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Assessment of the Effectiveness of the 2003–04 Influenza Vaccine Among Children and Adults — Colorado, 2003

The 2003–04 influenza season was characterized by the early onset of influenza activity, reports of severe illness, particularly in children, and predominant circulation of an influenza A (H3N2) virus strain that was antigenically different from the influenza A (H3N2) vaccine strain (*1*). In 2003, a retrospective cohort study among children and a case-control study among adults in Colorado were conducted to provide preliminary data on the effectiveness of the 2003–04 influenza vaccine. This report summarizes the results of those studies, which indicated vaccine effectiveness (VE) among both adults and children, differing from results of a previous study that did not indicate effectiveness among adults (*2*).

Retrospective Pediatric Cohort Study

Using electronic medical records and an immunization registry database from 2003, Kaiser Permanente Colorado and CDC conducted a retrospective cohort study among children aged 6–23 months. The objective of the study was to evaluate the effectiveness of the 2003–04 influenza vaccine against medically attended illnesses that occurred during November 19–December 7, 2003, the period of peak influenza activity in the Denver metropolitan area. Two different outcomes based on *International Classification of Diseases, Ninth Revision* (ICD-9)-coded health-care provider visits were evaluated: influenza-like illness (ILI) and pneumonia and influenza (P&I)*. Children included in the study were aged 6–23 months on October 1, 2003, were continuously enrolled in the Kaiser Permanente Colorado Health Maintenance Organization (HMO) during October 1–December 31, 2003, and had one or more health-care visits to the HMO since birth or ≥8 months before October 1, depending on the child's age. Children who had received two influenza vaccinations ≥14 days before diagnosis of ILI or P&I and who had received at least one of their two influenza vaccinations since September 2003 were classified as fully vaccinated. Children with no influenza vaccination since September 2003 were classified as unvaccinated. Children with 2 doses since September 2003 but who sought medical attention <14 days after their second dose, or children with only 1 dose of influenza vaccine since September 2003 and no previous influenza vaccination, were classified as partially vaccinated. Because patients continued to be vaccinated during the influenza season, vaccination status was included as a time-varying variable by using a multivariate Cox proportional hazard model to estimate a hazard ratio (HR). VE was calculated as one minus HR. Chronic medical conditions†, age, and sex were controlled for in the analysis.

* For ILI, ICD-9 codes were 38, 78.89, 78.99, 460–464.2, 464.4, 465–466, 480–487, 490, and 780.31; and 493, 786.07, 786.1, and 786.2 plus fever ICD-9 code 780.6 or a measured temperature of ≥100.4° F (≥38.0° C) at health-care visit. For P&I, codes were 480–487.

† Medical conditions associated with an increased risk for influenza-related complications include chronic disorders of the pulmonary or cardiovascular systems (e.g., asthma), chronic metabolic diseases (e.g., diabetes, renal dysfunction, and hemoglobinopathies), and immune suppression (e.g., immunosuppression caused by medications or by human immunodeficiency virus) (*3*).

INSIDE

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A total of 5,139 children were included in the analysis; 2,518 (49%) were female, and 382 (7%) had one or more chronic medical conditions. By November 19, totals of 377 (7%) and 1,007 (20%), respectively, were fully or partially vaccinated against influenza; by December 7, totals of 752 (15%) and 1,388 (27%), respectively, were fully or partially vaccinated. The estimated HRs were 0.75 (95% confidence interval [CI] = 0.56–1.00) for ILI and 0.51 (95% CI = 0.29–0.91) for P&I, when fully vaccinated children were compared with unvaccinated children, and corresponded to VE estimates of 25% (p = 0.052) and 49% (p = 0.022), respectively. When partially vaccinated children were compared with unvaccinated children, no statistically significant reduction in ILI or P&I was observed.

Adult Case-Control Study

During December 2003–February 2004, a case-control study was conducted among persons aged 50–64 years by CDC and the Colorado Department of Public Health and Environment (CDPHE). Patients were identified from cases of laboratory-confirmed influenza reported to the CDPHE surveillance system during November 1–December 31. Contact information was not routinely included or required with case reports and limited the number of patients who could be contacted. Patients were interviewed by telephone, and information was collected on demographics, illness onset and duration, vaccination and timing, health-care provider visits, hospitalization, and use of antiviral medication.

Controls were recruited through random-digit–dialing sampling and were matched 3:1 to patients by age, sex, and telephone area code. During telephone interviews, information on demographics, vaccination and timing, and history of ILI was collected. Logistic regression analysis that controlled for influenza-related high-risk conditions (*3*), sex, and telephone area code was used to estimate an odds ratio (OR). VE was calculated as one minus OR.

Of 574 patients reported to CDPHE, 352 (61%) were contacted; 330 (94%) agreed to participate. Patients were excluded if they did not recall influenza testing or experiencing symptoms of illness or if they were vaccinated 1–13 days before influenza illness onset; 304 cases were included in the analysis.

Of 1,675 eligible controls, 1,482 (88%) were contacted; 1,185 (80%) completed the interview. A total of 130 reported having ILI and were excluded; 1,055 controls were included in the analysis. The patients were older (mean age: 57 years among patients and 56 years among controls; p<0.0001), and 166 (50%) had medical conditions placing them at increased risk for influenza-related complications, compared with 221 (21%) of controls (p<0.01) (*3*). Thirty-two percent of patients were hospitalized during their influenza illness. VE was estimated at 52% for those without a high-risk condition and 38% for those with a high-risk condition (Table).

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TABLE. Number and percentage of vaccinated persons aged 50–64 years and vaccine effectiveness (VE), by risk status* — Colorado, 2003

	Patients			Controls			VE	
	Total	Vaccinated		Total	Vaccinated			
Risk status	no.	No.	(%)	no.	No.	(%)	%	(95% CI†)
Not high risk	149	54	(36.2)	829	450	(54.3)	52%	(31%–66%)
High risk	155	86	(55.5)	221	147	(66.5)	38%	(5%–59%)
All	**304**	**140**	**(46.0)**	**1,055§**	**600**	**(56.9)**	**47%**	**(30%–60%)**

* Medical conditions associated with an increased risk for influenza-related complications include chronic disorders of the pulmonary or cardiovascular systems (e.g., asthma), chronic metabolic diseases (e.g., diabetes, renal dysfunction, and hemoglobinopathies), and immune suppression (e.g., immunosuppression caused by medications or by human immunodeficiency virus) (*3*).
† Confidence interval.
§ Includes five controls whose high-risk status was not reported.

Editorial Note: The findings from the two studies indicated that the influenza vaccine had some effectiveness (25%–49% against nonlaboratory-confirmed influenza and 38%–52% against laboratory-confirmed influenza) in preventing illness during the 2003–04 influenza season, supporting recommendations to continue influenza vaccination efforts despite a suboptimal match between the predominant influenza A (H3N2) circulating and vaccine strains (*1,2*). The effectiveness of the inactivated influenza vaccine against laboratory-confirmed illness among healthy adults aged <65 years is expected to be 70%–90% in years when the vaccine and circulating strains are well matched (*3–5*). The estimated 52% VE against laboratory-confirmed influenza among adults with no high-risk conditions in this study was lower, but still provided substantial health benefit. The study among children aged 6–23 months provides further data that 2 doses of vaccine (i.e., a dose of the current vaccine plus a primer dose) are needed to optimize protection compared with a single dose (*3*).

Results from these studies differ from those of a study of health-care workers that did not find the 2003–04 influenza vaccine to be effective against ILI (*2*). However, the health-care worker study might have had an insufficient number of subjects to detect low effectiveness against ILI compared with the pediatric ILI study, which included approximately three times as many subjects in a population expected to have a higher influenza illness attack rate than adults (*3*). In addition, the more specific outcome of medically attended, laboratory-confirmed influenza used in the case-control study of persons aged 50–64 years was more likely to find effectiveness, compared with the less influenza-specific ILI outcome used in the health-care worker study (*1,4,5*).

The findings in this report are subject to at least three limitations. First, because both studies in this report were retrospective and vaccination was not assigned randomly, biases in VE estimates might have occurred. However, these estimates are consistent with other studies that evaluated influenza VE in years with and without an antigenic mismatch by using ILI, laboratory-confirmed influenza, and more severe illness outcomes such as P&I hospitalization (*3–7*). Second, the studies are limited by lack of testing for influenza among the children and among adult controls and lack of validation of influenza vaccination among the adults; however, reporting of influenza vaccination has been found to be sensitive and specific among elderly outpatients (*8*). Third, adults without telephones in the control group were not eligible to participate; persons living in households without telephones might be less likely to report influenza vaccination, compared with those living in households with telephones (*9*).

Influenza vaccine remains the primary means for the prevention of influenza and its complications and can provide benefit even in years when the influenza vaccine and circulating strains are not matched optimally. Efforts to increase vaccination rates in groups at high risk and their contacts are needed to reduce the burden of influenza. In addition, vaccination with 2 doses of influenza vaccine for children not vaccinated previously against influenza is needed to maximize protection. For optimal assessment of influenza VE, prospective studies should be conducted annually.

Acknowledgment

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References

1. CDC. Update: influenza activity—United States and worldwide, 2003–04 season, and composition of the 2004–05 influenza vaccine. MMWR 2004;53:547–52.
2. CDC. Preliminary assessment of the effectiveness of the 2003–04 inactivated influenza vaccine—Colorado, December 2003. MMWR 2004;53:8–11.
3. CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2004;53(No. RR-6).
4. Bridges CB, Thompson WW, Meltzer MI, et al. Effectiveness and cost-benefit of influenza vaccination of healthy working adults: a randomized trial. JAMA 2000;284:1655–63.

5. Edwards KM, Dupont WD, Westrich MK, Plummer WD Jr, Palmer PS, Wright PF. A randomized controlled trial of cold-adapted and inactivated vaccines for the prevention of influenza A disease. J Infect Dis 1994;169:68–76.
6. Nordin J, Mullooly J, Poblete S, et al. Influenza vaccine effectiveness in preventing hospitalizations and deaths in persons 65 years or older in Minnesota, New York, and Oregon: data from 3 health plans. J Infect Dis 2001;184:665–70.
7. Fedson DS, Wajda A, Nicol JP, Hammond GW, Kaiser DL, Roos LL. Clinical effectiveness of influenza vaccination in Manitoba. JAMA 1993;270:1956–61.
8. Mac Donald R, Baken L, Nelson A, Nichol KL. Validation of self-report of influenza and pneumococcal vaccination status in elderly outpatients. Am J Prev Med 1999;16:173–7.
9. CDC. Influenza and pneumococcal vaccination levels among adults aged ≥65 years—United States 1999. MMWR 2001;50:532–7.

Aseptic Meningitis Outbreak Associated With Echovirus 9 Among Recreational Vehicle Campers — Connecticut, 2003

Aseptic meningitis is an inflammation of the tissues covering the brain and spinal cord and caused by a virus, most frequently an enterovirus (*1*). In August 2003, the Connecticut Department of Public Health (CDPH) received a report of three viral meningitis cases among recreational vehicle (RV) campers staying at a campground in northeastern Connecticut. CDPH, assisted by CDC, conducted an investigation, which 1) identified a total of 12 cases of aseptic meningitis and 24 cases of enterovirus-like illness among 201 campers interviewed, 2) demonstrated how transmission of enterovirus from persons with mild illness contributed to the aseptic meningitis outbreak, and 3) determined that crowded conditions inside RVs and in the campground swimming pool likely facilitated spread of enterovirus. Pool operators should check chlorine and pH levels frequently, particularly during peak pool occupancy; adults should take precautions against passing enterovirus to children, who are at greater risk for severe illness.

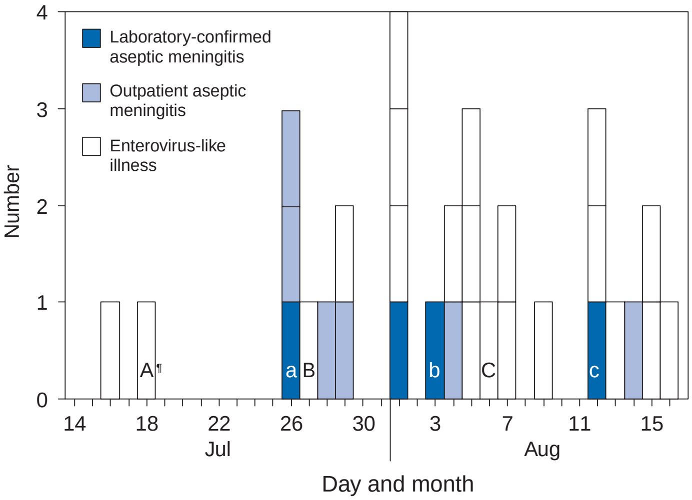
A retrospective cohort study was conducted of seasonal campers (i.e., campers who rented RV sites for the entire summer) via personal interview. Any person who stayed at least one night at a seasonal campsite during the study period was considered a cohort member. Response rate was estimated by using the mean number of campers per campsite to estimate the number at campsites where campers could not be contacted. A meningitis patient was defined as a seasonal camper with headache and either neck stiffness or photophobia, with illness onset during July 16–August 17, 2003. Laboratory-confirmed cases additionally had ≥10 white blood cells/μL identified by CSF analysis. Other acute, self-limited illnesses consistent with enteroviral infections also were identified during the outbreak period. A case of enterovirus-like illness was defined clinically as an acute illness with any one of the following symptoms: headache, neck stiffness, photophobia, sore throat, chills, or exanthem (i.e., acute generalized skin rash) in a seasonal camper with illness onset during July 16–August 17. Primary campsite illnesses were defined as the first acute illness of either case type at a campsite. Univariate and multivariate logistic regression analyses were used to identify predictors for primary illness. Enterovirus polymerase chain reaction (PCR) and amplicon sequencing (*2*) were performed at CDC.

Of an estimated 239 seasonal campers, 201 (84%) completed the study questionnaire. Among the 201 campers, 12 cases of meningitis and 24 other cases of enterovirus-like illness were identified (attack rates: 6% for meningitis and 18% for all illness). Four meningitis patients were hospitalized and had CSF analysis that confirmed aseptic meningitis. At CDC, PCR tests on CSF from three of these patients detected enterovirus serotype echovirus 9 in two samples. The CSF sample for the fourth patient was positive for enterovirus by PCR at a clinical laboratory.

The median age was lower for meningitis patients (14 years; range: 3–42 years) and enterovirus-like illness patients (15 years; range: 3–64 years) than for well campers (38 years; range: 8 months–80 years). Patients were more likely to be female among both patient groups (67%) than among well campers (40%). Illness duration was longer for meningitis patients (median: 7 days; range: 2–28 days) than for enterovirus-like illness patients (median: 3 days; range: 1–21 days). Among the 12 meningitis patients, the most common symptoms were headache (12), stiff neck (10), nausea (10), and photophobia (eight). Among the 24 patients with enterovirus-like illness, the most common symptoms were sore throat (15), headache (12), cough (seven), and diarrhea (six).

Dates of illness onset for meningitis and other enterovirus-like illness cases were similar and clustered in four peaks, 6–8 days apart (Figure). Two enterovirus-like illness cases from a single campsite preceded the first illness peak by 8 days. Four children hospitalized with laboratory-confirmed aseptic meningitis came from four different campsites. Mothers of three of these children had an enterovirus-like illness with onset 6–8 days before their child's illness onset. The secondary campsite attack rate (29%) was greater than the primary rate (9%), and attack rates were higher at campsites with more campers per site: one to two campers per site, 6% (two of 36); three to four campers, 16% (12 of 74); five to six campers, 17% (eight of 47); seven to eight campers, 21% (six of 28); nine to 10 campers, 50% (eight of 16) (age-adjusted trend analysis; $p<0.05$). Primary illness was associated with younger age (odds

FIGURE. Number of cases of laboratory-confirmed aseptic meningitis*, outpatient aseptic meningitis†, and acute enterovirus-like illness§, by date of illness onset — Connecticut, July–August 2003



* Confirmed as ≥10 white blood cells/µL, by cerebrospinal fluid analysis; n = four.
† Headache and either stiff neck or photophobia in a seasonal camper with onset of illness during July 16–August 17, 2003; n = eight (dates of illness onset for two persons were not available).
§ n = 24 (dates of illness onset for two persons were not available).
¶ Mother-child pairs for which the mother's enterovirus-like illness preceded the child's aseptic meningitis illness by an incubation period are marked as Aa, Bb, and Cc.

ratio [OR] for each additional decade of age = 0.77; 95% confidence interval = 0.59–0.99).

Increasing frequency of submerging one's head in the campground pool during the outbreak period was associated with increased risk for primary illness of either case type (age-adjusted OR = 3.3 for one–five times, 5.9 for six–15 times, 6.1 for ≥16 times; $p<0.05$). Campers reported that the pool often was crowded at midday (e.g., "wall-to-wall" swimmers), particularly during weekends. An automated chlorine feeder with stabilized cyanurated chlorine was in use at the pool throughout the day. Chlorine levels were checked twice a day (i.e., at approximately 7 a.m. and 8 p.m.) with a handheld test kit. According to written records, chlorine levels were low (0.5–1.0 mg/L versus the required level of ≥1.5 mg/L) almost every evening throughout late July and August. The pool operator was not certified by a national certification group.

At the time of the initial outbreak report, campground staff were advised to ensure adequate pool chlorination and to clean and disinfect common areas (e.g., bathrooms, bathhouses, and game room). Through printed bulletins and informational postings, all campers were directed to 1) wash their hands frequently, especially after bathroom use, diaper changes, and before eating or preparing food; 2) avoid sharing eating utensils and drinking containers; and 3) shower before using the swimming pool. Parents were instructed to keep children with febrile illness at their campsites until fever and other symptoms resolved.

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Editorial Note: In this aseptic meningitis outbreak, community spread was associated with swimming in a crowded campground pool. Chlorine levels were low in the evening; hot sun and high occupancy likely reduced chlorine levels during the day (*3*), allowing the pool water to become intermittently contaminated with enterovirus.

The cohort's high attack rate was likely facilitated by secondary intrahousehold enterovirus spread among residents of the same campsite promoted by crowding; risk for illness was higher in campsites with more campers. Crowding results in more frequent person-to-person contact and possibly less personal hygiene (e.g., hand washing). Meningitis illness began in three hospitalized patients, one incubation period after their mothers' enterovirus-like illnesses, suggesting that intrahousehold spread from adults to children was a source for several more serious infections.

Echovirus 9 was the predominate enterovirus serotype circulating in the eastern United States during 2003 (*4*) and was identified as the likely etiologic agent in this outbreak. Enterovirus activity typically peaks in temperate climates during the summer and early fall (*5*). Based on meningitis data from Connecticut's hospital admission syndromic surveillance system, the outbreak occurred in the weeks preceding widespread community enteroviral transmission in eastern Connecticut. Enterovirus infections usually are mild illnesses; a small proportion result in aseptic meningitis (*5*).

The findings in this report are subject to at least two limitations. First, although the cases of enterovirus-like illness were consistent clinically with echovirus infection and were linked temporally and epidemically to echovirus 9 aseptic meningitis cases, no laboratory confirmation was attempted. Second, because the pool was closed for the season by the time interview results were analyzed, pool water was not tested for enterovirus.

Ongoing contamination of pool water with enterovirus likely facilitated community transmission. Connecticut's public health code requires that water be tested when a pool opens each day and then with sufficient frequency during bather use to ensure that an adequate disinfection level and pH are maintained. The free available chlorine residual should be ≥1.5 mg/L for stabilized cyanurated chlorine, substantially higher than the 0.8 mg/L required for unstabilized chlorine. Given that an automated chlorine feeder was in use, the frequent low evening chlorine levels suggest little chlorine was available earlier in the day during peak bather usage. This outbreak underscores the importance of testing chlorine and pH during peak pool occupancy, even if levels are appropriate when a pool is opened.

Swimming has been associated with other enteroviral outbreaks (*6–8*) and other infectious disease outbreaks (*9*). To reduce swimming-associated illness, CDC recommends that 1) staff frequently check pool water chlorine and pH levels, particularly during periods of heavy bather use, 2) persons with diarrhea avoid swimming, 3) swimmers shower before pool use and avoid swallowing pool water, and 4) children be taken to restrooms frequently (*3*). In addition, CDC recommends improving pool testing, pool staff training, and public education on appropriate pool use to prevent recreational water-related illness (*10*).

Children are at greater risk for severe manifestations of enteroviral infection, including aseptic meningitis (*1*); adults with enteroviral infection are more likely to experience upper respiratory or "cold" symptoms only. Hygienic precautions need to be taken within households as well as among other community members. Enterovirus is shed in the saliva and feces of infected persons (*5*). To minimize viral spread to children in their care, ill caregivers should wash their hands thoroughly after toilet use and avoid sharing drinks and utensils.

References

1. Rotbart HA. Viral meningitis. Semin Neurol 2000;20:277–92.
2. Oberste MS, Nix WA, Maher K, Pallansch MA. Improved molecular identification of enteroviruses by RT-PCR and amplicon sequencing. J Clin Virol 2003;26:375–7.
3. CDC. Healthy swimming. Your disinfection team: chlorine & pH. Atlanta, Georgia: U.S. Department of Health and Human Services, CDC, 2004. Available at http://www.cdc.gov/healthyswimming/ph_chlorine.htm.
4. CDC. Outbreaks of aseptic meningitis associated with echoviruses 9 and 30 and preliminary surveillance reports on enterovirus activity—United States, 2003. MMWR 2003;52:761–4.
5. American Academy of Pediatrics. Enterovirus (nonpoliovirus) infections. In: Pickering LK, ed. Red Book: 2003 report of the Committee on Infectious Diseases, 26th ed. Elk Grove Village, Illinois: American Academy of Pediatrics, 2003:269–70.
6. Kee F, McElroy G, Stewart D, Coyle P, Watson J. A community outbreak of echovirus infection associated with an outdoor swimming pool. J Pub Health Med 1994;16:145–8.
7. Lenaway DD, Brockmann R, Dolan GJ, Cruz-Uribe F. An outbreak of an enterovirus-like illness at a community wading pool: implications for public health inspection programs. Am J Public Health 1989; 79:889–90.
8. Hawley HB, Morin DP, Geraghty ME, Tomkow J, Phillips CA. Coxsackievirus B epidemic at a boys' summer camp: isolation of virus from swimming water. JAMA 1973;226:33–6.
9. CDC. Surveillance for waterborne-disease outbreaks—United States, 1999–2000. In: CDC Surveillance Summaries (November 22). MMWR 2002;51(No. SS-8).
10. CDC. Surveillance data from swimming pool inspections—selected states and counties, United States, May–September 2002. MMWR 2003;52:513–6.

Epidemiology of Measles — United States, 2001–2003

Measles is a highly infectious, acute viral illness that can cause severe pneumonia, diarrhea, encephalitis, and death. To characterize the epidemiology of measles in the United States during 2001–2003, CDC analyzed data reported by state and local health departments. This report summarizes the results of that analysis, which indicated that no endemic measles virus is circulating in the United States; however, imported measles cases continue to occur and can result in limited indigenous transmission. Maintaining immunity through high vaccination coverage levels is essential to limit the spread of measles from imported cases and prevent measles from becoming endemic.

Following state laws and regulations, health-care providers, laboratories, and other health-care personnel report confirmed measles cases to state and public health departments; this information is forwarded to CDC. Data on variables such as vaccination status, age, complications, transmission setting, and serologic confirmation of cases also are collected.

Measles cases are confirmed either by laboratory test or by meeting the clinical case definition (i.e., illness characterized by generalized maculopapular rash lasting ≥3 days, a temperature of ≥101° F [≥38.3° C], and cough, coryza, or conjunctivitis) and being epidemiologically linked to a laboratory-confirmed case. Cases among persons who were infected outside the United States are classified as imported. Cases among persons who were infected in the United States are classified as indigenous. Indigenous cases are subclassified into three groups: import-linked (i.e., cases linked epidemiologically to an imported case); imported virus (i.e., cases that cannot be linked epidemiologically to an imported case, but for which imported virus has been isolated from the patient or from an epidemiologically linked patient); and unknown source (i.e., all other cases acquired in the United States for which no epidemiologic link or virologic evidence indicates importation).

During 2001–2003, state and local health departments reported annual totals of 116, 44, and 56 confirmed measles cases, respectively (216 total cases). In 2002, a record low measles incidence of 0.15 cases per million population was reported, representing a 59% decrease from the incidence reported in 2000, which had been the lowest previously (*1*).

During 2001–2003, of the total 216 measles cases reported, 96 (44%) were imported, and 120 were indigenous. Of the indigenous cases, 59 (49%) were import-linked, 18 (15%) were imported virus, and 43 (36%) were unknown source cases (Table). Import-associated cases (i.e., imported, import-linked, and imported virus cases) accounted for 80% of all reported cases (Figure).

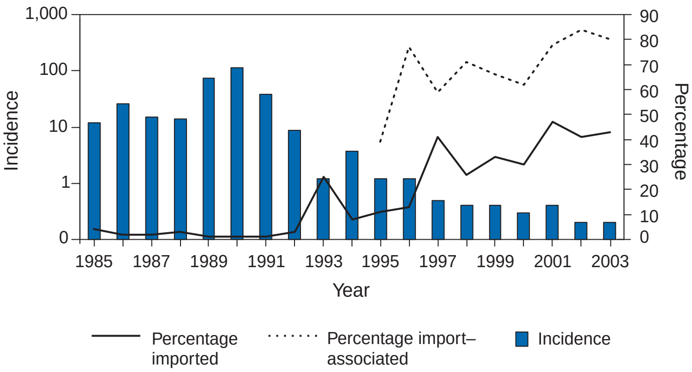
During 2001–2003, the highest percentage (47%) of imported measles cases was reported in 2001 (Figure).

TABLE. Number and percentage of reported cases of measles, by selected characteristics and year — United States, 2001–2003

	2001		2002		2003*		Total	
Characteristic	**No.**	**(%)†**	**No.**	**(%)†**	**No.**	**(%)†**	**No.**	**(%)†**
Sex								
Male	52	(45)	20	(45)	27	(48)	**99**	**(46)**
Female	63	(54)	24	(55)	22	(39)	**109**	**(50)**
Unknown	1	(1)	0	(0)	7	(13)	**8**	**(4)**
Race/Ethnicity								
White, non-Hispanic	46	(40)	23	(52)	19	(34)	**88**	**(41)**
Black, non-Hispanic	3	(3)	2	(5)	1	(2)	**6**	**(3)**
Hispanic	9	(8)	3	(7)	1	(2)	**13**	**(6)**
American Indian/Alaska Native	1	(1)	0	(0)	0	(0)	**1**	**(0)**
Asian/Pacific Islander	46	(40)	9	(20)	23	(41)	**78**	**(36)**
Other	1	(1)	1	(2)	2	(4)	**4**	**(2)**
Unknown	10	(9)	6	(14)	10	(18)	**26**	**(12)**
Age group								
<12 months	16	(14)	18	(41)	12	(21)	**46**	**(21)**
1–4 yrs	10	(9)	3	(7)	9	(16)	**22**	**(10)**
5–19 yrs	29	(25)	4	(9)	14	(25)	**47**	**(22)**
20–39 yrs	48	(41)	16	(36)	13	(23)	**77**	**(36)**
40–44 yrs	9	(8)	2	(5)	2	(4)	**13**	**(6)**
≥45 yrs	4	(3)	1	(2)	6	(11)	**11**	**(5)**
Residency								
United States	81	(70)	36	(82)	38	(68)	**155**	**(72)**
Other countries	35	(30)	8	(18)	18	(32)	**61**	**(28)**
Case classification								
Imported cases	54	(47)	18	(41)	24	(43)	**96**	**(44)**
Indigenous cases (total)	62	(53)	26	(59)	32	(57)	**120**	**(56)**
Import-linked cases	25	(40)	15	(58)	19	(59)	**59**	**(49)**
Imported virus	12	(19)	4	(15)	2	(6)	**18**	**(15)**
Unknown source	25	(40)	7	(27)	11	(34)	**43**	**(36)**
Total reported cases	**116**	**(100)**	**44**	**(100)**	**56**	**(100)**	**216**	**(100)**
Vaccination status								
U.S. residents (total in age groups§)								
1 dose	19	(27)	4	(21)	4	(15)	**27**	**(23)**
2 doses	3	(4)	1	(5)	5	(19)	**9**	**(8)**
Not vaccinated/unknown	48	(69)	14	(74)	18	(67)	**80**	**(69)**
Total	**70**	**(100)**	**19**	**(100)**	**27**	**(100)**	**116**	**(100)**
Non-U.S. residents (total in age groups§)								
1 dose	3	(12)	1	(17)	1	(9)	**5**	**(12)**
2 doses	1	(4)	0	(0)	0	(0)	**1**	**(2)**
Not vaccinated/unknown	21	(84)	5	(83)	10	(91)	**36**	**(86)**
Total	**25**	**(100)**	**6**	**(100)**	**11**	**(100)**	**42**	**(100)**
No. outbreaks	10	—	3	—	3	—	**16**	—
No. outbreaks with imported source documented	9	—	2	—	2	—	**13**	—
Maximum outbreak size	14	—	13	—	12	—	**N/A¶**	—
No. measles-associated deaths	0	—	0	—	2	—	**2**	—
No. states reporting confirmed cases	22	—	17	—	15	—	**31**	—
Viral genotypes	D3, D4, D5, D7, H1, H2		B3, D3, D4, D7, D8		D4, D6, D7, H1		**N/A**	—

* Provisional data.
† Percentages might not total 100 because of rounding.
§ Age groups for which vaccine is recommended in the United States.
¶ Not applicable.

FIGURE. Incidence* and percentage of import-associated† measles cases, by year — United States,1985–2003§



* Per million population.
† Imported, import-linked, and imported virus cases.
§ Data for 2003 are provisional.

Imported cases occurred in 55 international visitors traveling to the United States and 41 U.S. residents exposed to measles while traveling abroad. The largest numbers of imported cases were from China and Japan.

The 96 imported cases during 2001–2003 resulted in 42 chains of indigenous transmission. The greatest numbers of cases linked epidemiologically to an imported case were 10 in 2001, 12 in 2002, and nine in 2003. The longest durations of measles transmission following imported cases were 34 days in 2001, 27 days in 2002, and 62 days in 2003. Of the unknown source cases, 29 (67%) were isolated cases, eight (19%) were in chains of transmission involving two cases, and six (19%) were in two outbreaks (i.e., three or more linked cases).

During 2001–2003, nine genotypes were identified among measles viruses detected in the United States. Measles virus was isolated from 27 chains of transmission, including 14 (16%) of 87 isolated cases, four (31%) of 13 two-case chains of transmission, and nine (56%) of 16 outbreaks. The most commonly identified genotypes were D7 and H1, which occurred in six and five chains of transmission, respectively.

During 2001–2003, a total of 21 states reported no confirmed measles cases, and 23 reported one to nine cases. States reporting ≥10 cases (Alabama [12], California [50], Hawaii [27], New York [24], Pennsylvania [18], and Washington [16]) accounted for 69% of all cases. Fifteen states reported unknown source cases, and two states (California [14] and Hawaii [six]) reported more than five such cases. Of the 3,140 counties in the United States, 78 reported one or more confirmed cases; 14 counties reported four or more cases (range: four to 27 cases). Twenty-six counties reported unknown source cases, but no county reported more than six.

Of 155 (72%) cases in U.S. residents, 116 (75%) occurred in vaccine-eligible persons (i.e., aged >12 months and born after 1957); 27 (23%) had received 1 dose of measles-containing vaccine (MCV), nine (8%) had received 2 doses of MCV, and 80 (69%) were either not vaccinated or had unknown vaccination status. Of 61 (28%) cases in non-U.S. residents, 42 (69%) occurred in vaccine-eligible persons; five (12%) had received 1 dose of MCV, one (2%) had received 2 doses of MCV, and 36 (86%) were either not vaccinated or had unknown vaccination status.

In 2003, two measles-related deaths were reported. The first was attributed to measles encephalitis in a child aged 13 years who had chronic granulomatous disease, received a bone marrow transplant in October 2002, and died in January 2003. Measles was confirmed by a positive serologic test for measles IgM and isolation of measles virus from a brain biopsy. Despite an intensive search, no additional cases were detected in the surrounding area. The second measles-related death was in an international traveler aged 75 years infected in Israel who had measles pneumonitis and encephalopathy. Measles was confirmed by reverse transciptase-polymerase chain reaction from nasopharyngeal swab and urine.

During 2001–2003, a total of 16 measles outbreaks were reported: 10 in 2001 and three each in 2002 and 2003. In 2001, the largest number of cases occurred in a multistate outbreak involving 13 imported cases and one contact among internationally adopted children (*2*). In 2002, the largest outbreak was associated with a day care center in Alabama (*3*); 10 infants who shared the same day care room were exposed to measles from an infant who was infected in the Philippines and attended the day care center. In 2003, the largest outbreak occurred in Hawaii, accounting for 12 cases in persons ranging in age from 3 months to 21 years. This outbreak began simultaneously with a measles outbreak in the Republic of the Marshall Islands (RMI) (*4*) and included three imported cases from RMI.

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Editorial Note: The findings in this report document a new record low number of cases since measles became a nationally reportable disease in the United States in 1912. The low reported incidence (i.e., less than one case per million) since 1997 and the high percentage of import-associated cases support the conclusion that measles is not endemic in the United States (*5*). Lack of endemic transmission also is demonstrated by the limited secondary transmission from imported cases. During 2001–2003, as in the previous 4 years, some measles cases of unknown sources were reported for which no link to importation was detected. However, these cases do not occur in temporal or geographic clustering patterns that might suggest a chain of endemic transmission. Moreover, the diversity of measles virus genotypes observed in the United States since 1997 (*6*) reflects multiple imported sources of virus and indicates that no genotype of measles is endemic in the United States.

The outbreak in Alabama in 2002, with 10 of 10 exposed infants infected, demonstrates the high transmissibility of measles when the virus is introduced into susceptible populations; susceptibility to measles is high among U.S. infants. Approximately 95% of women giving birth after 2000 were born after measles vaccine licensure in 1963. Women born in the United States after 1963 transfer less measles antibody to their infants than women born before 1963. This results in increased susceptibility to measles among infants aged <12 months in the United States (*7*). However, the high level of measles immunity in the United States makes exposure to measles virus a rare event among infants. Infants traveling internationally should be vaccinated as early as age 6 months (*8*).

Although measles is no longer endemic in the United States, imported cases continue to cause occasional limited transmission of measles. Even limited transmission can result in measles-associated deaths. The small number of import-linked cases after an importation demonstrates that population immunity to measles in the United States is sufficiently high to avoid sustained transmission of measles virus (*9*). The high levels of immunity result from high levels (i.e., >90%) of vaccine coverage with 1 dose of MCV among preschool children (*10*) and the required 2 doses of MCV for children attending school. Maintaining high levels of immunity through high vaccine coverage levels is essential to limit spread from imported cases and prevent measles from again becoming endemic in the United States. In addition, encouraging and assisting other countries to improve measles control can reduce the risk for importation.

Acknowledgment

The data in this report are based on contributions by state and local health departments.

References

1. CDC. Measles—United States, 2000. MMWR 2002;51:120–3.
2. CDC. Measles outbreak among internationally adopted children arriving in the United States, February–March 2001. MMWR 2002;51:1115–6.
3. CDC. Measles outbreak associated with an imported case in an infant—Alabama, 2002. MMWR 2004;53:30–3.
4. CDC. Measles epidemic—Majuro Atoll, Republic of the Marshall Islands, July 13–September 13, 2003. MMWR 2003;52:888–9.
5. Papania M, Seward J, Redd S, Lievano F, Harpaz R, Wharton M. The epidemiology of measles in the United States, 1997–2001. J Infect Dis 2004 (in press).
6. Rota PA, Liffick SL, Rota JS, et al. Molecular epidemiology of measles viruses in the United States, 1997–2001. Emerg Infect Dis 2002;8:902–8.
7. Papania M, Baughman A, Lee S, et al. Increased susceptibility to measles in infants in the United States. Pediatrics 1999;104:e59.
8. CDC. Measles, mumps, and rubella—vaccine use and strategies for elimination of measles, rubella, and congenital rubella syndrome and control of mumps: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1998;47(No. RR-8).
9. De Serres G, Gay NJ, Farrington CP. Epidemiology of transmissible diseases after elimination. Am J Epidemiol 2000;151:1039–48.
10. CDC. National, state, and urban area vaccination levels among children aged 19–35 months—United States, 2002. MMWR 2003;52:728–32.

Congenital Syphilis — United States, 2002

Congenital syphilis (CS) occurs when the spirochete *Treponema pallidum* is transmitted from a pregnant woman with syphilis to her fetus. Untreated syphilis during pregnancy can lead to stillbirth, neonatal death, or infant disorders such as deafness, neurologic impairment, and bone deformities. This report summarizes 2002 CS surveillance data, which indicated that CS rates have decreased among all racial/ethnic minority populations and in all regions of the United States except the Northeast. To further decrease CS, collaborative efforts among health-care providers, health insurers, policymakers, and the public are needed to increase prenatal care and syphilis screening during pregnancy for women at risk for delivering infants with CS.

CDC analyzed national surveillance data for CS cases* reported to state and local health departments in 2002. Rates of CS per 100,000 live-born infants were determined from U.S. natality data†. During 2000–2002, the rate of CS decreased 21.1%, from 14.2 to 11.2 cases per 100,000 live births, and primary and secondary (P&S) syphilis rates among women declined 35.3%, from 1.7 to 1.1 cases per 100,000 women; cases of CS decreased from 578 cases in 2000 to 451

* A case of CS was defined in a live-born infant who 1) had a reactive treponemal serologic test for syphilis and evidence of CS on physical examination, radiologic test, or cerebrospinal fluid (CSF) test; 2) had a reactive fluorescent treponemal antibody absorbed–19S-IgM antibody test or IgM enzyme-linked immunosorbent assay; 3) had *T. pallidum* identified from external lesions, placenta, umbilical cord, or autopsy specimens, or whose mother had a syphilitic lesion at delivery; 4) was born to a woman with untreated or inadequately treated syphilis before or during pregnancy; or 5) was born to a woman with syphilis whose serologic response to penicillin therapy was not documented or was documented to be inadequate (i.e., less than a fourfold decline in nontreponemal serologic titer) and had either a radiologic and/or CSF test consistent with CS or did not undergo a radiologic and/or CSF examination for signs of syphilis. The definition also included stillbirths among women with untreated syphilis.

† From the National Center for Health Statistics' vital statistics natality tapes for 1989–2002. Available at http://www.cdc.gov/nchs/births.htm.

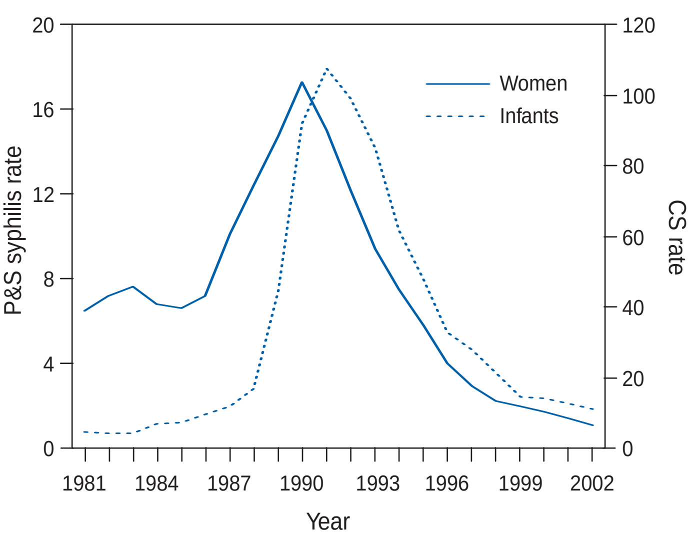
cases in 2002. The declines in CS rates among infants and P&S syphilis rates among women during 2000–2002 continue a pattern observed during the 1990s; CS rates and P&S syphilis rates among women have declined every year since 1991 (Figure 1).

During 2000–2002, the rate of CS declined in all racial/ethnic minority populations in the United States. The rate of CS declined 50.6% among American Indian/Alaska Native infants, 22.4% among Hispanic infants, 21.4% among Asian/Pacific Islander infants, and 19.8% among non-Hispanic black infants; the rate remained unchanged among non-Hispanic white infants (Table). In addition, rates of CS declined in all regions§ of the United States except the Northeast. The rate of CS declined 29.5% in the South, 22.9% in the West, and 12.5% in the Midwest; the rate increased 0.9% in the Northeast (Table). In 2002, CS cases were reported from 138 (4.4%) of the 3,139 U.S. counties; in 2000, cases were reported from 170 (5.4%) counties.

Among the 451 cases of CS reported in 2002, a total of 333 (73.8%) occurred because the mother had no documented treatment or received inadequate treatment of syphilis before or during pregnancy (Figure 2); many of these cases occurred

§ *Northeast*: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; *Midwest*: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; *South*: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; and *West*: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

FIGURE 1. Rates of congenital syphilis (CS) among infants* and primary and secondary (P&S) syphilis among women†, by year — United States, 1981–2002



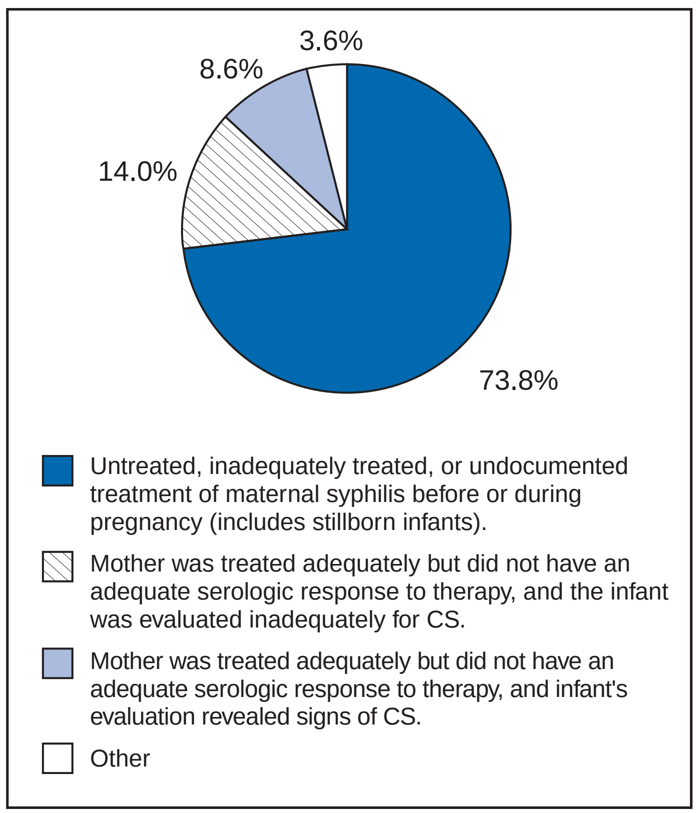
* Per 100,000 live-born infants.
† Per 100,000 population.

TABLE. Number and rate* of congenital syphilis (CS) cases among infants, by year, race/ethnicity, and region — United States, 2000–2002

Characteristic	2000 No.	2000 Rate	2001 No.	2001 Rate	2002 No.	2002 Rate
Race/Ethnicity						
White, non-Hispanic	37	1.5	48	2.0	35	1.5
Black, non-Hispanic	331	54.5	261	44.1	254	43.7
Hispanic	171	21.0	162	19.0	143	16.3
Asian/Pacific Islander	11	5.6	5	2.5	9	4.4
American Indian/ Alaska Native	6	15.4	7	18.0	3	7.6
Other†	3	—	2	—	1	—
Unknown†	19	—	13	—	6	—
Region§						
Northeast	74	10.7	79	11.5	73	10.8
Midwest	101	11.2	96	10.8	86	9.8
South	287	19.3	228	15.4	202	13.6
West	116	11.8	95	9.7	90	9.1
Total	**578**	**14.2**	**498**	**12.4**	**451**	**11.2**

* Per 100,000 live-born infants.
† Rates were not calculated because denominator cannot be characterized.
§ *Northeast*: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; *Midwest*: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; *South*: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; and *West*: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

FIGURE 2. Diagnoses of congenital syphilis (CS) — United States, 2002



among infants born to women who had no prenatal care or no documented prenatal care. In 63 (14.0%) cases, the mother was treated adequately but did not have an adequate serologic response to therapy, and the infant was evaluated inadequately for CS. In 39 (8.6%) cases, the mother was treated adequately but did not have an adequate serologic response to therapy, and the infant's evaluation revealed laboratory or clinical signs of CS. A total of 16 (3.6%) cases were reported for other reasons.

In 288 (63.9%) CS cases reported in 2002, the mother received prenatal care; the mother did not receive prenatal care in 130 (28.8%) cases, and no information on prenatal care was reported for 33 (7.3%) cases. Use of prenatal care by mothers of infants with CS did not differ substantially in 2002 compared with 2000 (*1*). In 2002, the trimester when the first prenatal visit occurred could be determined for 238 (82.6%) of the 288 mothers who received prenatal care; 86 initiated care during the first trimester of pregnancy, 93 during the second trimester, and 59 during the third trimester. A total of 18 (30.5%) mothers who initiated prenatal care during the third trimester did so <30 days before delivery. In 2002, among infants with CS, 18 (4.0%) were stillborn, and eight (1.8%) died within 30 days of delivery.

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Editorial Note: Decreases in CS rates closely parallel decreases in P&S syphilis rates among women, and interventions designed to prevent, detect, and treat syphilis among women of reproductive age likely have played an important role in the decline of CS rates. In 1998, efforts to eliminate syphilis were initiated in the United States, and prevention of CS was a key objective of the National Plan to Eliminate Syphilis, which was launched the following year (*2*). Elimination efforts initially focused on syphilis among racial/ethnic minority populations and persons living in the South, two populations with the highest CS and P&S syphilis rates. Although rates of CS are still substantially higher among infants born to women in racial/ethnic minority populations, declines in CS rates have been greatest among minority women and women living in the South. Early detection and treatment of syphilis among women before or during pregnancy are integral to reducing rates of CS. Syphilis elimination activities that might have reduced the occurrence of CS include 1) enhanced screening of women at high risk for acquiring syphilis, 2) efforts to increase provider awareness, education, and training regarding syphilis, and 3) efforts to increase awareness of the disease among communities with high rates of infection.

Although the rate of CS declined 63.3% during 1997–2002, rates of P&S syphilis have increased recently among men, particularly men who have sex with men (*3*), and enhanced national and local prevention efforts have been directed toward this population. Continued progress toward reducing CS will require that syphilis elimination efforts among women of reproductive age be maintained.

Ensuring that all women receive prenatal care and are screened for syphilis during pregnancy will reduce the incidence of CS. Lack of prenatal care and late or limited prenatal care continue to be important factors associated with CS (*4,5*). In 2002, a total of 29% of mothers of infants with reported CS did not receive prenatal care, and fewer than half of mothers who did receive prenatal care initiated it during their first trimester of pregnancy.

Inadequate health-care provider adherence to CS screening recommendations also can result in CS. In a 1999–2000 national survey, 14% of obstetricians/gynecologists did not report routinely screening pregnant women for syphilis (*6*), and many providers who do screen for syphilis do so only once during pregnancy. CDC recommends more frequent testing among pregnant women at high risk (e.g., uninsured women, women living in poverty, sex workers, and illicit drug users) or those who live in areas of excess syphilis morbidity (*7*). In some counties with a high incidence of syphilis, only 16% of mothers had at least two documented prenatal syphilis tests, and only 46% had a documented syphilis test at delivery (*8*).

The findings in this report are subject to at least three limitations. First, because the quality of surveillance data varies at local and state levels, case definitions might have been applied inconsistently in some areas. Second, because of difficulties in diagnosing CS in asymptomatic infants who were exposed to syphilis in utero, reporting of asymptomatic CS cases might be incomplete. Finally, because of difficulties in obtaining medical records during case investigations, maternal treatment history and infant laboratory data reporting were incomplete.

Although the incidence of CS has decreased substantially since implementation of syphilis elimination activities, the majority of CS cases reported in 2002 were preventable. Community-based organizations, health-care providers, and government organizations can assist in preventing CS by collaborating to promote access to and use of comprehensive prenatal care for women who are uninsured or who are covered by public insurance programs (e.g., Medicaid). In addition, the findings in this report underscore the need to improve prenatal health-care providers' adherence to screening and treatment practices for pregnant women and to address socioeconomic factors associated with syphilis.

Ongoing efforts to form and maintain coalitions developed to eliminate syphilis can assist in decreasing the prevalence of syphilis among women of reproductive age and the incidence of CS.

Acknowledgment

The data in this report are based on contributions by state and local health departments.

References

1. CDC. Congenital syphilis—United States, 2000. MMWR 2001;50:573–7.
2. CDC. The national plan to eliminate syphilis from the United States. Atlanta, Georgia: U.S. Department of Health and Human Services, CDC, National Center for HIV, STD, and TB Prevention, 1999:10–1.
3. CDC. Primary and secondary syphilis—United States, 2002. MMWR 2003;52:1117–20.
4. Southwick KL, Guidry HM, Weldon MM, Mertz KJ, Berman SM, Levine WC. An epidemic of congenital syphilis in Jefferson County, Texas, 1994–1995: inadequate prenatal syphilis testing after an outbreak in adults. Am J Public Health 1999;89:557–60.
5. Warner L, Rochat RW, Fichtner RR, Stoll BJ, Nathan L, Toomey KE. Missed opportunities for congenital syphilis prevention in an urban southeastern hospital. Sex Transm Dis 2001;28:92–8.
6. Hogben M, St. Lawrence J, Kasprzyk D, et al. Sexually transmitted disease screening by United States obstetricians and gynecologists. Obstet Gynecol 2002;100:801–7.
7. CDC. Sexually transmitted diseases treatment guidelines 2002. MMWR 2002;51(No. RR-6).
8. Schrag SJ, Arnold KE, Mohle-Boetani JC, et al. Prenatal screening for infectious diseases and opportunities for prevention. Obstet Gynecol 2003;102:753–60.

West Nile Virus Activity — United States, August 4–10, 2004

During August 4–10, a total of 89 cases of human West Nile virus (WNV) illness were reported from 14 states (Alabama, Arizona, California, Florida, Illinois, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, New Mexico, North Dakota, South Dakota, and Wyoming).

During 2004, a total of 24 states have reported a total of 495 cases of human WNV illness to CDC through ArboNET (Table, Figure). Of these, 274 (55%) cases were reported from Arizona. A total of 281 (58%) of the 495 cases occurred in males; the median age of patients was 51 years (range: 1 month–99 years). Illness onset ranged from April 20 to August 3; 10 cases were fatal.

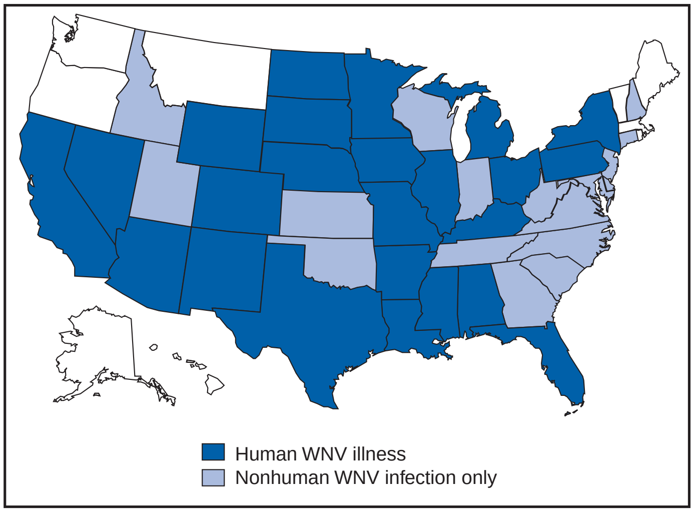
A total of 46 presumptive West Nile viremic blood donors (PVDs) have been reported to ArboNET in 2004. Of these, 33 (72%) were reported from Arizona, seven from California, three from South Dakota, and one each from Colorado, Iowa, and New Mexico. Of the 46 PVDs, two persons aged 66 and 69 years subsequently had neuroinvasive illness, and

TABLE. Number of human cases of West Nile virus (WNV) illness, by state — United States, 2004*

State	Neuroinvasive disease†	West Nile fever§	Other clinical/ unspecified¶	Total reported to CDC**	Deaths
Alabama	3	0	0	3	0
Arizona	109	26	139	274	3
Arkansas	1	2	0	3	0
California	38	50	14	102	2
Colorado	9	35	0	44	0
Florida	7	3	0	10	1
Illinois	2	1	1	4	0
Iowa	1	2	0	3	1
Kentucky	0	1	0	1	0
Louisiana	1	0	0	1	0
Michigan	1	0	0	1	0
Minnesota	1	2	0	3	0
Mississippi	3	0	0	3	1
Missouri	1	1	1	3	0
Nebraska	0	1	0	1	0
Nevada	2	0	0	2	0
New Mexico	4	6	1	11	0
New York	2	1	0	3	0
North Dakota	0	2	0	2	0
Ohio	1	0	0	1	1
Pennsylvania	1	0	0	1	0
South Dakota	2	11	0	13	0
Texas	2	1	0	3	1
Wyoming	1	2	0	3	0
Total	**192**	**147**	**156**	**495**	**10**

* As of August 10, 2004.
† Cases with neurologic manifestations (i.e., West Nile meningitis, West Nile encephalitis, and West Nile myelitis).
§ Cases with no evidence of neuroinvasion.
¶ Illnesses for which sufficient clinical information was not provided.
** Total number of human cases of WNV illness reported to ArboNet by state and local health departments.

FIGURE. Areas reporting West Nile virus (WNV) activity — United States, 2004*



* As of 3 a.m., Mountain Standard Time, August 10, 2004.

seven persons (median age: 55 years; range: 22–72 years) subsequently had West Nile fever.

In addition, during 2004, a total of 2,171 dead corvids and 342 other dead birds with WNV infection have been reported from 35 states. WNV infections have been reported in horses from 24 states (Alabama, Arizona, Arkansas, California, Colorado, Florida, Idaho, Illinois, Iowa, Kentucky, Minnesota, Mississippi, Missouri, Nevada, New Mexico, North Carolina, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Virginia, Wisconsin, and Wyoming) and in a dog from New Mexico. Two unidentified animal species with WNV infection were reported from Illinois and Nevada. WNV seroconversions have been reported in 336 sentinel chicken flocks from seven states (Arizona, California, Delaware, Florida, Louisiana, Nebraska, and Nevada) and in two wild hatchling birds from Ohio. Three seropositive sentinel horses were reported from Puerto Rico. A total of 2,216 WNV-positive mosquito pools have been reported from 27 states (Arizona, Arkansas, California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Michigan, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New Mexico, New York, Ohio, Pennsylvania, South Dakota, Tennessee, Texas, Utah, and Virginia).

Additional information about national WNV activity is available from CDC at http://www.cdc.gov/ncidod/dvbid/westnile/index.htm and at http://westnilemaps.usgs.gov.

Notice to Readers

Public Comment Sought on CDC's Vaccine Safety

In consultation with outside stakeholders, the CDC has undertaken a review of vaccine safety activities at CDC. As part of this effort, the CDC is seeking public comments regarding the current state of the agency's vaccine safety program and to identify ways in which excellence in vaccine safety monitoring, research and communication can be maximized and sustained in the future. Comments should focus on the objectives listed below:

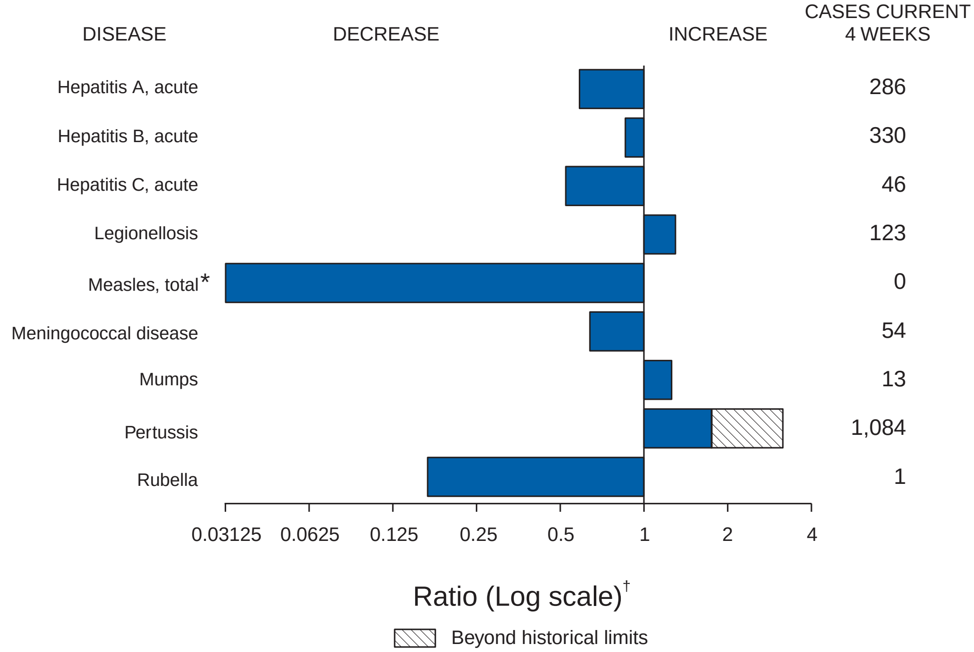
1) Review the structure, function, credibility, effectiveness, efficiency and support of CDC's vaccine safety program and assess how it can be maximized and sustained.
   - Assess the program's ability to detect emerging or rare adverse events.
   - Assess the capacity of the program to provide comprehensive monitoring of the growing number of vaccines.
2) Review the intramural and extramural collaborative activities of the vaccine safety program and determine their effectiveness and efficiency.
   - Assess additional steps CDC can institute to enhance coordination with other federal agencies and partners, including consumer and advocacy groups.
3) Determine the optimal organizational location for vaccine safety activities within the CDC to ensure scientific objectivity, transparency and oversight while at the same time ensuring that program priorities are appropriately established and are relevant to the immunization program and other stakeholder needs.

CDC will post presentations of facts about CDC's vaccine safety activities on the CDC Web site so that the public can make informed comments about the objectives listed above. The link to the objectives is at http://www.cdc.gov/od/vaccsafe/comments.htm. The links to the presentations are also provided on the Web site.

We invite the public to review the available information and follow the instructions for providing comments and input. The public comment period will end on October 12, 2004.

If you have any questions or need more information, please email the following address: vaccsafe@cdc.gov.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals August 7, 2004, with historical data



* No measles cases were reported for the current 4-week period yielding a ratio for week 31 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 August 7, 2004 (31st Week)*

	Cum. 2004	Cum. 2003		Cum. 2004	Cum. 2003
Anthrax	-	-	Hemolytic uremic syndrome, postdiarrheal†	67	83
Botulism:	-	-	HIV infection, pediatric†¶	98	135
foodborne	8	8	Measles, total	18**	38††
infant	42	38	Mumps	120	136
other (wound & unspecified)	8	16	Plague	-	1
Brucellosis†	65	56	Poliomyelitis, paralytic	-	-
Chancroid	18	36	Psittacosis†	5	7
Cholera	4	1	Q fever†	36	49
Cyclosporiasis†	123	49	Rabies, human	3	1
Diphtheria	-	-	Rubella	16	6
Ehrlichiosis:	-	-	Rubella, congenital syndrome	-	1
human granulocytic (HGE)†	118	137	SARS-associated coronavirus disease† §§	-	7
human monocytic (HME)†	100	113	Smallpox† ¶¶	-	NA
human, other and unspecified	6	24	*Staphylococcus aureus*:	-	-
Encephalitis/Meningitis:	-	-	Vancomycin-intermediate (VISA)† ¶¶	4	NA
California serogroup viral† §	18	37	Vancomycin-resistant (VRSA)† ¶¶	1	NA
eastern equine† §	-	8	Streptococcal toxic-shock syndrome†	63	120
Powassan† §	-	-	Tetanus	7	7
St. Louis† §	2	8	Toxic-shock syndrome	61	78
western equine† §	-	-	Trichinosis	5	-
Hansen disease (leprosy)†	44	53	Tularemia†	41	40
Hantavirus pulmonary syndrome†	11	16	Yellow fever	-	-

-: No reported cases.
* Incidence data for reporting years 2003 and 2004 are provisional and cumulative (year-to-date).
† Not notifiable in all states.
§ Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNet Surveillance).
¶ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update July 25, 2004.
** Of 18 cases reported, 10 were indigenous, and eight were imported from another country.
†† Of 38 cases reported, 25 were indigenous, and 13 were imported from another country.
§§ Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (notifiable as of July 2003).
¶¶ Not previously notifiable.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending August 7, 2004, and August 2, 2003 (31st Week)*

Reporting area	AIDS		Chlamydia†		Coccidiodomycosis		Cryptosporidiosis		Encephalitis/Meningitis West Nile§	
	Cum. 2004¶	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	23,710	26,307	507,115	506,889	3,438	2,031	1,477	1,344	191	556
NEW ENGLAND	775	907	17,618	16,093	-	-	86	93	-	2
Maine	10	49	1,180	1,168	N	N	14	8	-	-
N.H.	29	22	890	913	-	-	16	12	-	1
Vt.	13	11	613	601	-	-	12	18	-	-
Mass.	236	371	8,051	6,296	-	-	29	41	-	1
R.I.	82	68	1,948	1,668	-	-	3	9	-	-
Conn.	405	386	4,936	5,447	N	N	12	5	-	-
MID. ATLANTIC	5,023	6,201	64,583	62,936	-	-	228	181	3	18
Upstate N.Y.	625	645	13,344	11,341	N	N	58	43	-	-
N.Y. City	2,759	3,193	19,549	20,832	-	-	50	64	2	-
N.J.	923	1,045	10,050	9,467	-	-	12	10	-	2
Pa.	716	1,318	21,640	21,296	N	N	108	64	1	16
E.N. CENTRAL	1,946	2,622	84,262	91,186	8	6	354	368	4	13
Ohio	240	463	20,212	24,761	N	N	93	53	1	8
Ind.	257	346	10,379	9,985	N	N	47	34	-	3
Ill.	961	1,236	23,014	28,249	-	-	13	47	2	1
Mich.	382	452	21,232	18,082	8	6	87	57	1	1
Wis.	106	125	9,425	10,109	-	-	114	177	-	-
W.N. CENTRAL	483	490	30,439	29,297	4	2	213	153	4	92
Minn.	120	96	5,555	6,362	N	N	73	53	1	4
Iowa	37	54	3,642	3,327	N	N	42	32	-	8
Mo.	211	233	11,439	10,515	3	1	36	14	1	-
N. Dak.	13	3	920	921	N	N	8	10	-	10
S. Dak.	7	7	1,460	1,485	-	-	23	23	2	29
Nebr.**	18	33	3,055	2,610	1	1	15	6	-	29
Kans.	77	64	4,368	4,077	N	N	16	15	-	12
S. ATLANTIC	7,289	7,617	98,853	94,700	-	3	261	177	7	18
Del.	105	146	1,696	1,799	N	N	-	3	-	-
Md.	808	878	11,169	9,638	-	3	11	11	-	-
D.C.	460	724	1,716	1,937	-	-	8	4	-	-
Va.	403	625	13,209	11,144	-	-	29	16	-	3
W. Va.	33	53	1,664	1,471	N	N	3	3	-	-
N.C.	401	783	16,909	15,105	N	N	43	19	-	2
S.C.**	428	497	9,708	8,184	-	-	9	2	-	1
Ga.	1,034	1,205	17,653	20,793	-	-	86	69	-	2
Fla.	3,617	2,706	25,129	24,629	N	N	72	50	7	10
E.S. CENTRAL	1,179	1,143	33,371	32,917	3	1	57	65	6	23
Ky.	130	98	3,368	4,845	N	N	23	15	-	3
Tenn.**	466	517	13,316	11,807	N	N	12	24	-	2
Ala.	295	272	6,780	8,720	-	-	13	23	3	8
Miss.	288	256	9,907	7,545	3	1	9	3	3	10
W.S. CENTRAL	2,978	2,695	65,796	63,808	2	-	40	37	4	174
Ark.	130	106	4,736	4,579	1	-	12	5	1	4
La.	606	403	13,182	13,025	1	-	-	2	1	34
Okla.	120	136	6,978	6,533	N	N	13	7	-	7
Tex.	2,122	2,050	40,900	39,671	-	-	15	23	2	129
MOUNTAIN	861	964	26,129	29,514	2,200	1,371	91	66	125	216
Mont.	5	10	1,306	1,297	N	N	29	13	-	6
Idaho	9	16	1,725	1,473	N	N	9	15	-	-
Wyo.	8	5	647	564	1	1	2	2	1	15
Colo.	166	214	5,177	7,540	N	N	31	14	9	181
N. Mex.	118	71	2,586	4,473	9	5	4	4	4	12
Ariz.	331	433	9,837	8,619	2,134	1,338	13	3	109	2
Utah	44	40	2,142	2,192	18	4	2	9	-	-
Nev.	180	175	2,709	3,356	38	23	1	6	2	-
PACIFIC	3,176	3,668	86,064	86,438	1,221	648	147	204	38	-
Wash.	215	287	10,380	9,420	N	N	17	25	-	-
Oreg.	157	166	4,866	4,480	-	-	19	25	-	-
Calif.	2,717	3,140	67,035	67,118	1,221	648	110	154	38	-
Alaska	29	13	2,143	2,283	-	-	-	-	-	-
Hawaii	58	62	1,640	3,137	-	-	1	-	-	-
Guam	2	5	-	395	-	-	-	-	-	-
P.R.	401	723	1,474	1,395	N	N	N	N	-	-
V.I.	6	22	143	227	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	32	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 2003 and 2004 are provisional and cumulative (year-to-date).

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

§ Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNet Surveillance).

¶ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update July 25, 2004.

** Contains data reported through National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 7, 2004, and August 2, 2003 (31st Week)*

Reporting area	*Escherichia coli*, Enterohemorrhagic (EHEC)						Giardiasis		Gonorrhea	
	O157:H7		Shiga toxin positive, serogroup non-O157		Shiga toxin positive, not serogrouped					
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	1,120	1,058	113	115	83	75	8,993	9,569	176,750	191,096
NEW ENGLAND	73	65	29	22	15	6	794	709	4,158	4,018
Maine	5	6	-	-	-	-	73	84	146	126
N.H.	10	10	5	2	-	-	18	23	64	68
Vt.	6	6	-	-	1	-	79	52	49	50
Mass.	34	25	5	7	14	6	378	345	1,900	1,543
R.I.	5	1	1	-	-	-	62	55	507	520
Conn.	13	17	18	13	-	-	184	150	1,492	1,711
MID. ATLANTIC	128	130	19	12	14	16	2,015	1,970	20,696	24,084
Upstate N.Y.	60	42	9	5	5	7	677	489	4,403	4,398
N.Y. City	25	4	-	-	-	-	594	677	6,269	8,002
N.J.	16	21	3	2	4	-	201	288	3,894	5,037
Pa.	27	63	7	5	5	9	543	516	6,130	6,647
E.N. CENTRAL	226	251	21	19	12	9	1,095	1,717	34,410	39,999
Ohio	51	49	7	10	11	9	439	482	10,032	12,885
Ind.	31	42	-	-	-	-	-	-	3,621	3,767
Ill.	39	46	-	2	-	-	84	540	9,868	12,378
Mich.	48	38	4	-	1	-	386	380	8,494	7,546
Wis.	57	76	10	7	-	-	186	315	2,395	3,423
W.N. CENTRAL	252	183	17	18	15	12	1,055	976	9,546	9,975
Minn.	49	55	7	9	2	1	369	373	1,847	1,657
Iowa	72	40	-	-	-	-	158	128	649	777
Mo.	50	46	10	2	6	1	270	271	4,731	5,063
N. Dak.	9	6	-	3	5	4	17	25	70	40
S. Dak.	18	13	-	3	-	-	35	24	158	117
Nebr.	35	8	-	1	-	-	76	69	596	827
Kans.	19	15	-	-	2	6	130	86	1,495	1,494
S. ATLANTIC	85	75	15	27	18	19	1,495	1,443	44,171	46,905
Del.	1	2	N	N	N	N	27	19	541	703
Md.	19	3	1	2	3	1	64	64	4,884	4,571
D.C.	1	1	-	-	-	-	37	23	1,249	1,447
Va.	16	21	6	5	-	-	243	203	5,363	5,194
W. Va.	2	3	-	-	-	-	18	24	542	505
N.C.	-	-	-	-	10	17	N	N	8,984	8,760
S.C.	4	-	-	-	-	-	28	68	4,601	4,693
Ga.	16	16	4	3	-	-	433	466	7,525	10,254
Fla.	26	29	4	17	5	1	645	576	10,482	10,778
E.S. CENTRAL	46	43	1	1	8	5	172	187	14,374	16,087
Ky.	17	14	1	1	5	5	N	N	1,471	2,094
Tenn.	15	17	-	-	3	-	80	86	4,854	4,771
Ala.	8	9	-	-	-	-	92	101	4,264	5,409
Miss.	6	3	-	-	-	-	-	-	3,785	3,813
W.S. CENTRAL	43	45	1	3	1	4	152	167	24,681	26,291
Ark.	8	5	-	-	-	-	67	91	2,301	2,452
La.	2	3	-	-	-	-	19	8	5,946	7,340
Okla.	10	12	-	-	-	-	66	68	2,952	2,559
Tex.	23	25	1	3	1	4	-	-	13,482	13,940
MOUNTAIN	100	132	9	11	-	4	766	790	5,582	6,194
Mont.	11	4	-	-	-	-	25	43	39	66
Idaho	25	26	4	6	-	-	96	90	48	42
Wyo.	1	2	1	-	-	-	13	11	32	26
Colo.	22	43	1	3	-	4	270	231	1,547	1,705
N. Mex.	5	4	1	2	-	-	43	27	313	714
Ariz.	11	19	N	N	N	N	110	142	2,050	2,312
Utah	16	26	1	-	-	-	153	170	321	204
Nev.	9	8	1	-	-	-	56	76	1,232	1,125
PACIFIC	167	134	1	2	-	-	1,449	1,610	19,132	17,543
Wash.	58	33	-	1	-	-	183	152	1,502	1,634
Oreg.	27	22	1	1	-	-	239	207	639	603
Calif.	74	77	-	-	-	-	943	1,153	16,243	14,325
Alaska	1	1	-	-	-	-	39	48	347	319
Hawaii	7	1	-	-	-	-	45	50	401	662
Guam	N	N	-	-	-	-	-	-	-	40
P.R.	-	1	-	-	-	-	18	139	119	155
V.I.	-	-	-	-	-	-	-	-	49	55
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	3	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting years 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 7, 2004, and August 2, 2003 (31st Week)*

Reporting area	*Haemophilus influenzae*, invasive — All ages, All serotypes: Cum. 2004	Cum. 2003	Age <5 years — Serotype b: Cum. 2004	Cum. 2003	Age <5 years — Non-serotype b: Cum. 2004	Cum. 2003	Age <5 years — Unknown serotype: Cum. 2004	Cum. 2003	Hepatitis (viral, acute), by type A: Cum. 2004	Cum. 2003
UNITED STATES	1,125	1,173	11	17	58	75	110	132	3,203	3,739
NEW ENGLAND	104	84	1	2	5	5	3	3	559	176
Maine	8	2	-	-	-	-	-	1	10	8
N.H.	13	10	-	1	2	-	-	-	11	9
Vt.	5	6	-	-	-	-	1	-	8	5
Mass.	46	41	1	1	-	5	2	1	471	92
R.I.	3	4	-	-	-	-	-	1	13	11
Conn.	29	21	-	-	3	-	-	-	46	51
MID. ATLANTIC	248	251	1	1	3	2	28	31	372	796
Upstate N.Y.	85	88	1	1	3	2	4	7	54	69
N.Y. City	51	46	-	-	-	-	9	8	146	288
N.J.	45	50	-	-	-	-	3	7	69	125
Pa.	67	67	-	-	-	-	12	9	103	314
E.N. CENTRAL	152	196	-	3	2	3	26	36	321	374
Ohio	70	47	-	-	2	-	11	8	32	72
Ind.	-	32	-	-	-	-	-	3	58	36
Ill.	41	73	-	-	-	-	9	18	110	110
Mich.	14	16	-	3	-	3	5	1	98	119
Wis.	27	28	-	-	-	-	1	6	23	37
W.N. CENTRAL	67	78	2	-	3	6	4	10	122	110
Minn.	29	29	1	-	3	6	-	1	28	33
Iowa	1	-	1	-	-	-	-	-	33	16
Mo.	21	33	-	-	-	-	2	9	38	36
N. Dak.	3	2	-	-	-	-	-	-	1	-
S. Dak.	-	1	-	-	-	-	-	-	2	-
Nebr.	6	1	-	-	-	-	-	-	8	8
Kans.	7	12	-	-	-	-	2	-	12	17
S. ATLANTIC	273	241	-	-	16	9	21	15	605	798
Del.	8	-	-	-	-	-	2	-	5	5
Md.	44	58	-	-	4	5	1	-	81	83
D.C.	-	-	-	-	-	-	-	-	4	26
Va.	24	32	-	-	-	-	1	5	56	47
W. Va.	10	11	-	-	-	-	3	-	4	12
N.C.	40	22	-	-	5	1	1	1	56	46
S.C.	2	5	-	-	-	-	-	1	21	23
Ga.	72	44	-	-	-	-	12	5	207	322
Fla.	73	69	-	-	7	3	1	3	171	234
E.S. CENTRAL	42	49	1	1	-	2	8	4	90	105
Ky.	4	3	-	-	-	1	-	-	17	19
Tenn.	26	29	-	-	-	1	6	3	49	61
Ala.	12	16	1	1	-	-	2	1	6	12
Miss.	-	1	-	-	-	-	-	-	18	13
W.S. CENTRAL	48	54	1	1	6	8	1	4	218	368
Ark.	1	5	-	-	-	1	-	-	38	21
La.	8	17	-	-	-	2	1	4	15	34
Okla.	38	30	-	-	6	5	-	-	18	8
Tex.	1	2	1	1	-	-	-	-	147	305
MOUNTAIN	132	119	3	6	16	20	13	13	283	289
Mont.	-	-	-	-	-	-	-	-	4	4
Idaho	5	3	-	-	-	-	2	1	12	9
Wyo.	-	1	-	-	-	-	-	-	4	1
Colo.	30	23	-	-	-	-	3	5	33	42
N. Mex.	25	15	-	-	5	4	3	1	11	12
Ariz.	51	61	-	6	8	8	1	4	177	167
Utah	10	10	2	-	1	5	2	2	34	18
Nev.	11	6	1	-	2	3	2	-	8	36
PACIFIC	59	101	2	3	7	20	6	16	633	723
Wash.	3	6	2	-	-	4	1	1	36	39
Oreg.	30	25	-	-	-	-	2	2	42	41
Calif.	16	45	-	3	7	16	2	8	534	630
Alaska	4	18	-	-	-	-	1	5	5	7
Hawaii	6	7	-	-	-	-	-	-	16	6
Guam	-	-	-	-	-	-	-	-	-	2
P.R.	-	-	-	-	-	-	-	-	15	53
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 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 7, 2004, and August 2, 2003 (31st Week)*

	Hepatitis (viral, acute), by type				Legionellosis		Listeriosis		Lyme disease	
	B		C							
Reporting area	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	3,616	4,081	650	641	857	1,027	322	356	7,803	10,725
NEW ENGLAND	196	187	4	3	19	48	14	26	814	1,898
Maine	1	1	-	-	-	1	5	5	53	56
N.H.	23	11	-	-	1	5	1	2	52	42
Vt.	3	2	1	3	2	1	-	-	19	13
Mass.	109	133	3	-	4	27	3	13	207	1,052
R.I.	3	4	-	-	2	2	1	-	97	121
Conn.	57	36	U	U	10	12	4	6	386	614
MID. ATLANTIC	682	472	75	76	222	250	71	69	5,728	7,190
Upstate N.Y.	55	50	7	10	47	58	24	14	1,980	1,986
N.Y. City	63	141	-	-	17	25	9	14	-	149
N.J.	387	117	-	-	44	33	11	15	1,457	2,099
Pa.	177	164	68	66	114	134	27	26	2,291	2,956
E.N. CENTRAL	329	301	55	94	230	213	49	46	291	634
Ohio	77	84	5	7	107	115	19	12	51	29
Ind.	23	20	3	4	37	12	12	2	46	12
Ill.	50	38	9	15	10	26	-	13	-	48
Mich.	156	128	38	63	69	46	16	13	12	-
Wis.	23	31	-	5	7	14	2	6	182	545
W.N. CENTRAL	227	190	200	136	22	45	7	9	200	158
Minn.	28	23	9	7	2	3	3	3	129	105
Iowa	11	7	-	1	3	9	1	-	14	20
Mo.	154	131	191	127	12	21	2	3	48	28
N. Dak.	3	-	-	-	1	1	-	-	-	-
S. Dak.	-	2	-	-	3	1	-	-	-	-
Nebr.	18	15	-	1	-	2	1	3	6	2
Kans.	13	12	-	-	1	8	-	-	3	3
S. ATLANTIC	1,095	1,147	106	100	199	285	55	66	657	685
Del.	22	6	-	-	4	11	N	N	66	116
Md.	90	74	13	6	37	68	8	10	413	435
D.C.	13	5	1	-	5	8	-	-	3	4
Va.	132	100	14	4	23	54	10	8	58	41
W. Va.	19	12	17	1	4	10	1	3	4	6
N.C.	107	99	7	7	21	16	13	10	63	54
S.C.	54	93	7	23	1	5	-	2	5	1
Ga.	350	376	7	7	28	21	9	18	8	10
Fla.	308	382	40	52	76	92	14	15	37	18
E.S. CENTRAL	235	268	57	49	44	64	17	14	26	32
Ky.	36	43	19	9	19	24	4	2	11	7
Tenn.	101	110	21	11	15	21	8	4	9	8
Ala.	39	54	1	5	9	15	3	6	1	3
Miss.	59	61	16	24	1	4	2	2	5	14
W.S. CENTRAL	139	653	80	118	36	42	22	36	19	75
Ark.	31	52	1	3	-	2	1	1	4	-
La.	34	86	44	74	3	1	2	2	2	6
Okla.	26	38	3	2	3	4	-	1	-	-
Tex.	48	477	32	39	30	35	19	32	13	69
MOUNTAIN	299	355	31	25	45	42	15	19	16	7
Mont.	2	8	2	1	1	2	-	1	-	-
Idaho	6	4	-	1	6	3	1	1	2	2
Wyo.	7	22	-	-	5	2	-	-	2	-
Colo.	32	52	6	5	6	7	6	6	1	-
N. Mex.	10	27	7	-	-	2	-	2	-	1
Ariz.	167	165	4	6	10	9	-	5	5	-
Utah	29	29	2	-	14	13	1	2	6	1
Nev.	46	48	10	12	3	4	7	2	-	3
PACIFIC	414	508	42	40	40	38	72	71	52	46
Wash.	32	41	13	11	7	5	6	4	4	-
Oreg.	71	74	10	7	N	N	5	2	20	9
Calif.	295	375	16	20	33	33	59	61	27	35
Alaska	13	3	-	-	-	-	-	-	1	2
Hawaii	3	15	3	2	-	-	2	4	N	N
Guam	-	4	-	3	-	-	-	-	-	-
P.R.	36	80	-	-	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 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 7, 2004, and August 2, 2003 (31st Week)*

Reporting area	Malaria		Meningococcal disease		Pertussis		Rabies, animal		Rocky Mountain spotted fever	
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	686	664	871	1,112	6,699	4,357	2,973	4,135	604	374
NEW ENGLAND	48	26	46	50	768	495	328	304	17	5
Maine	5	1	8	5	2	11	31	27	-	-
N.H.	1	3	3	3	26	27	11	14	-	-
Vt.	3	-	2	-	44	46	13	18	-	-
Mass.	24	13	26	31	668	382	136	106	15	5
R.I.	2	-	1	2	16	7	19	40	1	-
Conn.	13	9	6	9	12	22	118	99	1	-
MID. ATLANTIC	160	169	110	137	1,492	443	293	520	38	24
Upstate N.Y.	24	32	27	32	1,066	182	260	213	1	-
N.Y. City	67	85	20	31	83	61	4	5	6	7
N.J.	33	32	24	18	120	79	-	62	10	12
Pa.	36	20	39	56	223	121	29	240	21	5
E.N. CENTRAL	65	61	104	183	1,557	401	50	60	33	9
Ohio	21	11	46	45	291	140	18	21	11	4
Ind.	8	1	-	31	55	33	5	6	19	1
Ill.	12	29	12	50	238	33	16	10	-	2
Mich.	15	16	36	32	78	47	11	19	3	2
Wis.	9	4	10	25	895	148	-	4	-	-
W.N. CENTRAL	45	29	61	84	751	187	287	413	65	31
Minn.	18	15	17	20	109	59	43	21	-	1
Iowa	2	3	11	16	36	48	46	55	-	2
Mo.	13	3	18	33	191	43	20	8	54	23
N. Dak.	3	1	1	1	366	3	40	40	-	-
S. Dak.	1	2	2	1	10	3	10	94	3	2
Nebr.	2	-	2	6	4	5	53	69	7	2
Kans.	6	5	10	7	35	26	75	126	1	1
S. ATLANTIC	177	166	169	198	337	305	1,047	1,665	260	218
Del.	3	2	19	8	5	5	9	26	-	1
Md.	39	38	8	22	69	44	50	238	32	54
D.C.	9	7	4	4	2	-	-	-	-	-
Va.	16	19	10	19	99	64	284	330	11	13
W. Va.	-	4	5	4	5	6	40	52	3	4
N.C.	11	13	24	25	49	79	382	483	174	92
S.C.	7	3	12	15	28	40	92	129	9	10
Ga.	34	38	10	22	10	20	184	219	17	38
Fla.	58	42	77	79	70	47	6	188	14	6
E.S. CENTRAL	20	14	36	52	88	101	77	130	63	57
Ky.	2	1	5	11	29	28	16	25	-	-
Tenn.	3	4	11	13	37	50	24	86	26	32
Ala.	11	6	10	14	16	15	28	18	18	7
Miss.	4	3	10	14	6	8	9	1	19	18
W.S. CENTRAL	60	82	85	122	306	329	697	815	111	25
Ark.	6	4	14	10	16	25	31	25	70	-
La.	2	3	23	31	7	7	-	1	3	-
Okla.	4	3	6	12	17	37	76	142	38	18
Tex.	48	72	42	69	266	260	590	647	-	7
MOUNTAIN	28	18	43	59	625	595	94	90	12	5
Mont.	-	-	3	3	22	1	17	13	3	1
Idaho	1	1	6	6	21	46	1	3	2	1
Wyo.	-	1	2	2	12	119	-	1	1	2
Colo.	9	11	10	15	311	211	17	15	-	1
N. Mex.	1	-	6	7	73	40	2	5	2	-
Ariz.	8	2	9	20	130	98	53	43	1	-
Utah	5	2	4	-	44	60	4	6	3	-
Nev.	4	1	3	6	12	20	-	4	-	-
PACIFIC	83	99	217	227	775	1,501	100	138	5	-
Wash.	7	14	21	19	392	356	-	-	-	-
Oreg.	12	7	45	35	266	312	3	5	3	-
Calif.	63	74	146	159	98	825	89	128	2	-
Alaska	-	-	1	4	8	1	8	5	-	-
Hawaii	1	4	4	10	11	7	-	-	-	-
Guam	-	-	-	-	-	1	-	-	-	-
P.R.	-	-	4	8	2	2	34	45	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 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 7, 2004, and August 2, 2003 (31st Week)*

Reporting area	Salmonellosis		Shigellosis		Streptococcal disease, invasive, group A		*Streptococcus pneumoniae*, invasive: Drug resistant, all ages		*Streptococcus pneumoniae*, invasive: Age <5 years	
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	19,960	21,686	6,136	13,641	3,110	4,067	1,402	1,366	384	475
NEW ENGLAND	1,049	1,137	148	180	139	362	18	72	8	6
Maine	54	75	2	6	6	22	2	-	2	-
N.H.	51	84	5	5	15	23	-	-	N	N
Vt.	33	41	2	6	8	16	7	6	1	3
Mass.	621	688	93	124	93	162	N	N	N	N
R.I.	48	40	9	4	17	5	9	10	5	3
Conn.	242	209	37	35	-	134	-	56	U	U
MID. ATLANTIC	3,111	2,586	707	1,452	526	705	101	91	77	70
Upstate N.Y.	664	547	315	197	177	267	47	48	53	50
N.Y. City	711	710	209	233	72	97	U	U	U	U
N.J.	432	448	119	251	118	139	-	-	4	2
Pa.	1,304	881	64	771	159	202	54	43	20	18
E.N. CENTRAL	2,284	3,181	430	1,171	630	990	342	314	108	208
Ohio	724	797	89	225	169	237	239	206	56	76
Ind.	292	299	116	80	76	95	103	108	23	19
Ill.	321	1,155	87	623	133	248	-	-	-	77
Mich.	488	445	68	165	216	284	N	N	N	N
Wis.	459	485	70	78	36	126	N	N	29	36
W.N. CENTRAL	1,394	1,306	239	425	212	247	12	11	56	53
Minn.	325	299	30	57	110	118	-	-	39	37
Iowa	286	208	45	31	N	N	N	N	N	N
Mo.	377	466	103	217	43	54	8	7	8	2
N. Dak.	25	23	2	6	9	12	-	3	2	4
S. Dak.	64	61	8	9	9	19	4	1	-	-
Nebr.	89	86	12	63	10	22	-	-	5	5
Kans.	228	163	39	42	31	22	N	N	2	5
S. ATLANTIC	5,089	4,896	1,629	4,244	604	680	717	716	27	13
Del.	37	59	4	150	3	6	4	1	N	N
Md.	497	443	82	361	125	171	-	6	16	-
D.C.	28	19	24	35	4	5	4	-	3	4
Va.	614	509	87	240	55	82	N	N	N	N
W. Va.	131	67	4	-	17	30	82	50	8	9
N.C.	600	601	172	590	85	79	N	N	U	U
S.C.	361	226	204	259	35	33	65	102	N	N
Ga.	809	932	374	840	125	132	161	158	N	N
Fla.	2,012	2,040	678	1,769	155	142	401	399	N	N
E.S. CENTRAL	1,172	1,449	359	593	143	139	81	101	-	-
Ky.	197	230	45	66	50	37	21	12	N	N
Tenn.	224	424	132	207	93	102	60	89	N	N
Ala.	340	339	147	193	-	-	-	-	N	N
Miss.	411	456	35	127	-	-	-	-	-	-
W.S. CENTRAL	1,630	3,107	1,362	3,633	173	186	36	53	75	73
Ark.	284	346	40	62	13	6	6	18	7	4
La.	274	442	170	282	2	1	30	35	12	14
Okla.	207	228	293	512	45	62	N	N	31	36
Tex.	865	2,091	859	2,777	113	117	N	N	25	19
MOUNTAIN	1,318	1,196	442	563	356	345	23	4	33	52
Mont.	89	56	4	2	-	1	-	-	-	-
Idaho	103	103	8	14	7	14	N	N	N	N
Wyo.	31	56	1	3	6	2	6	3	-	-
Colo.	316	294	82	103	93	93	-	-	30	40
N. Mex.	130	118	64	112	61	84	5	-	-	8
Ariz.	423	364	236	272	159	127	N	N	N	N
Utah	127	111	24	27	28	23	10	1	3	4
Nev.	99	94	23	30	2	1	2	-	-	-
PACIFIC	2,913	2,828	820	1,380	327	413	72	4	-	-
Wash.	286	323	63	108	38	41	-	-	N	N
Oreg.	245	245	39	143	N	N	N	N	N	N
Calif.	2,141	2,099	689	1,102	233	301	N	N	N	N
Alaska	39	50	4	4	-	-	-	-	N	N
Hawaii	202	111	25	23	56	71	72	4	-	-
Guam	-	28	-	23	-	-	-	-	-	-
P.R.	109	369	2	9	N	N	N	N	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	3	U	-	U	-	U	-	U	-	U

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

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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 7, 2004, and August 2, 2003 (31st Week)*

	Syphilis									
	Primary & secondary		Congenital		Tuberculosis		Typhoid fever		Varicella (Chickenpox)	
Reporting area	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	4,256	4,183	205	270	5,924	7,303	154	197	10,017	10,482
NEW ENGLAND	117	130	1	-	207	241	16	19	587	2,165
Maine	2	6	-	-	-	12	-	-	179	640
N.H.	3	15	-	-	9	10	-	1	-	-
Vt.	-	-	-	-	-	6	-	-	408	489
Mass.	76	83	-	-	128	115	13	11	-	111
R.I.	15	13	-	-	19	31	1	2	-	3
Conn.	21	13	1	-	51	67	2	5	-	922
MID. ATLANTIC	575	498	35	43	1,181	1,284	32	35	62	16
Upstate N.Y.	50	22	5	7	154	144	3	4	-	-
N.Y. City	351	279	10	24	596	685	11	20	-	-
N.J.	95	100	19	12	235	249	9	10	-	-
Pa.	79	97	1	-	196	206	9	1	62	16
E.N. CENTRAL	458	575	35	45	690	658	7	25	3,898	3,777
Ohio	131	121	1	2	116	113	2	-	1,019	927
Ind.	35	32	8	9	76	83	-	4	-	-
Ill.	161	232	4	17	310	300	-	14	-	-
Mich.	115	176	22	17	141	123	4	7	2,532	2,266
Wis.	16	14	-	-	47	39	1	-	347	584
W.N. CENTRAL	95	98	2	4	256	271	7	4	122	39
Minn.	14	32	-	-	99	101	3	2	-	-
Iowa	5	7	-	-	23	17	-	1	N	N
Mo.	54	33	1	4	68	71	2	1	5	-
N. Dak.	-	2	-	-	3	-	-	-	74	39
S. Dak.	-	1	-	-	5	16	-	-	43	-
Nebr.	4	3	-	-	18	12	2	-	-	-
Kans.	18	20	1	-	40	54	-	-	-	-
S. ATLANTIC	1,136	1,092	25	50	1,176	1,398	32	35	1,554	1,534
Del.	4	4	1	-	-	-	-	-	4	18
Md.	224	173	3	9	141	137	9	8	-	-
D.C.	46	33	1	-	54	-	1	-	17	22
Va.	66	56	2	1	136	146	2	11	394	424
W. Va.	2	1	-	-	14	11	-	-	914	902
N.C.	108	93	6	10	149	176	3	6	N	N
S.C.	66	67	1	4	115	86	-	-	225	168
Ga.	163	293	1	13	11	303	11	5	-	-
Fla.	457	372	10	13	556	539	6	5	-	-
E.S. CENTRAL	244	191	16	10	335	405	5	5	-	-
Ky.	27	24	1	1	55	68	2	-	-	-
Tenn.	84	80	7	2	127	134	3	2	-	-
Ala.	107	69	6	5	120	139	-	3	-	-
Miss.	26	18	2	2	33	64	-	-	-	-
W.S. CENTRAL	695	502	32	47	459	1,114	10	13	2,208	2,591
Ark.	28	31	-	1	71	60	-	-	-	-
La.	142	73	-	1	-	-	-	-	42	9
Okla.	19	32	2	1	86	86	1	-	-	-
Tex.	506	366	30	44	302	968	9	13	2,166	2,582
MOUNTAIN	198	194	36	26	275	224	5	4	1,586	360
Mont.	-	-	-	-	4	5	-	-	-	-
Idaho	13	4	2	1	4	5	-	-	-	-
Wyo.	1	-	-	-	2	2	-	-	24	38
Colo.	19	23	-	3	58	54	1	3	1,193	-
N. Mex.	26	37	1	4	14	29	-	-	68	-
Ariz.	119	120	33	18	121	89	2	1	-	-
Utah	4	2	-	-	26	18	1	-	301	322
Nev.	16	8	-	-	46	22	1	-	-	-
PACIFIC	738	903	23	45	1,345	1,708	40	57	-	-
Wash.	62	44	-	-	139	144	3	2	-	-
Oreg.	19	29	-	-	50	63	1	2	-	-
Calif.	654	823	23	45	1,072	1,404	30	53	-	-
Alaska	-	1	-	-	20	35	-	-	-	-
Hawaii	3	6	-	-	64	62	6	-	-	-
Guam	-	1	-	-	-	38	-	-	-	90
P.R.	71	118	3	9	14	58	-	-	175	386
V.I.	4	1	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	-	U	10	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting years 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE III. Deaths in 122 U.S. cities,* week ending August 7, 2004 (31st Week)

Reporting Area	All causes, by age (years)						P&I[†]
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	504	330	112	41	9	12	44
Boston, Mass.	129	74	34	11	5	5	12
Bridgeport, Conn.	14	10	4	-	-	-	-
Cambridge, Mass.	16	12	2	2	-	-	3
Fall River, Mass.	19	14	3	2	-	-	-
Hartford, Conn.	45	27	13	3	2	-	7
Lowell, Mass.	16	9	6	1	-	-	-
Lynn, Mass.	9	6	2	1	-	-	-
New Bedford, Mass.	21	12	5	4	-	-	2
New Haven, Conn.	41	24	9	6	-	2	3
Providence, R.I.	64	48	6	6	2	2	6
Somerville, Mass.	7	5	1	1	-	-	1
Springfield, Mass.	36	24	6	3	-	3	4
Waterbury, Conn.	26	19	7	-	-	-	3
Worcester, Mass.	61	46	14	1	-	-	3
MID. ATLANTIC	2,006	1,388	417	117	33	46	103
Albany, N.Y.	45	25	10	5	1	4	-
Allentown, Pa.	27	20	2	1	-	4	-
Buffalo, N.Y.	53	42	9	1	1	-	1
Camden, N.J.	24	16	4	3	1	-	1
Elizabeth, N.J.	23	17	4	1	-	1	3
Erie, Pa.	41	34	5	2	-	-	4
Jersey City, N.J.	31	17	12	-	1	1	-
New York City, N.Y.	1,058	727	221	66	16	23	46
Newark, N.J.	41	14	17	7	1	2	3
Paterson, N.J.	7	4	2	1	-	-	-
Philadelphia, Pa.	347	233	85	14	6	9	21
Pittsburgh, Pa.[§]	17	12	3	1	-	1	-
Reading, Pa.	10	7	2	-	-	1	-
Rochester, N.Y.	129	107	14	6	2	-	15
Schenectady, N.Y.	20	15	4	-	1	-	-
Scranton, Pa.	26	21	4	-	1	-	1
Syracuse, N.Y.	50	35	12	2	1	-	7
Trenton, N.J.	23	16	4	3	-	-	-
Utica, N.Y.	19	15	1	3	-	-	1
Yonkers, N.Y.	15	11	2	1	1	-	-
E.N. CENTRAL	1,805	1,207	371	126	50	50	99
Akron, Ohio	53	25	17	4	1	6	5
Canton, Ohio	41	30	10	1	-	-	4
Chicago, Ill.	263	149	63	28	12	10	14
Cincinnati, Ohio	25	18	2	3	-	2	2
Cleveland, Ohio	206	142	47	12	2	3	3
Columbus, Ohio	197	136	41	10	6	4	12
Dayton, Ohio	110	82	19	4	5	-	8
Detroit, Mich.	168	102	39	18	1	8	16
Evansville, Ind.	43	35	2	3	1	2	1
Fort Wayne, Ind.	45	31	6	3	3	2	2
Gary, Ind.	10	5	4	-	1	-	-
Grand Rapids, Mich.	46	36	6	2	1	1	10
Indianapolis, Ind.	189	119	38	19	8	5	4
Lansing, Mich.	46	31	8	4	3	-	1
Milwaukee, Wis.	85	61	17	5	2	-	5
Peoria, Ill.	51	36	9	3	-	3	3
Rockford, Ill.	56	43	8	3	1	1	1
South Bend, Ind.	23	16	3	2	-	2	3
Toledo, Ohio	102	71	25	2	3	1	2
Youngstown, Ohio	46	39	7	-	-	-	3
W.N. CENTRAL	611	374	149	46	25	16	42
Des Moines, Iowa	73	54	12	5	2	-	6
Duluth, Minn.	20	13	3	2	2	-	-
Kansas City, Kans.	38	29	7	-	2	-	3
Kansas City, Mo.	93	49	28	8	4	4	2
Lincoln, Nebr.	35	26	6	3	-	-	5
Minneapolis, Minn.	50	28	14	6	1	1	8
Omaha, Nebr.	64	49	9	3	1	2	6
St. Louis, Mo.	77	42	20	7	4	3	3
St. Paul, Minn.	64	38	19	1	2	4	5
Wichita, Kans.	97	46	31	11	7	2	4
S. ATLANTIC	1,150	682	314	95	35	24	55
Atlanta, Ga.	124	73	31	14	4	2	4
Baltimore, Md.	181	100	49	22	9	1	15
Charlotte, N.C.	98	57	20	11	2	8	11
Jacksonville, Fla.	150	89	41	11	5	4	6
Miami, Fla.	107	71	22	8	6	-	4
Norfolk, Va.	52	33	10	4	3	2	1
Richmond, Va.	45	27	14	3	-	1	1
Savannah, Ga.	58	32	15	8	1	2	1
St. Petersburg, Fla.	65	40	16	6	3	-	1
Tampa, Fla.	146	96	47	2	-	1	6
Washington, D.C.	102	53	39	5	2	3	3
Wilmington, Del.	22	11	10	1	-	-	2
E.S. CENTRAL	760	476	177	56	30	21	60
Birmingham, Ala.	107	72	22	3	5	5	15
Chattanooga, Tenn.	56	38	12	3	2	1	5
Knoxville, Tenn.	91	56	25	5	2	3	-
Lexington, Ky.	66	45	12	4	3	2	3
Memphis, Tenn.	163	95	44	12	8	4	16
Mobile, Ala.	66	45	16	2	1	2	2
Montgomery, Ala.	45	34	5	5	1	-	5
Nashville, Tenn.	166	91	41	22	8	4	14
W.S. CENTRAL	1,394	896	293	132	40	33	65
Austin, Tex.	107	64	23	15	1	4	6
Baton Rouge, La.	13	5	3	5	-	-	-
Corpus Christi, Tex.	52	31	13	4	2	2	3
Dallas, Tex.	167	99	37	21	5	5	10
El Paso, Tex.	95	61	22	7	5	-	2
Ft. Worth, Tex.	106	72	23	6	2	3	6
Houston, Tex.	380	241	81	38	9	11	19
Little Rock, Ark.	46	28	10	6	-	2	3
New Orleans, La.	47	28	13	4	2	-	-
San Antonio, Tex.	216	158	33	14	7	4	11
Shreveport, La.	33	22	6	3	2	-	4
Tulsa, Okla.	132	87	29	9	5	2	1
MOUNTAIN	997	639	227	61	38	29	47
Albuquerque, N.M.	131	83	27	14	3	4	11
Boise, Idaho	40	26	8	2	1	3	5
Colo. Springs, Colo.	47	31	12	3	1	-	1
Denver, Colo.	104	55	28	7	5	8	4
Las Vegas, Nev.	237	157	53	15	8	4	11
Ogden, Utah	32	24	7	-	-	1	-
Phoenix, Ariz.	115	68	28	9	8	1	3
Pueblo, Colo.	33	20	8	2	2	-	1
Salt Lake City, Utah	100	61	23	5	7	4	6
Tucson, Ariz.	158	114	33	4	3	4	5
PACIFIC	1,671	1,125	357	105	46	38	130
Berkeley, Calif.	14	13	-	1	-	-	-
Fresno, Calif.	118	79	25	7	3	4	6
Glendale, Calif.	25	21	2	2	-	-	5
Honolulu, Hawaii	88	70	13	4	-	1	5
Long Beach, Calif.	66	41	15	6	3	1	10
Los Angeles, Calif.	325	212	70	29	9	5	40
Pasadena, Calif.	13	6	3	3	-	1	1
Portland, Oreg.	135	94	29	9	1	2	7
Sacramento, Calif.	188	127	38	12	6	5	15
San Diego, Calif.	171	120	38	4	2	7	12
San Francisco, Calif.	68	38	14	6	7	3	2
San Jose, Calif.	167	113	39	8	5	2	9
Santa Cruz, Calif.	28	19	6	2	1	-	6
Seattle, Wash.	129	78	35	5	5	6	4
Spokane, Wash.	51	41	9	-	1	-	3
Tacoma, Wash.	85	53	21	7	3	1	5
TOTAL	10,898[¶]	7,117	2,417	779	306	269	645

U: Unavailable. -:No reported cases.

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

† Pneumonia and influenza.

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

¶ Total includes unknown ages.

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