and Adolescent Immunization Schedule

A new catch-up immunization schedule for children and adolescents who start late or who are >1 month behind is presented for the first time in 2003 (Tables 1 and 2). Minimum ages and minimum intervals between doses are provided for each of the routinely recommended childhood and adolescent vaccines. The schedule is divided into two age groups, children aged 4 months–6 years and children/adolescents aged 7–18 years.

Hepatitis B Vaccine

The schedule indicates a preference for administering the first dose of hepatitis B vaccine to all newborns soon after birth and before hospital discharge. Administering the first dose of hepatitis B vaccine soon after birth should minimize the risk for infection caused by errors or delays in maternal hepatitis B surface antigen (HBsAg) testing or reporting, or by exposure to persons with chronic hepatitis B virus (HBV) infection in the household, and can increase the child's likelihood of completing the vaccine series. Only monovalent hepatitis B vaccine can be used for the birth dose. Either monovalent or combination vaccine can be used to complete

the series. Four doses of hepatitis B vaccine can be administered to complete the series when a birth dose is given. In addition to receiving hepatitis B immune globulin (HBIG) and the hepatitis B vaccine series, infants born to HBsAg-positive mothers should be tested for HBsAg and antibody to HBsAg (anti-HBs) at age 9–15 months to identify those with chronic HBV infection or those who might require revaccination (2).

Influenza Vaccine

In addition to the recommendation to administer annual influenza vaccine to children at high risk, healthy children aged 6–23 months are encouraged to receive influenza vaccine when feasible. Children in this age group are at substantially increased risk for influenza-related hospitalizations (3).

Inactivated Poliovirus Vaccine

The inactivated poliovirus (IPV) vaccine footnote has been removed from the Recommended Childhood and Adolescent Immunization Schedule, reflecting the cessation of the use of oral poliovirus (OPV) vaccine in the United States. An all-IPV schedule for routine childhood poliovirus vaccination has been recommended in the United States since January 1, 2000 (4). All children should receive 4 doses of IPV at age 2, 4, and 6–18 months, and at age 4–6 years. For children who received an all-IPV or all-OPV series, a fourth dose is not necessary if the third dose was administered at age ≥ 4 years. If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered regardless of the child's current age. These statements clarify the "Dose Three to Booster Dose" column in Table 2 of the catch-up schedule. Routine poliovirus vaccination is not generally recommended for persons aged ≥ 18 years residing in the United States (5).

Vaccine Supply Recommendations

As a result of the vaccine supply shortage, deferral of some doses of pneumococcal conjugate vaccine (PCV) has been recommended (6); health-care providers should record patients for whom vaccination has been deferred and should contact them once the supply has been restored. Supplies of tetanus and diphtheria toxoids (Td) vaccine; diphtheria and tetanus

The Recommended Childhood and Adolescent Immunization Schedule and the Catch-up Childhood and Adolescent Immunization Schedule have been adopted by the Advisory Committee on Immunization Practices, the Academy of Pediatrics, and the Academy of Family Physicians. The standard *MMWR* footnote format has been modified for joint publication of this harmonized schedule.

Suggested citation: Centers for Disease Control and Prevention. Recommended Childhood and Adolescent Immunization Schedule—United States, 2003. *MMWR* 2003;52:Q1–4.

FIGURE. Recommended childhood and adolescent immunization schedule¹ — United States, 2003

Vaccine	Range of recommended ages				Catch-up vaccination				Preadolescent assessment			
	Birth	1 mo	2 mos	4 mos	6 mos	12 mos	15 mos	18 mos	24 mos	4–6 yrs	11–12 yrs	13–18 yrs
Hepatitis B²	HepB #1	only if mother HBsAg (-)							HepB series			
Diphtheria, Tetanus, Pertussis			DTaP	DTaP	DTaP		DTaP			DTaP		Td
Haemophilus influenzae Type b⁴			Hib	Hib	Hib		Hib					
Inactivated Polio			IPV	IPV	IPV					IPV		
Measles, Mumps, Rubella⁵						MMR #1				MMR #2		MMR #2
Varicella⁶							Varicella		Varicella			
Pneumococcal⁷			PCV	PCV	PCV		PCV		PCV			PPV
----- Vaccines below this line are for selected populations -----												
Hepatitis A⁸										HepA series		
Influenza⁹					Influenza (yearly)							

1. Indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 1, 2002, for children through age 18 years. Any dose not given at the recommended age should be given at any subsequent visit when indicated and feasible. [Hatched box] Indicates age groups that warrant special effort to administer those vaccines not given previously. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and the vaccine's other components are not contraindicated. Providers should consult the manufacturers' package inserts for detailed recommendations.

2. **Hepatitis B vaccine (HepB).** All infants should receive the first dose of HepB vaccine soon after birth and before hospital discharge; the first dose also may be given by age 2 months if the infant's mother is HBsAg-negative. Only monovalent HepB vaccine can be used for the birth dose. Monovalent or combination vaccine containing HepB may be used to complete the series; 4 doses of vaccine may be administered when a birth dose is given. The second dose should be given at least 4 weeks after the first dose except for combination vaccines, which cannot be administered before age 6 weeks. The third dose should be given at least 16 weeks after the first dose and at least 8 weeks after the second dose. The last dose in the vaccination series (third or fourth dose) should not be administered before age 6 months. Infants born to HBsAg-positive mothers should receive HepB vaccine and 0.5 mL hepatitis B immune globulin (HBIG) within 12 hours of birth at separate sites. The second dose is recommended at age 1–2 months. The last dose in the vaccination series should not be administered before age 6 months. These infants should be tested for HBsAg and anti-HBs at 9–15 months of age. Infants born to mothers whose HBsAg status is unknown should receive the first dose of the HepB vaccine series within 12 hours of birth. Maternal blood should be drawn as soon as possible to determine the mother's HBsAg status; if the HBsAg test is positive, the infant should receive HBIG as soon as possible (no later than age 1 week). The second dose is recommended at age 1–2 months. The last dose in the vaccination series should not be administered before age 6 months.

3. **Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP).** The fourth dose of DTaP may be administered at age 12 months provided that 6 months have elapsed since the third dose and the child is unlikely to return at age 15–18 months. **Tetanus and diphtheria toxoids (Td)** is recommended at age 11–12 years if at least 5 years have elapsed since the last dose of Td-containing vaccine. Subsequent routine Td boosters are recommended every 10 years.

4. **Haemophilus influenzae type b (Hib) conjugate vaccine.** Three Hib conjugate vaccines are licensed for infant use. If PRP-OMP (PedvaxHIB[®] or ComVax[®] [Merck]) is administered at age 2 and 4 months, a dose at age 6 months is not required. DTaP/Hib combination products should not be used for primary vaccination in infants at age 2, 4, or 6 months but can be used as boosters following any Hib vaccine.

5. **Measles, mumps, and rubella vaccine (MMR).** The second dose of MMR is recommended routinely at age 4–6 years but may be administered during any visit provided that at least 4 weeks have elapsed since the first dose and that both doses are administered beginning at or after age 12 months. Those who have not received the second dose previously should complete the schedule by the visit at age 11–12 years.

6. **Varicella vaccine.** Varicella vaccine is recommended at any visit at or after age 12 months for susceptible children (i.e., those who lack a reliable history of chickenpox). Susceptible persons aged ≥13 years should receive 2 doses given at least 4 weeks apart.

7. **Pneumococcal vaccine.** The heptavalent pneumococcal conjugate vaccine (PCV) is recommended for all children aged 2–23 months and for certain children aged 24–59 months. **Pneumococcal polysaccharide vaccine (PPV)** is recommended in addition to PCV for certain high-risk groups. See *MMWR* 2000;49(No. RR-9):1–37.

8. **Hepatitis A vaccine.** Hepatitis A vaccine is recommended for children and adolescents in selected states and regions, and for certain high-risk groups. Consult local public health authority and *MMWR* 1999;48(No. RR-12):1–37. Children and adolescents in these states, regions, and high-risk groups who have not been immunized against hepatitis A can begin the hepatitis A vaccination series during any visit. The two doses in the series should be administered at least 6 months apart.

9. **Influenza vaccine.** Influenza vaccine is recommended annually for children aged ≥6 months with certain risk factors (including but not limited to asthma, cardiac disease, sickle cell disease, HIV, and diabetes, and household members of persons in groups at high risk (see *MMWR* 2002;51[No. RR-3]:1–31), and can be administered to all others wishing to obtain immunity. In addition, healthy children age 6–23 months are encouraged to receive influenza vaccine if feasible because children in this age group are at substantially increased risk for influenza-related hospitalizations. Children aged ≤12 years should receive vaccine in a dosage appropriate for their age (0.25 mL if 6–35 months or 0.5 mL if ≥3 years). Children aged ≤8 years who are receiving influenza vaccine for the first time should receive 2 doses separated by at least 4 weeks.

Additional information about vaccines, including precautions and contraindications for vaccination and vaccine shortages, is available at <http://www.cdc.gov/nip> or at the National Immunization information hotline, telephone 800-232-2522 (English) or 800-232-0233 (Spanish). Copies of the schedule can be obtained at <http://www.cdc.gov/nip/recs/child-schedule.htm>. Approved by the **Advisory Committee on Immunization Practices** (<http://www.cdc.gov/nip/acip>), the **American Academy of Pediatrics** (<http://www.aap.org>), and the **American Academy of Family Physicians** (<http://www.aafp.org>).

TABLE 1. Catch-up schedule for children aged 4 months–6 years

Dose one (minimum age)	Minimum interval between doses			
	Dose one to dose two	Dose two to dose three	Dose three to dose four	Dose four to dose five
DTaP (6 wks)	4 wks	4 wks	6 mos	6 mos ¹
IPV (6 wks)	4 wks	4 wks	4 wks ²	
HepB ³ (birth)	4 wks	8 wks (and 16 weeks after first dose)		
MMR (12 mos)	4 wks ⁴			
Varicella (12 mos)				
Hib ⁵ (6 wks)	4 wks: if 1 st dose given at age <12 mos 8 wks (as final dose): if 1 st dose given at age 12–24 mos No further doses needed: if 1 st dose given at age ≥15 mos	4 wks ⁶ : if current age <12 mos 8 wks (as final dose) ⁶ : if current age ≥12 mos and 2 nd dose given at age <15 mos No further doses needed: if previous dose given at age ≥15 mos	8 wks (as final dose): this dose only necessary for children aged 12 mos–5 yrs who received 3 doses before age 12 mos	
PCV ⁷ (6 wks)	4 wks: if 1 st dose given at age <12 mos and current age <24 mos 8 wks (as final dose): if 1 st dose given at age ≥12 mos or current age 24–59 mos No further doses needed: for healthy children if 1 st dose given at age ≥24 mos	4 wks: if current age <12 mos 8 wks (as final dose): if current age ≥12 mos No further doses needed: for healthy children if previous dose given at age ≥24 mos	8 wks (as final dose): this dose only necessary for children aged 12 mos–5 yrs who received 3 doses before age 12 mos	

1. **Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP):** The fifth dose is not necessary if the fourth dose was given after the fourth birthday.

2. **Inactivated Polio (IPV):** For children who received an all-IPV or all-OPV series, a fourth dose is not necessary if third dose was given at age ≥4 years. If both OPV and IPV were given as part of a series, a total of 4 doses should be given, regardless of the child's current age.

3. **Hepatitis B vaccine (HepB):** All children and adolescents who have not been vaccinated against hepatitis B should begin the hepatitis B vaccination series during any visit. Providers should make special efforts to immunize children who were born in, or whose parents were born in, areas of the world where hepatitis B virus infection is moderately or highly endemic.

4. **Measles, mumps, and rubella vaccine (MMR):** The second dose of MMR is recommended routinely at age 4–6 years, but may be given earlier if desired.

5. **Haemophilus influenzae type b (Hib):** Vaccine is not recommended generally for children aged ≥5 years.

6. **Hib:** If current age is <12 months and the first 2 doses were PRP-OMP (PedvaxHIB[®] or ComVax [Merck][®]), the third (and final) dose should be given at age 12–15 months and at least 8 weeks after the second dose.

7. **Pneumococcal conjugate vaccine (PCV):** Vaccine is not recommended generally for children aged ≥5 years.

TABLE 2. Catch-up schedule for children aged 7–18 years

Minimum interval between doses		
Dose one to dose two	Dose two to dose three	Dose three to booster dose
Td: 4 wks	Td: 6 mos	Td ¹ : 6 mos: if 1 st dose given at age <12 mos and current age <11 yrs 5 yrs: if 1 st dose given at age ≥12 mos and 3 rd dose given at age <7 yrs and current age ≥11 yrs 10 yrs: if 3 rd dose given at age ≥7 yrs
IPV ² : 4 wks	IPV ² : 4 wks	IPV ²
HepB: 4 wks	HepB: 8 wks (and 16 wks after 1 st dose)	
MMR: 4 wks		
Varicella ³ : 4 wks		

1. **Tetanus toxoid:** For children aged 7–10 years, the interval between the third and booster dose is determined by the age when the first dose was given. For adolescents aged 11–18 years, the interval is determined by the age when the third dose was given.

2. **Inactivated Polio (IPV):** Vaccine is not recommended generally for persons aged ≥18 years.

3. **Varicella:** Give 2-dose series to all susceptible adolescents aged ≥13 years.

toxoids and acellular pertussis (DTaP) vaccine; measles, mumps, and rubella (MMR) vaccine; and varicella vaccine in the United States have become sufficient to permit the resumption of the routine schedule for use as recommended by ACIP (7–9). The range of recommended ages for the Td vaccine has been extended to 18 years to emphasize that the vaccine can be administered during any visit if at least 5 years have elapsed since the last dose of tetanus and diphtheria toxoid-containing vaccine. Information about vaccine shortages is available from CDC's National Immunization Program at <http://www.cdc.gov/nip/news/shortages/default.htm>.

Vaccine Information Statements

The National Childhood Vaccine Injury Act requires that all health-care providers give parents or patients copies of Vaccine Information Statements before administering each dose of the vaccines listed in the schedule. Additional information is available from state health departments and at <http://www.cdc.gov/nip/publications/vis>. Detailed recommendations for using vaccines are available from the manufacturers' package inserts, ACIP statements on specific vaccines, and the *2000 Red Book (10)*. ACIP statements for each recommended childhood vaccine can be viewed, downloaded, and printed from CDC's National Immunization Program at <http://www.cdc.gov/nip/publications/acip-list.htm>; instructions on the use of the Vaccine Information Statements are available at <http://www.cdc.gov/nip/publications/vis/vis-instructions.pdf>.

References

1. CDC. Recommended childhood immunization schedule—United States, 2002. *MMWR* 2002;51:31–3.
2. CDC. Hepatitis B virus: a comprehensive strategy for eliminating transmission in the United States through universal childhood vaccination: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 1991;40(No. RR-13).
3. CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2002;51(No. RR-3).
4. CDC. Updated recommendations on the use of pneumococcal conjugate vaccine in a setting of vaccine shortage—Advisory Committee on Immunization Practices. *MMWR* 2001;50:1140–2.
5. CDC. Recommendations of the Advisory Committee on Immunization Practices: revised recommendations for routine poliomyelitis vaccination. *MMWR* 1999;48:590.
6. CDC. Poliovirus prevention in the United States: updated recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2000;49(No. RR-5).
7. CDC. Resumption of routine schedule for tetanus and diphtheria toxoids. *MMWR* 2002;51:529–30.
8. CDC. Resumption of routine schedule for diphtheria and tetanus toxoids and acellular pertussis vaccine and for measles, mumps, and rubella vaccine. *MMWR* 2002;51:598–9.
9. CDC. Resumption of routine schedule for varicella vaccine. *MMWR* 2002;51:679.
10. American Academy of Pediatrics. Active and passive immunization. In: Pickering LK, ed. *2000 Red Book: Report of the Committee on Infectious Diseases*; 25th ed. Elk Grove Village, Illinois: American Academy of Pediatrics, 2000.

boostershot.

Need help? MMWR Online is ready.
Visit cdc.gov/mmwr, and access important
health information when and where you need it.

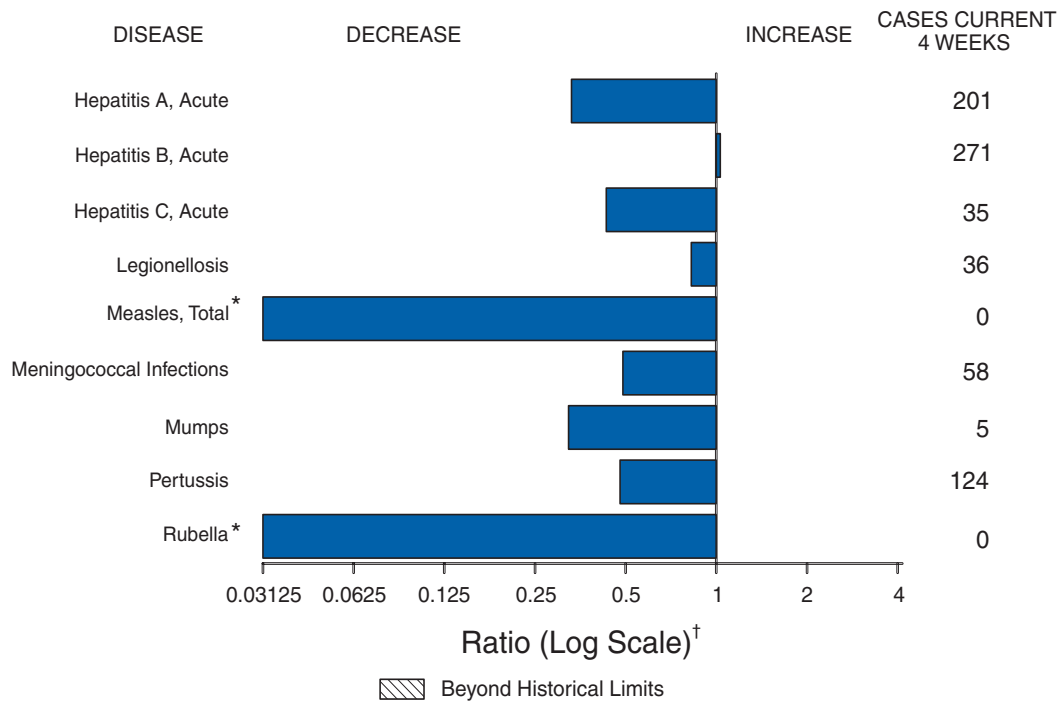
From the latest ACIP recommendations and immunization
schedules, to useful continuing education courses,
MMWR Online makes it easier for you to
know what matters.

Log on and sign up to receive MMWR by e-mail, free of charge.
You'll enjoy pain-free electronic delivery of all MMWR
publications, including MMWR Dispatch—the
best way to get breaking health news fast.

MMWR Online
The boost you need—right on schedule.

know what matters.



FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending January 25, 2003, with historical data

* No measles or rubella cases were reported for the current 4-week period yielding a ratio for week 4 of zero (0).

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

TABLE I. Summary of provisional cases of selected notifiable diseases, United States, cumulative, week ending January 25, 2003 (4th Week)*

	Cum. 2003	Cum. 2002		Cum. 2003	Cum. 2002
Anthrax	-	-	Hansen disease (leprosy) [†]	2	2
Botulism:	-	-	Hantavirus pulmonary syndrome [†]	2	-
foodborne	-	2	Hemolytic uremic syndrome, postdiarrheal [†]	5	8
infant	3	6	HIV infection, pediatric [§]	-	11
other (wound & unspecified)	1	3	Measles, total [¶]	-	-
Brucellosis [†]	2	6	Mumps	11	12
Chancroid	2	3	Plague	-	-
Cholera	-	-	Poliomyelitis, paralytic	-	-
Cyclosporiosis [†]	-	9	Psittacosis [†]	2	8
Diphtheria	-	-	Q fever [†]	2	2
Ehrlichiosis:	-	-	Rabies, human	-	-
human granulocytic (HGE) [†]	6	6	Rubella	-	-
human monocytic (HME) [†]	4	1	Rubella, congenital	-	1
other and unspecified	-	-	Streptococcal toxic-shock syndrome [†]	6	7
Encephalitis/Meningitis:	-	-	Tetanus	1	-
California serogroup viral [†]	-	-	Toxic-shock syndrome	2	9
eastern equine [†]	-	-	Trichinosis	-	-
Powassan [†]	-	-	Tularemia [†]	2	2
St. Louis [†]	-	-	Yellow fever	-	-
western equine [†]	-	-			

-: No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

[†] Not notifiable in all states.

[§] Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP). Last update November 24, 2002.

[¶] No cases of indigenous or imported measles were reported.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending January 25, 2003, and January 26, 2002 (4th Week)*

Reporting area	AIDS		Chlamydia [†]		Coccidiomycosis		Cryptosporidiosis		Encephalitis/Meningitis West Nile	
	Cum. 2003 [§]	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	-	2,266	35,745	50,988	212	121	68	148	-	-
NEW ENGLAND	-	81	1,182	1,876	-	-	4	4	-	-
Maine	-	-	138	90	N	N	-	-	-	-
N.H.	-	2	117	130	-	-	-	1	-	-
Vt.	-	3	67	55	-	-	1	-	-	-
Mass.	-	76	185	735	-	-	1	2	-	-
R.I.	-	-	203	212	-	-	1	1	-	-
Conn.	-	-	472	654	-	-	1	-	-	-
MID. ATLANTIC	-	693	1,587	5,366	-	-	23	17	-	-
Upstate N.Y.	-	27	531	354	-	-	3	1	-	-
N.Y. City	-	532	379	2,344	-	-	19	11	-	-
N.J.	-	77	677	1,006	-	-	-	1	-	-
Pa.	-	57	-	1,662	N	N	1	4	-	-
E.N. CENTRAL	-	188	8,251	9,242	1	2	7	48	-	-
Ohio	-	47	3,067	2,512	-	-	3	5	-	-
Ind.	-	35	1,273	1,015	N	N	-	2	-	-
Ill.	-	70	1,581	2,961	-	-	-	13	-	-
Mich.	-	31	1,505	1,544	1	2	4	7	-	-
Wis.	-	5	825	1,210	-	-	-	21	-	-
W.N. CENTRAL	-	28	1,706	2,917	-	-	7	5	-	-
Minn.	-	-	161	827	-	-	3	1	-	-
Iowa	-	4	174	114	N	N	2	1	-	-
Mo.	-	22	659	982	-	-	1	2	-	-
N. Dak.	-	-	4	71	N	N	-	-	-	-
S. Dak.	-	-	124	144	-	-	1	-	-	-
Nebr.	-	-	-	207	-	-	-	1	-	-
Kans.	-	2	584	572	N	N	-	-	-	-
S. ATLANTIC	-	711	8,022	8,002	-	-	14	30	-	-
Del.	-	-	229	181	N	N	-	-	-	-
Md.	-	134	1,281	982	-	-	2	-	-	-
D.C.	-	-	257	245	-	-	-	1	-	-
Va.	-	65	953	906	-	-	-	-	-	-
W. Va.	-	1	170	172	N	N	-	-	-	-
N.C.	-	45	1,751	701	-	-	1	3	-	-
S.C.	-	42	135	1,056	-	-	-	-	-	-
Ga.	-	222	1,046	898	-	-	9	21	-	-
Fla.	-	202	2,200	2,861	N	N	2	5	-	-
E. S. CENTRAL	-	107	2,938	3,550	-	-	5	6	-	-
Ky.	-	15	395	522	-	-	-	1	-	-
Tenn.	-	40	782	1,245	-	-	2	-	-	-
Ala.	-	19	931	1,103	-	-	3	4	-	-
Miss.	-	33	830	680	N	N	-	1	-	-
W.S. CENTRAL	-	311	6,009	7,760	-	-	1	4	-	-
Ark.	-	13	459	586	-	-	1	2	-	-
La.	-	-	747	1,197	N	N	-	-	-	-
Okla.	-	7	302	678	N	N	-	-	-	-
Tex.	-	291	4,501	5,299	-	-	-	2	-	-
MOUNTAIN	-	95	1,909	3,167	184	63	5	6	-	-
Mont.	-	-	129	138	-	-	-	-	-	-
Idaho	-	1	152	150	-	-	2	2	-	-
Wyo.	-	1	78	46	-	-	-	-	-	-
Colo.	-	19	320	966	N	N	2	1	-	-
N. Mex.	-	6	43	533	-	1	-	-	-	-
Ariz.	-	39	681	894	183	56	1	-	-	-
Utah	-	-	186	9	-	2	-	2	-	-
Nev.	-	29	320	431	1	4	-	1	-	-
PACIFIC	-	52	4,141	9,108	27	56	2	28	-	-
Wash.	-	1	949	1,002	N	N	-	U	-	-
Oreg.	-	45	251	384	-	-	-	6	-	-
Calif.	-	3	2,556	7,233	27	56	2	22	-	-
Alaska	-	-	196	176	-	-	-	-	-	-
Hawaii	-	3	189	313	-	-	-	-	-	-
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	-	78	103	N	N	-	-	-	-
V.I.	-	22	-	10	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

† Chlamydia refers to genital infections caused by *C. trachomatis*.

§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update November 24, 2002.

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending January 25, 2003, and January 26, 2002 (4th Week)*

Reporting area	<i>Escherichia coli</i> , Enterohemorrhagic (EHEC)						Giardiasis		Gonorrhea	
	O157:H7		Shiga toxin positive, serogroup non-O157		Shiga toxin positive, not serogrouped		Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002				
UNITED STATES	47	96	2	3	1	1	1,029	931	16,477	24,298
NEW ENGLAND	6	5	-	-	-	-	36	110	331	633
Maine	-	-	-	-	-	-	8	12	5	5
N.H.	-	1	-	-	-	-	3	7	10	7
Vt.	-	-	-	-	-	-	5	11	8	10
Mass.	3	1	-	-	-	-	19	60	47	299
R.I.	-	-	-	-	-	-	1	5	76	69
Conn.	3	3	-	-	-	-	-	15	185	243
MID. ATLANTIC	2	6	-	-	-	-	405	194	844	2,700
Upstate N.Y.	2	3	-	-	-	-	14	21	259	195
N.Y. City	-	-	-	-	-	-	378	91	120	1,013
N.J.	-	3	-	-	-	-	6	34	465	640
Pa.	N	N	-	-	-	-	7	48	-	852
E.N. CENTRAL	9	33	-	-	1	1	131	215	4,326	4,828
Ohio	4	5	-	-	1	1	73	41	2,027	1,434
Ind.	-	1	-	-	-	-	-	-	520	503
Ill.	-	13	-	-	-	-	2	80	796	1,616
Mich.	4	4	-	-	-	-	54	47	674	843
Wis.	1	10	-	-	-	-	2	47	309	432
W.N. CENTRAL	5	18	-	2	-	-	62	70	754	1,397
Minn.	2	5	-	2	-	-	6	13	73	266
Iowa	1	4	-	-	-	-	27	14	31	41
Mo.	2	2	N	N	N	N	14	18	417	671
N. Dak.	-	-	-	-	-	-	-	-	-	1
S. Dak.	-	-	-	-	-	-	2	4	1	17
Nebr.	-	4	-	-	-	-	-	9	-	95
Kans.	-	3	-	-	-	-	13	12	232	306
S. ATLANTIC	5	13	1	1	-	-	192	183	4,450	5,446
Del.	-	1	-	-	-	-	3	4	118	141
Md.	-	-	-	-	-	-	10	8	645	623
D.C.	-	-	-	-	-	-	-	6	223	226
Va.	-	1	-	-	-	-	7	-	523	628
W. Va.	-	-	-	-	-	-	-	-	61	67
N.C.	2	2	-	-	-	-	-	-	1,005	802
S.C.	-	-	-	-	-	-	1	-	118	673
Ga.	-	9	-	-	-	-	122	34	626	653
Fla.	3	-	1	1	-	-	49	131	1,131	1,633
E.S. CENTRAL	5	-	-	-	-	-	20	14	1,771	2,248
Ky.	-	-	-	-	-	-	-	-	213	237
Tenn.	3	-	-	-	-	-	9	1	458	806
Ala.	2	-	-	-	-	-	11	13	668	766
Miss.	-	-	-	-	-	-	-	-	432	439
W.S. CENTRAL	1	3	-	-	-	-	11	5	2,655	3,904
Ark.	1	-	-	-	-	-	8	5	311	447
La.	-	-	-	-	-	-	-	-	530	873
Okla.	-	-	-	-	-	-	3	-	126	303
Tex.	-	3	-	-	-	-	-	-	1,688	2,281
MOUNTAIN	5	4	1	-	-	-	70	73	471	859
Mont.	-	-	-	-	-	-	2	3	10	11
Idaho	1	1	-	-	-	-	12	1	7	9
Wyo.	-	-	-	-	-	-	2	-	5	4
Colo.	1	1	-	-	-	-	19	36	104	301
N. Mex.	-	1	1	-	-	-	2	7	23	104
Ariz.	1	-	-	-	-	-	15	6	196	284
Utah	2	-	-	-	-	-	6	5	17	-
Nev.	-	1	-	-	-	-	12	15	109	146
PACIFIC	9	14	-	-	-	-	102	67	875	2,283
Wash.	3	2	-	-	-	-	3	7	183	244
Oreg.	-	5	-	-	-	-	11	46	49	70
Calif.	4	7	-	-	-	-	77	-	555	1,887
Alaska	-	-	-	-	-	-	7	7	34	42
Hawaii	2	-	-	-	-	-	4	7	54	40
Guam	N	N	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	-	-	-	-	8	29
V.I.	-	-	-	-	-	-	-	-	-	5
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending January 25, 2003, and January 26, 2002 (4th Week)*

Reporting area	<i>Haemophilus influenzae</i> , invasive								Hepatitis (viral, acute), by type	
	All ages		Age <5 years						A	
	All serotypes		Serotype B		Non-serotype B		Unknown serotype			
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	74	116	2	-	10	13	-	-	272	689
NEW ENGLAND	7	11	-	-	-	1	-	-	5	29
Maine	-	-	-	-	-	-	-	-	-	1
N.H.	1	-	-	-	-	-	-	-	-	1
Vt.	3	-	-	-	-	-	-	-	1	-
Mass.	1	8	-	-	-	1	-	-	4	15
R.I.	-	-	-	-	-	-	-	-	-	-
Conn.	2	3	-	-	-	-	-	-	-	12
MID. ATLANTIC	8	26	-	-	2	1	-	-	42	72
Upstate N.Y.	3	9	-	-	-	1	-	-	3	4
N.Y. City	4	9	-	-	2	-	-	-	39	24
N.J.	1	6	-	-	-	-	-	-	-	19
Pa.	-	2	-	-	-	-	-	-	-	25
E.N. CENTRAL	5	22	1	-	1	2	-	-	28	72
Ohio	2	10	-	-	1	-	-	-	12	15
Ind.	1	-	-	-	-	-	-	-	-	1
Ill.	-	10	-	-	-	1	-	-	1	35
Mich.	2	-	1	-	-	-	-	-	15	12
Wis.	-	2	-	-	-	1	-	-	-	9
W.N. CENTRAL	3	1	-	-	1	-	-	-	11	31
Minn.	1	-	-	-	-	-	-	-	-	-
Iowa	-	1	-	-	-	-	-	-	6	8
Mo.	1	-	-	-	-	-	-	-	1	5
N. Dak.	-	-	-	-	-	-	-	-	1	-
S. Dak.	-	-	-	-	-	-	-	-	-	1
Nebr.	-	-	-	-	-	-	-	-	-	1
Kans.	1	-	-	-	1	-	-	-	3	16
S. ATLANTIC	22	29	-	-	1	3	-	-	116	185
Del.	-	-	-	-	-	-	-	-	-	-
Md.	6	11	-	-	-	-	-	-	17	39
D.C.	-	-	-	-	-	-	-	-	-	8
Va.	-	1	-	-	-	-	-	-	-	1
W. Va.	-	-	-	-	-	-	-	-	-	-
N.C.	-	3	-	-	-	-	-	-	2	23
S.C.	1	-	-	-	-	-	-	-	2	2
Ga.	4	7	-	-	-	1	-	-	57	32
Fla.	11	7	-	-	1	2	-	-	38	80
E.S. CENTRAL	7	1	-	-	1	1	-	-	7	35
Ky.	-	-	-	-	-	-	-	-	-	5
Tenn.	1	-	-	-	-	-	-	-	4	10
Ala.	6	1	-	-	1	1	-	-	3	5
Miss.	-	-	-	-	-	-	-	-	-	15
W.S. CENTRAL	6	2	-	-	1	1	-	-	2	76
Ark.	1	-	-	-	-	-	-	-	-	4
La.	2	-	-	-	-	-	-	-	1	1
Okla.	3	2	-	-	1	1	-	-	1	2
Tex.	-	-	-	-	-	-	-	-	-	69
MOUNTAIN	14	11	1	-	2	2	-	-	18	37
Mont.	-	-	-	-	-	-	-	-	-	2
Idaho	-	-	-	-	-	-	-	-	-	5
Wyo.	-	-	-	-	-	-	-	-	-	2
Colo.	1	3	-	-	-	-	-	-	3	6
N. Mex.	2	2	-	-	-	1	-	-	-	3
Ariz.	7	6	1	-	1	1	-	-	11	8
Utah	3	-	-	-	1	-	-	-	1	3
Nev.	1	-	-	-	-	-	-	-	3	8
PACIFIC	2	13	-	-	1	2	-	-	43	152
Wash.	-	-	-	-	-	-	-	-	1	1
Oreg.	1	8	-	-	1	1	-	-	2	13
Calif.	-	1	-	-	-	1	-	-	39	138
Alaska	-	-	-	-	-	-	-	-	1	-
Hawaii	1	4	-	-	-	-	-	-	-	-
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	-	-	-	-	-	5
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	U	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.
 * Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending January 25, 2003, and January 26, 2002 (4th Week)*

Reporting area	Hepatitis (viral, acute), by type				Legionellosis		Listeriosis		Lyme disease	
	B		C		Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002						
UNITED STATES	358	316	72	274	46	48	21	26	171	320
NEW ENGLAND	11	15	-	1	2	2	2	2	1	35
Maine	-	-	-	-	-	-	-	1	-	-
N.H.	-	1	-	-	-	-	1	-	-	6
Vt.	1	1	-	1	1	-	-	-	1	-
Mass.	10	10	-	-	-	2	1	-	-	29
R.I.	-	-	-	-	-	-	-	-	-	-
Conn.	-	3	-	-	1	-	-	1	-	-
MID. ATLANTIC	74	86	30	157	4	5	6	4	136	216
Upstate N.Y.	-	3	1	1	2	1	1	2	80	136
N.Y. City	48	54	-	-	2	-	4	1	49	-
N.J.	23	21	29	155	-	1	-	-	5	44
Pa.	3	8	-	1	-	3	1	1	2	36
E.N. CENTRAL	30	31	8	3	18	22	3	7	2	7
Ohio	13	5	1	-	9	15	3	2	2	1
Ind.	-	-	-	-	-	-	-	-	-	-
Ill.	-	3	1	-	-	-	-	1	-	-
Mich.	17	19	6	3	9	6	-	1	-	-
Wis.	-	4	-	-	-	1	-	3	U	6
W.N. CENTRAL	10	13	9	46	1	2	1	-	-	6
Minn.	-	1	-	-	-	-	1	-	-	1
Iowa	1	2	-	-	-	-	-	-	-	3
Mo.	7	7	9	44	-	1	-	-	-	2
N. Dak.	1	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-
Nebr.	-	1	-	2	-	1	-	-	-	-
Kans.	1	2	-	-	1	-	-	-	-	-
S. ATLANTIC	166	76	13	7	15	5	5	1	24	48
Del.	-	1	-	2	-	1	-	-	-	5
Md.	2	11	1	2	4	3	-	-	14	38
D.C.	-	1	-	-	-	-	-	-	-	2
Va.	-	1	-	-	-	-	-	-	-	-
W. Va.	-	1	-	-	N	N	-	-	-	-
N.C.	13	11	1	1	2	-	1	-	5	-
S.C.	-	2	-	-	-	-	1	-	-	-
Ga.	124	12	1	-	1	-	1	-	-	-
Fla.	27	36	10	2	8	1	2	1	5	3
E.S. CENTRAL	12	20	5	11	1	-	2	-	-	-
Ky.	-	2	-	1	-	-	-	-	-	-
Tenn.	2	4	-	-	1	-	-	-	-	-
Ala.	4	4	-	1	-	-	2	-	-	-
Miss.	6	10	5	9	-	-	-	-	-	-
W.S. CENTRAL	1	8	1	42	1	2	-	3	-	4
Ark.	-	7	-	1	-	-	-	-	-	-
La.	1	1	1	-	-	-	-	-	-	1
Okla.	-	-	-	-	1	-	-	-	-	-
Tex.	-	-	-	41	-	2	-	3	-	3
MOUNTAIN	32	19	3	3	2	2	2	2	-	1
Mont.	1	-	-	-	-	-	1	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-
Wyo.	1	1	-	2	-	-	-	-	-	-
Colo.	7	6	3	1	-	1	-	1	-	-
N. Mex.	-	3	-	-	-	-	-	-	-	1
Ariz.	18	1	-	-	1	-	1	1	-	-
Utah	4	3	-	-	1	1	-	-	-	-
Nev.	1	5	-	-	-	-	-	-	-	-
PACIFIC	22	48	3	4	2	8	-	7	8	3
Wash.	1	-	-	-	-	-	-	-	-	-
Oreg.	3	12	-	2	N	N	-	-	2	-
Calif.	18	35	3	2	2	8	-	7	6	3
Alaska	-	1	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	N	N
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	3	-	-	-	-	-	1	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending January 25, 2003, and January 26, 2002 (4th Week)*

Reporting area	Malaria		Meningococcal disease		Pertussis		Rabies, animal		Rocky Mountain spotted fever	
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	51	68	77	115	179	297	188	361	17	20
NEW ENGLAND	1	7	4	9	51	83	31	24	-	-
Maine	1	-	-	1	-	3	-	2	-	-
N.H.	-	3	-	-	-	-	2	-	-	-
Vt.	-	-	-	2	12	13	2	4	-	-
Mass.	-	3	3	6	39	62	13	7	-	-
R.I.	-	-	-	-	-	-	-	2	-	-
Conn.	-	1	1	-	-	5	14	9	-	-
MID. ATLANTIC	21	17	3	18	7	6	21	46	1	2
Upstate N.Y.	1	1	-	5	7	4	14	33	-	-
N.Y. City	20	7	2	3	-	2	5	-	1	-
N.J.	-	8	-	3	-	-	-	8	-	-
Pa.	-	1	1	7	-	-	2	5	-	2
E.N. CENTRAL	4	8	13	18	24	41	1	1	1	1
Ohio	2	3	6	10	22	18	-	-	1	1
Ind.	-	-	3	-	-	-	-	1	-	-
Ill.	-	3	-	2	-	8	-	-	-	-
Mich.	2	2	3	3	2	4	1	-	-	-
Wis.	-	-	1	3	-	11	-	-	-	-
W.N. CENTRAL	4	4	6	6	10	32	30	29	1	-
Minn.	2	-	1	-	-	-	3	1	-	-
Iowa	2	1	2	-	-	15	3	3	1	-
Mo.	-	2	1	4	6	11	-	-	-	-
N. Dak.	-	-	-	-	-	-	5	-	-	-
S. Dak.	-	-	-	1	-	-	-	13	-	-
Nebr.	-	-	-	1	-	-	-	-	-	-
Kans.	-	1	2	-	4	6	19	12	-	-
S. ATLANTIC	13	8	18	12	36	14	93	77	13	16
Del.	-	-	3	-	-	1	-	-	-	-
Md.	5	5	2	1	7	3	2	24	4	4
D.C.	-	1	-	-	-	-	-	-	-	-
Va.	-	-	-	-	-	-	15	17	-	-
W. Va.	1	-	-	-	-	-	4	7	-	-
N.C.	-	2	3	1	12	7	27	26	9	12
S.C.	-	-	-	-	-	2	8	3	-	-
Ga.	1	-	1	3	13	-	35	-	-	-
Fla.	6	-	9	7	4	1	2	-	-	-
E.S. CENTRAL	1	3	7	4	5	14	1	108	-	1
Ky.	-	-	-	-	1	5	-	-	-	-
Tenn.	-	1	2	-	-	2	-	108	-	1
Ala.	1	1	2	4	4	1	1	-	-	-
Miss.	-	1	3	-	-	6	-	-	-	-
W.S. CENTRAL	1	1	5	18	-	35	3	56	-	-
Ark.	-	-	1	3	-	32	-	-	-	-
La.	1	1	3	1	-	-	-	-	-	-
Okla.	-	-	1	-	-	1	3	8	-	-
Tex.	-	-	-	14	-	2	-	48	-	-
MOUNTAIN	-	1	4	10	40	39	6	8	-	-
Mont.	-	-	-	-	-	1	1	-	-	-
Idaho	-	-	-	-	1	4	-	-	-	-
Wyo.	-	-	-	-	-	1	-	1	-	-
Colo.	-	-	-	4	19	23	-	-	-	-
N. Mex.	-	-	1	-	1	8	-	-	-	-
Ariz.	-	-	3	2	13	-	5	7	-	-
Utah	-	-	-	-	3	1	-	-	-	-
Nev.	-	1	-	4	3	1	-	-	-	-
PACIFIC	6	19	17	20	6	33	2	12	1	-
Wash.	2	-	2	2	-	-	-	-	-	-
Oreg.	3	-	5	6	6	11	-	-	-	-
Calif.	1	17	10	12	-	21	2	4	1	-
Alaska	-	-	-	-	-	-	-	8	-	-
Hawaii	-	2	-	-	-	1	-	-	-	-
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	1	-	-	-	6	-	-
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	U	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending January 25, 2003, and January 26, 2002 (4th Week)*

Reporting area	Salmonellosis		Shigellosis		Streptococcal disease, invasive, group A		<i>Streptococcus pneumoniae</i> , invasive			
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Drug resistant, all ages		Age <5 years	
							Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	1,253	1,897	986	912	175	271	150	111	26	8
NEW ENGLAND	57	83	13	16	6	17	1	-	-	1
Maine	2	11	-	-	-	3	-	-	-	-
N.H.	2	3	-	-	1	N	-	-	N	N
Vt.	1	4	-	-	1	1	1	-	-	1
Mass.	40	49	9	15	4	11	N	N	N	N
R.I.	4	3	2	-	-	-	-	-	-	-
Conn.	8	13	2	1	-	-	-	-	-	-
MID. ATLANTIC	122	214	67	48	26	48	3	2	2	-
Upstate N.Y.	15	13	8	4	10	11	3	2	2	-
N.Y. City	91	92	45	29	11	22	U	U	U	U
N.J.	6	65	5	3	1	13	N	N	N	N
Pa.	10	44	9	12	4	2	-	-	-	-
E.N. CENTRAL	149	289	48	163	39	60	30	5	21	6
Ohio	95	48	21	66	19	13	30	-	20	-
Ind.	8	9	4	3	-	2	-	5	1	2
Ill.	7	137	3	66	-	21	-	-	-	-
Mich.	37	52	19	19	20	24	-	-	N	N
Wis.	2	43	1	9	-	-	N	N	-	4
W.N. CENTRAL	71	116	27	127	9	14	18	22	1	-
Minn.	16	19	1	16	-	-	-	-	1	-
Iowa	21	16	1	9	-	-	N	N	N	N
Mo.	22	52	18	17	3	6	-	1	-	-
N. Dak.	1	-	-	-	-	-	-	-	-	-
S. Dak.	4	3	2	53	3	-	-	-	-	-
Nebr.	-	8	-	18	-	5	-	4	N	N
Kans.	7	18	5	14	3	3	18	17	N	N
S. ATLANTIC	502	541	655	245	39	63	85	65	-	1
Del.	1	2	36	2	1	-	-	-	N	N
Md.	40	48	73	27	11	10	N	N	N	N
D.C.	-	6	-	3	-	2	-	3	-	1
Va.	15	13	12	22	-	1	N	N	N	N
W. Va.	-	1	-	1	-	-	-	-	-	-
N.C.	67	79	61	18	2	12	N	N	U	U
S.C.	3	13	3	1	1	2	7	10	N	N
Ga.	185	125	244	82	7	26	28	34	N	N
Fla.	191	254	226	89	17	10	50	18	N	N
E.S. CENTRAL	101	103	45	66	2	4	4	10	-	-
Ky.	4	7	2	18	-	1	-	-	N	N
Tenn.	30	16	8	1	2	3	4	10	N	N
Ala.	48	48	28	23	-	-	-	-	N	N
Miss.	19	32	7	24	-	-	-	-	-	-
W.S. CENTRAL	27	116	30	70	3	21	7	2	2	-
Ark.	15	17	1	8	-	-	-	1	-	-
La.	6	6	5	8	-	-	7	1	-	-
Okla.	6	15	24	10	3	4	N	N	2	-
Tex.	-	78	-	44	-	17	N	N	-	-
MOUNTAIN	72	84	42	25	39	16	2	5	-	-
Mont.	2	2	-	-	-	-	-	-	-	-
Idaho	8	6	-	1	3	-	N	N	N	N
Wyo.	1	2	1	-	-	1	1	2	-	-
Colo.	23	37	8	8	10	7	-	-	-	-
N. Mex.	3	8	7	2	6	8	1	3	-	-
Ariz.	19	4	22	4	19	-	-	-	N	N
Utah	8	9	2	5	1	-	-	-	-	-
Nev.	8	16	2	5	-	-	-	-	-	-
PACIFIC	152	351	59	152	12	28	-	-	-	-
Wash.	15	3	-	-	-	-	-	-	N	N
Oreg.	7	26	3	11	N	N	N	N	N	N
Calif.	108	304	52	138	7	22	N	N	N	N
Alaska	10	7	1	1	-	-	-	-	N	N
Hawaii	12	11	3	2	5	6	-	-	-	-
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	5	-	1	N	N	-	-	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending January 25, 2003, and January 26, 2002 (4th Week)*

Reporting area	Syphilis				Tuberculosis		Typhoid fever		Varicella (Chickenpox)
	Primary & secondary		Congenital		Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002					
UNITED STATES	351	355	9	22	150	452	12	16	906
NEW ENGLAND	2	3	-	-	2	16	-	3	299
Maine	-	-	-	-	-	-	-	-	199
N.H.	-	-	-	-	-	-	-	-	-
Vt.	-	-	-	-	-	-	-	-	73
Mass.	2	1	-	-	1	-	-	2	27
R.I.	-	-	-	-	-	7	-	-	-
Conn.	-	2	-	-	1	9	-	1	-
MID. ATLANTIC	36	29	2	5	65	60	6	3	-
Upstate N.Y.	1	-	-	1	-	1	-	-	-
N.Y. City	19	14	1	2	63	16	6	2	-
N.J.	16	11	1	2	-	24	-	1	-
Pa.	-	4	-	-	2	19	-	-	-
E. N. CENTRAL	52	52	4	1	21	19	2	2	449
Ohio	16	7	-	-	5	5	-	-	70
Ind.	1	8	-	-	7	7	1	-	-
Ill.	10	16	3	1	9	6	-	-	-
Mich.	24	18	1	-	-	-	1	-	363
Wis.	1	3	-	-	-	1	-	2	16
W. N. CENTRAL	6	9	-	-	7	29	-	1	1
Minn.	-	4	-	-	2	6	-	1	-
Iowa	-	-	-	-	-	-	-	-	-
Mo.	1	2	-	-	-	18	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	1
S. Dak.	-	-	-	-	1	-	-	-	-
Nebr.	-	2	-	-	-	-	-	-	-
Kans.	5	1	-	-	4	5	-	-	-
S. ATLANTIC	112	92	3	3	6	80	2	5	150
Del.	-	1	-	-	-	-	-	-	-
Md.	18	9	-	-	-	-	2	1	-
D.C.	5	1	-	-	-	-	-	-	-
Va.	5	3	-	-	3	1	-	-	2
W. Va.	-	-	-	-	1	3	-	-	144
N.C.	14	30	-	2	2	2	-	-	-
S.C.	8	7	1	1	-	2	-	-	4
Ga.	10	13	-	-	-	5	-	1	-
Fla.	52	28	2	-	-	67	-	3	-
E. S. CENTRAL	22	44	-	2	9	30	-	-	-
Ky.	5	1	-	-	-	4	-	-	-
Tenn.	9	20	-	1	-	17	-	-	-
Ala.	8	17	-	-	9	8	-	-	-
Miss.	-	6	-	1	-	1	-	-	-
W. S. CENTRAL	52	52	-	7	2	122	-	2	-
Ark.	7	-	-	-	1	2	-	-	-
La.	8	15	-	-	-	-	-	-	-
Okla.	1	8	-	-	1	1	-	-	-
Tex.	36	29	-	7	-	119	-	2	-
MOUNTAIN	14	19	-	1	4	14	-	-	7
Mont.	-	-	-	-	-	-	-	-	-
Idaho	-	1	-	-	-	-	-	-	-
Wyo.	-	-	-	-	1	1	-	-	2
Colo.	-	-	-	-	1	4	-	-	-
N. Mex.	3	3	-	-	-	2	-	-	-
Ariz.	11	15	-	1	2	4	-	-	-
Utah	-	-	-	-	-	1	-	-	5
Nev.	-	-	-	-	-	2	-	-	-
PACIFIC	55	55	-	3	34	82	2	-	-
Wash.	3	1	-	-	9	7	-	-	-
Oreg.	4	1	-	-	3	2	-	-	-
Calif.	48	53	-	3	10	63	2	-	-
Alaska	-	-	-	-	2	2	-	-	-
Hawaii	-	-	-	-	10	8	-	-	-
Guam	-	-	-	-	-	-	-	-	-
P.R.	7	14	-	2	-	-	-	-	-
V.I.	-	1	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-

N: Not notifiable. U: Unavailable. - : No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE III. Deaths in 122 U.S. cities,* week ending January 25, 2003 (4th 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	572	407	112	31	8	14	47	S. ATLANTIC	1,549	1,006	328	135	38	39	85
Boston, Mass.	162	100	44	12	2	4	16	Atlanta, Ga.	314	193	72	31	9	9	6
Bridgeport, Conn.	37	26	8	-	2	1	3	Baltimore, Md.	235	123	67	31	8	5	19
Cambridge, Mass.	17	15	-	2	-	-	1	Charlotte, N.C.	109	73	24	7	2	3	7
Fall River, Mass.	28	23	4	1	-	-	5	Jacksonville, Fla.	190	137	39	8	3	3	16
Hartford, Conn.	46	25	13	6	1	1	7	Miami, Fla.	144	100	22	16	4	2	10
Lowell, Mass.	24	22	1	1	-	-	-	Norfolk, Va.	49	33	8	3	3	2	3
Lynn, Mass.	12	7	4	1	-	-	-	Richmond, Va.	81	51	21	7	-	2	5
New Bedford, Mass.	29	23	4	2	-	-	3	Savannah, Ga.	31	24	3	-	1	3	2
New Haven, Conn.	U	U	U	U	U	U	U	St. Petersburg, Fla.	50	40	8	-	-	2	-
Providence, R.I.	69	60	4	-	1	4	-	Tampa, Fla.	223	156	41	15	3	6	15
Somerville, Mass.	4	4	-	-	-	-	-	Washington, D.C.	102	57	22	16	5	2	1
Springfield, Mass.	56	41	11	2	1	1	7	Wilmington, Del.	21	19	1	1	-	-	1
Waterbury, Conn.	29	19	7	2	1	-	1	E.S. CENTRAL	1,063	763	197	69	12	22	87
Worcester, Mass.	59	42	12	2	-	3	4	Birmingham, Ala.	225	157	46	13	5	4	12
MID. ATLANTIC	1,259	892	244	67	25	31	92	Chattanooga, Tenn.	75	58	13	2	1	1	6
Albany, N.Y.	44	34	5	2	1	2	5	Knoxville, Tenn.	126	95	23	6	1	1	12
Allentown, Pa.	16	13	2	1	-	-	1	Lexington, Ky.	64	42	11	10	-	1	6
Buffalo, N.Y.	124	98	15	4	3	4	13	Memphis, Tenn.	242	160	48	25	4	5	19
Camden, N.J.	48	26	15	4	1	2	3	Mobile, Ala.	98	79	14	4	-	1	7
Elizabeth, N.J.	23	17	5	-	-	1	1	Montgomery, Ala.	37	32	5	-	-	-	6
Erie, Pa.	42	29	8	3	2	-	4	Nashville, Tenn.	196	140	37	9	1	9	19
Jersey City, N.J.	39	25	9	3	-	2	-	W.S. CENTRAL	1,618	1,079	326	130	40	43	114
New York City, N.Y.	U	U	U	U	U	U	U	Austin, Tex.	96	67	13	12	1	3	8
Newark, N.J.	54	19	19	10	5	1	5	Baton Rouge, La.	77	51	16	4	5	1	5
Paterson, N.J.	29	18	5	2	1	3	1	Corpus Christi, Tex.	60	38	13	7	1	1	5
Philadelphia, Pa.	440	302	94	28	8	8	22	Dallas, Tex.	197	108	52	19	7	11	21
Pittsburgh, Pa. [§]	31	23	8	-	-	-	4	El Paso, Tex.	86	67	13	5	1	-	3
Reading, Pa.	21	15	5	1	-	-	2	Ft. Worth, Tex.	119	80	25	10	-	4	6
Rochester, N.Y.	139	111	23	1	2	2	7	Houston, Tex.	537	344	113	44	19	17	35
Schenectady, N.Y.	30	24	6	-	-	-	13	Little Rock, Ark.	87	59	21	5	1	1	2
Scranton, Pa.	37	32	4	1	-	-	4	New Orleans, La.	U	U	U	U	U	U	U
Syracuse, N.Y.	51	32	11	3	1	4	3	San Antonio, Tex.	165	116	28	14	3	4	10
Trenton, N.J.	42	34	3	3	1	1	1	Shreveport, La.	77	63	12	1	-	1	7
Utica, N.Y.	22	18	3	1	-	-	2	Tulsa, Okla.	117	86	20	9	2	-	12
Yonkers, N.Y.	27	22	4	-	-	1	1	MOUNTAIN	938	650	185	62	17	23	71
E.N. CENTRAL	2,135	1,463	427	148	46	51	160	Albuquerque, N.M.	146	105	30	9	1	1	16
Akron, Ohio	52	39	9	3	1	-	6	Boise, Idaho	43	35	6	1	-	1	4
Canton, Ohio	43	35	4	1	-	3	4	Colorado Springs, Colo.	54	37	11	2	3	1	6
Chicago, Ill.	387	243	90	39	5	10	30	Denver, Colo.	116	62	30	11	4	9	6
Cincinnati, Ohio	108	59	25	10	4	5	5	Las Vegas, Nev.	225	156	42	22	3	1	13
Cleveland, Ohio	113	70	23	11	5	4	4	Ogden, Utah	24	21	1	-	1	1	-
Columbus, Ohio	213	148	40	14	3	8	19	Phoenix, Ariz.	U	U	U	U	U	U	U
Dayton, Ohio	132	102	19	8	2	1	17	Pueblo, Colo.	21	15	5	-	1	-	3
Detroit, Mich.	186	113	45	13	4	11	13	Salt Lake City, Utah	140	88	30	14	2	6	10
Evansville, Ind.	60	45	10	4	1	-	4	Tucson, Ariz.	169	131	30	3	2	3	13
Fort Wayne, Ind.	68	54	7	5	1	1	6	PACIFIC	1,718	1,230	327	97	47	16	132
Gary, Ind.	22	13	4	5	-	-	2	Berkeley, Calif.	14	8	5	-	-	1	3
Grand Rapids, Mich.	81	56	18	1	2	4	8	Fresno, Calif.	177	121	41	7	7	1	14
Indianapolis, Ind.	226	144	62	15	5	-	9	Glendale, Calif.	24	21	2	1	-	-	2
Lansing, Mich.	U	U	U	U	U	U	U	Honolulu, Hawaii	80	60	16	3	-	1	5
Milwaukee, Wis.	104	79	20	4	1	-	12	Long Beach, Calif.	77	56	13	5	1	2	7
Peoria, Ill.	62	44	12	3	1	2	5	Los Angeles, Calif.	544	371	111	36	22	4	42
Rockford, Ill.	61	46	12	2	1	-	5	Pasadena, Calif.	29	20	4	2	3	-	3
South Bend, Ind.	56	42	10	3	1	-	5	Portland, Ore.	84	63	13	6	-	2	5
Toledo, Ohio	84	69	7	5	1	2	5	Sacramento, Calif.	U	U	U	U	U	U	U
Youngstown, Ohio	77	62	10	2	2	1	1	San Diego, Calif.	169	114	31	17	4	2	13
W.N. CENTRAL	567	416	94	27	12	18	43	San Francisco, Calif.	U	U	U	U	U	U	U
Des Moines, Iowa	34	27	3	4	-	-	1	San Jose, Calif.	200	159	34	3	2	2	15
Duluth, Minn.	27	24	2	1	-	-	1	Santa Cruz, Calif.	34	24	7	2	1	-	4
Kansas City, Kans.	31	22	6	1	2	-	1	Seattle, Wash.	114	81	19	8	5	1	7
Kansas City, Mo.	122	86	20	9	3	4	8	Spokane, Wash.	63	46	13	3	1	-	7
Lincoln, Nebr.	53	43	9	1	-	-	4	Tacoma, Wash.	109	86	18	4	1	-	5
Minneapolis, Minn.	78	53	13	3	2	7	4	TOTAL	11,419 [¶]	7,906	2,240	766	245	257	831
Omaha, Nebr.	84	65	11	4	1	3	12								
St. Louis, Mo.	U	U	U	U	U	U	U								
St. Paul, Minn.	48	37	9	1	-	1	5								
Wichita, Kans.	90	59	21	3	4	3	7								

U: Unavailable. -:No reported cases.

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

† Pneumonia and influenza.

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

¶ Total includes unknown ages.

All *MMWR* references are available on the Internet at <http://www.cdc.gov/mmwr>. Use the search function to find specific articles.

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.

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 and on a paid subscription basis for paper copy. 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 World-Wide Web server at <http://www.cdc.gov/mmwr> or from CDC's file transfer protocol server at <ftp://ftp.cdc.gov/pub/publications/mmwr>. To subscribe for paper copy, contact 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. Address inquiries about the *MMWR* Series, including material to be considered for publication, to Editor, *MMWR* Series, Mailstop C-08, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333; telephone 888-232-3228.

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.

☆U.S. Government Printing Office: 2003-533-155/69091 Region IV