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Enterobacter sakazakii Infections Associated with the Use of Powdered Infant Formula — Tennessee, 2001

Enterobacter sakazakii, a gram-negative, rod-shaped bacterium, is a rare cause of invasive infection with high death rates in neonates (*1,2*). This report summarizes the investigation of a fatal infection associated with *E. sakazakii* in a hospitalized neonate, which indicated that the infection was associated with the presence of the organism in commercial powdered formula fed to the infant. The implicated batch of formula has been recalled by the manufacturer. Clinicians should be aware of the potential risk for infection from use of nonsterile enteral formula in the neonatal health-care setting.

In April 2001, a male infant (2 lbs, 13 oz [1,270 grams]) was delivered by cesarean section at 33.5 weeks' gestation and was hospitalized in a neonatal intensive care unit (NICU) because of low birthweight, prematurity, and respiratory distress. The infant had fever, tachycardia, decreased vascular perfusion, and neurologic abnormalities (e.g., suspected seizure activity) at 11 days. Cerebrospinal fluid (CSF) obtained by lumbar puncture was analyzed and revealed a white blood cell count of 32/mm^3 [normal=0–0.5/mm^3], red blood cell count of 27/mm^3 [normal=0], protein of 292 mg/dL [normal=15–45 mg/dL], and glucose of 1 mg/dL [normal=40–70 mg/dL]. Culture of CSF grew *E. sakazakii*. The infant was treated with intravenous antimicrobials for meningitis; however, neurologic damage was progressive, and the infant died 9 days later. Because the organism was a rare cause of neonatal meningitis, hospital personnel, in collaboration with the Tennessee Department of Health and CDC, investigated the source of infection.

During April 10–20, 2001 (i.e., the study period), enhanced case surveillance was performed to determine if other infants in the NICU were either infected or colonized with *E. sakazakii*. Patients were assessed for colonization by stool culture; microbiology laboratory records also were reviewed for reports of *E. sakazakii* growth from clinical specimens during the study period. Confirmed infection was defined as any *E. sakazakii*-positive culture from a normally sterile site. Suspected infection was defined as an *E. sakazakii*-positive culture from a nonsterile site with documented deterioration in clinical status (e.g., increased respiratory rate without other evident cause) in the 24 hours before collection of the specimen for culture. Colonization was defined as an *E. sakazakii*-positive culture from a nonsterile site without documented deterioration in clinical status in the 24 hours before collection of the specimen for culture. A total of 49 infants were screened. Ten *E. sakazakii* infection or colonization events were identified: one confirmed infection in the index patient (culture-positive from CSF), two suspected infections (both culture-positive from tracheal aspirate), and seven colonizations (six culture-positive from stool, one from urine). One patient was colonized at two sites (urine and stool).

A cohort study was performed on the 49 patients who were screened to determine possible risk factors for acquisition of *E. sakazakii* infection or colonization. A case-patient was defined as any NICU patient with *E. sakazakii* infection (confirmed or suspected) or colonization during the study period. Medical records were reviewed to assess possible risk factors

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during the study period, including gestational age, birthweight, mechanical ventilator use, humidified incubator use, oral medications, and feeding type (total parenteral nutrition, formula [e.g., powdered or liquid], or breast milk) or method (i.e., continuous or intermittent administration). Of the 49 patients identified in the cohort, nine were case-patients and 40 were noncase-patients. Analysis of risk factors identified only use of a specific powdered infant formula product (Portagen [Mead Johnson Nutritionals, Evansville, Indiana]) to be significantly associated with *E. sakazakii* infection or colonization; all case-patients received Portagen compared with 21 of 40 noncase-patients ($p<0.01$).

To determine the source of infection, microbiologic studies were performed on samples of commercially sterile water used for formula preparation and from samples of formula taken from opened cans of Portagen from the same two batches used in the NICU during the study period. Environmental swab cultures were taken from surfaces on which the product had been prepared. Cultures also were performed on unopened containers of Portagen supplied by the manufacturer with batch codes matching those of opened cans. The water was cultured using membrane filtration. The powdered infant formula was cultured using a modification of a previously described enrichment method (*3*). Specifically, for each culture of formula, 100 grams of Portagen were inoculated in phosphate-buffered peptone water, incubated overnight, subcultured, reincubated, and picked and streaked. Colonies that demonstrated a yellow pigment characteristic of *E. sakazakii* were then picked for identification. Cultures of formula taken from both opened and unopened cans of Portagen from a single batch grew *E. sakazakii*. Water and all environmental cultures were negative. Pulsed-field gel electrophoresis revealed that isolates of *E. sakazakii* from the CSF culture of the neonate with meningitis and from the culture of formula from both opened and unopened containers were indistinguishable.

Hospital personnel reviewed NICU infection-control practices, policies, and procedures for preparation, storage, and administration of powdered infant formula. No breaches in infection control were detected. The product was prepared in the NICU according to manufacturer's instructions. Powdered formula was mixed with sterile water and was immediately refrigerated and used within 24 hours of preparation. The infant with *E. sakazakii* meningitis was given formula by continuous administration; administration or "hang" time (i.e., the amount of time the contents of a formula bag are fed to a patient) did not exceed 8 hours.

To prevent additional infections, the hospital made several policy changes. Principal formula type for NICU patients was changed from powdered formula to a commercially sterile, ready-to-feed liquid formula. Portagen is no longer used; other

powdered formula products are reserved for specific needs and, when necessary, are prepared in a designated formula preparation room in the pharmacy. The amount of allowable administration or "hang" time has been reduced from 8 hours to 4 hours. As of April 10, 2002, no additional episodes of infection or colonization have been detected at the reporting hospital.

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Editorial Note: This report describes an association between fatal infection attributed to *E. sakazakii* and use of a commercial powdered infant formula in a NICU. *E. sakazakii* is a rare cause of invasive disease in neonates; however, when meningitis occurs, severe neurologic complications, including cerebral abscess formation, are common, and death occurs in 33%–80% of cases (*1,2*). *E. sakazakii* infection, including sepsis, meningitis, or necrotizing enterocolitis, has been associated with use of powdered infant formula (*4–7*). In previous studies and in this report, the organism was detected in either prepared formula, the environment in which it was prepared, or unopened products. This is the first report of *E. sakazakii* infection associated with infant formula prompting recall of a commercial product in the United States. Portagen is a type of formula recommended by the manufacturer for infants with nutritional malabsorption problems and is to be used under the supervision of a health-care provider. The batch of Portagen implicated in this investigation (coded BMC17) was recalled voluntarily by Mead Johnson Nutritionals on March 29, 2002 (*8*). The manufacturer has disseminated a letter to health-care providers about the risk of powdered infant formulas.

Proper handling and use of infant formula products in the health-care setting is an important patient safety issue. Clinicians should be aware that powdered formulas are not sterile products and might contain opportunistic bacterial pathogens such as those in the family *Enterobacteriacae*, including *E. sakazakii* (*3*). These products commonly are used at many hospitals. A recent survey indicated that of 16 responding facilities, nine used powdered formulas in the NICU setting; four (25%) reported powdered formula as a principal source of patient feeding, and five (31%) reported use of powdered formula along with other formula types for principal feeding (National Association of Children's Hospitals and Related Institutions, unpublished data, 2001).

Risk for infection might depend on several factors, including the number of bacteria present in the product, handling after preparation, and underlying patient characteristics (e.g., immunosuppression, prematurity, or low birthweight). Because powdered formula is not sterile and can provide a good medium for growth, prolonged periods of storage or administration at room temperature might amplify the amount of bacteria already present. Health-care providers might be able to reduce risks for hospitalized neonates by choosing alternatives to powdered forms when possible. Preparation of formula should follow manufacturer's instructions, which might require steps beyond those described on the product label. The American Dietetic Association (ADA) has published guidelines for appropriate formula use, including details concerning proper preparation, storage, and administration (*9*). On the basis of these guidelines and input from ADA and the Food and Drug Administration (FDA), interim recommendations have been proposed concerning preparation of powdered infant formula in the NICU setting [see box]. In addition, FDA has disseminated a letter to health-care providers with further recommendations (*10*).

Health-care providers should report invasive disease attributed to *E. sakazakii* in infants aged <12 months, particularly bloodstream infection or meningitis with onset in the health-care setting, to state health departments and CDC (800-893-0485); adverse events associated with infant formula should be reported to FDA's MedWatch program (800-332-1088 or at http://www.fda.gov/medwatch).

Summary Interim Recommendations for Preparation of Powdered Infant Formula in the Neonatal Intensive Care Unit Setting

1. Formula products should be selected based on nutritional needs; alternatives to powdered forms should be chosen when possible.
2. Trained personnel should prepare powdered formula under aseptic technique in a designated preparation room.
3. Manufacturer's instructions should be followed; product should be refrigerated immediately and discarded if not used within 24 hours after preparation.
4. The administration or "hang" time for continuous enteral feeding should not exceed 4 hours.
5. Written hospital guidelines should be available in the event of a manufacturer product recall, including notification of health-care providers, a system for reporting and follow-up of specific formula products used, and retention of recall records.

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Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs — United States, 1995–1999

Cigarette smoking is the leading cause of preventable death in the United States and produces substantial health-related economic costs to society (*1,2*). This report presents the annual estimates of the disease impact of smoking in the United States during 1995–1999. CDC calculated national estimates of annual smoking-attributable mortality (SAM), years of potential life lost (YPLL), smoking-attributable medical expenditures (SAEs) for adults and infants, and productivity costs for adults. Results show that during 1995–1999, smoking caused approximately 440,000 premature deaths in the United States annually and approximately $157 billion in annual health-related economic losses. Implementation of comprehensive tobacco-control programs as recommended by CDC (*3*) could effectively reduce the prevalence, disease impact, and economic costs of smoking.

The disease impact of smoking was estimated by using the Adult and Maternal and Child Health Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC) software (*4*). Smoking-attributable deaths were calculated by multiplying estimates of the smoking-attributable fraction (SAF) of preventable deaths by total mortality data for 18 adult and four infant causes of death. For adults, SAFs were derived by using relative risks (RRs) for each cause of death from the American Cancer Society's Cancer Prevention Study-II (CPS-II;1982–1988) (*5*) and current and former cigarette smoking prevalence for two age cohorts: persons aged 35–64 years and persons aged ≥65 years (*4*).* For infants, SAFs were calculated by using RRs of death for infants of women who smoked during pregnancy and maternal smoking rates from birth certificates for 46 states, the District of Columbia, and New York City (birth certificate data for 1995–1999 were not available for California, Indiana, South Dakota, and the remainder of New York) (*4*). Smoking-attributable YPLL and productivity costs were estimated by multiplying age- and sex-specific SAM by remaining life expectancy and lifetime earnings data, respectively. Smoking-attributable fire deaths (*6*) were included in the SAM and YPLL estimates; SAM included lung cancer and heart disease deaths attributable to exposure to secondhand smoke (*7*).

Annual medical costs of smoking for adults aged ≥18 years were estimated by multiplying 1998 personal health-care expenditure data from the Centers for Medicare and Medicaid Services by medical expenditure SAFs for ambulatory, hospital, prescription drugs, nursing home, and other personal health care (*8*). Expenditure SAFs represent the proportions of personal health-care expenditures that could be avoided by eliminating smoking. These SAFs were derived from econometric analyses of national medical expenditure survey data that included information on a person's smoking history, other risk behaviors, socioeconomic status, and demographic characteristics. Nursing home SAFs were based on estimates of

* SAFs for each disease are calculated by using the following equation: $SAF = [(p_0 + p_1(RR_1) + p_2(RR_2)) - 1] / [p_0 + p_1(RR_1) + p_2(RR_2)]$ where p_0=percentage of never smokers (persons who have never smoked ≥100 cigarettes), p_1=percentage of current smokers (persons who have smoked ≥100 cigarettes and now smoke every day or some days), p_2=percentage of former smokers (persons who have smoked ≥100 cigarettes and do not currently smoke), RR_1=relative risk for current smokers relative to never smokers, and RR_2=relative risk for former smokers relative to never smokers.

the impact of smoking on the probability of admission to a nursing home; multiple admissions and length of stay in the nursing home were not considered. Neonatal medical costs of smoking in 1996 were calculated by using maternal smoking prevalence and health-care use data from the 1995 Pregnancy Risk Assessment Monitoring System (PRAMS) (*4*). Neonatal SAFs and SAEs were derived by applying 1996 private insurance-based costs (obtained from Medstat Group, Inc.) per night to smoking-attributable nights in hospitals and neonatal intensive-care units (*4*).

During 1995–1999, smoking caused an annual average of 264,087 deaths among men and 178,311 deaths among women in the United States (Table 1). Among adults, most smoking-related deaths were attributed to lung cancer (124,813), ischemic heart disease (81,976), and chronic airways obstruction (64,735). Smoking during pregnancy resulted in the death of 599 male and 408 female infants annually. Total annual SAM estimates include the deaths of 589 males and 377 females by residential fire during 1994–1998 (*5*), and the deaths of 15,517 males and 22,536 females from lung cancer and heart disease attributable to exposure to secondhand smoke (*6*).

For men, the average number of annual smoking-attributable cancer deaths during 1995–1999 decreased by approximately 1,100 (to 102,812 deaths) from 1990–1994; the number of cardiovascular disease deaths fell by approximately 28,000 (to 90,906 deaths), and the number of respiratory disease deaths remained stable (53,713 deaths). For women, the average number of annual smoking-attributable cancer deaths during 1995–1999 increased by approximately 5,800 (to 54,664 deaths), the number of respiratory disease deaths increased by approximately 7,300 (to 44,429 deaths), and the number of cardiovascular disease deaths fell by approximately 5,400 (to 57,699 deaths). Compared with 1990–1994, during 1995–1999, the average number of annual smoking-attributable deaths from perinatal conditions fell from 926 to 598 for males and from 666 to 407 for females. Excluding adult deaths from secondhand smoke, each year SAM was responsible for an estimated 3,332,272 YPLL for men and 2,284,113 for women. Adult male and female smokers lost an average of 13.2 and 14.5 years of life, respectively, because they smoked.

During 1995–1999, the average annual mortality-related productivity losses attributable to smoking for adults were $81.9 billion (Table 2). In 1998, smoking-attributable personal health-care medical expenditures were $75.5 billion. For each of the approximately 46.5 million adult smokers in 1999, these costs represent $1,760 in lost productivity and $1,623 in excess medical expenditures. Smoking-attributable neonatal expenditures were $366 million in 1996, or $704 per maternal smoker ($8 per adult smoker). Maternal smoking accounted for 2.3% of total neonatal medical expenditures in 1996. The economic costs of smoking totaled $3,391 per smoker per year.

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Editorial Note: During 1995–1999, a total of 442,398 persons in the United States died prematurely each year as a result of smoking. This number, which is higher than previous SAM estimates (*1*), reflects the inclusion of 35,053 secondhand smoking-attributable heart disease deaths and slightly higher smoking-related RRs for cancers, respiratory diseases, and infant conditions. The number of smoking-attributable deaths would have been greater if smoking prevalence among men, women, and pregnant women had not declined since the early 1990s.

Reported annual medical and productivity losses are larger than previous estimates of $53 billion (*7*) and $43 billion (*2*), respectively. Among adults, the medical costs of smoking represented approximately 8% of personal health-care expenditures in 1998, which is consistent with the 6%–14% SAFs in previous studies (*2*). The larger productivity-loss figure reflects increases in the number of smoking-attributable deaths and in average earnings since the mid-1980s.

The findings in this report are subject to at least five limitations. First, the reported SAM figures were derived from smoking rates in the current year, whereas actual smoking-attributable deaths were the result of smoking in previous decades, when smoking rates were higher. Second, RRs were adjusted for the effects of age but not for other potential confounders. However, CPS-II data showed that education, alcohol, and other confounders had negligible additional impact on SAM estimates for lung cancer, chronic obstructive pulmonary disease, ischemic health disease, and cerebrovascular disease (*1*). Third, deaths attributable to cigar smoking, pipe smoking, and smokeless tobacco use were not included. Fourth, productivity losses did not include the value of lost work time from smoking-related disability, absenteeism, excess work breaks, and secondhand smoke-related disease morbidity and mortality. Finally, the neonatal medical costs of maternal smoking understate the probable true costs of smoking-attributable conditions among children because the future medical costs for infants affected by maternal smoking and the current costs of treating newly diagnosed secondhand smoke-related conditions among children aged 1–4 years were not included.

TABLE 1. Annual deaths, smoking-attributable mortality (SAM), and years of potential life lost (YPLL), by cause of death and sex — United States, 1995–1999

Disease category (ICD-9 code)*	Male			Female		
	Total	SAM	YPLL	Total	SAM	YPLL
Neoplasms						
Lip, oral cavity, pharynx (140–149)	5,180	3,873	64,022	2,645	1,264	21,499
Esophagus (150)	8,627	6,280	94,359	2,778	1,613	25,686
Pancreas (157)	13,429	3,065	46,112	14,339	3,415	52,481
Larynx (161)	3,031	2,525	37,823	816	602	10,793
Trachea, lung, bronchus (162)	91,295	80,571	1,106,117	61,593	44,242	763,669
Cervix uteri (180)	—	—	—	4,138	552	13,606
Urinary bladder (188)	7,778	3,699	40,208	3,772	1,053	13,290
Kidney, other urinary (189)	7,066	2,799	41,867	4,537	236	4,172
Total	**136,406**	**102,812**	**1,430,507**	**94,618**	**52,949**	**905,194**
Cardiovascular diseases						
Hypertension (401–404)	17,575	3,320	51,291	25,182	2,740	36,286
Ischemic heart disease (410–414)						
Aged 35–64 years	52,977	22,059	514,926	19,381	7,069	185,580
Aged ≥65 years	191,172	29,312	252,380	217,962	23,536	219,813
Other heart diseases†	98,088	18,822	243,327	117,645	10,546	127,756
Cerebrovascular disease (430–438)						
Aged 35–64 years	9,726	3,898	93,903	8,103	3,586	101,493
Aged ≥65 years	51,369	4,697	37,751	88,452	5,264	47,581
Atherosclerosis (440)	6,008	1,644	14,877	10,050	883	7,925
Aortic aneurysm (441)	9,971	6,489	76,568	6,201	3,135	39,655
Other arterial disease (442–448)	4,716	665	8,535	6,183	940	12,359
Total	**441,602**	**90,906**	**1,293,559**	**499,159**	**57,699**	**778,447**
Respiratory diseases						
Pneumonia, influenza (480–487)	38,295	8,802	84,878	47,420	6,774	71,255
Bronchitis, emphysema (490–492)	10,935	9,944	109,011	9,585	7,752	107,365
Chronic airways obstruction (496)	42,765	34,919	353,137	39,727	29,816	379,052
Total	**91,996**	**53,665**	**547,026**	**96,731**	**44,342**	**557,672**
Perinatal conditions						
Short gestation/low birthweight (765)	2,198	227	16,685	1,768	175	13,871
Respiratory distress syndrome (769)	931	85	6,273	639	24	1,925
Other respiratory-newborn (770)	912	84	6,147	645	33	2,646
Sudden infant death syndrome (798.0)	1,766	202	14,805	1,197	175	13,872
Total	**5,808**	**599**	**43,910**	**4,249**	**408**	**32,314**
Burn deaths§	—	589	17,270	—	377	10,486
Secondhand smoke deaths¶						
Lung cancer	—	1,110	—	—	1,890	—
Ischemic heart disease	—	14,407	—	—	20,646	—
Overall Total		**264,087**	**3,332,272**		**178,311**	**2,284,113**

* *International Classification of Diseases, Ninth Revision.*
† Other heart diseases include ICD-9 codes 390–398, 415–417, and 420–429. Totals may not equal sums because of rounding.
§ Reference 6.
¶ Reference 7.

Cigarette smoking continues to be the principal cause of premature death in the United States and imposes substantial costs on society. For each of the approximately 22 billion packs sold in the U.S. in 1999, $3.45 was spent on medical care attributable to smoking, and $3.73 in productivity losses were incurred, for a total cost of $7.18 per pack. These costs provide a strong rationale for increasing funding for comprehensive tobacco-use interventions to the levels recommended by CDC. In California, decreases in smoking prevalence have resulted in reduced lung cancer and heart disease death rates (*9,10*). These results offer evidence of the potential benefits of expanding comprehensive tobacco-control programs in an effort to reduce current smoking prevalence by 50% by 2010.

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TABLE 2. Annual smoking-attributable economic costs for adults and infants — United States, 1995–1999

Cost component	Total (in millions)	Per smoker*
Adult costs		
Annual smoking-attributable productivity costs, 1995–1999		
Men	$55,389	$2,278
Women	$26,483	$1,193
Total	**$81,872**	**$1,760**
Smoking-attributable medical expenditures, 1998†		
Ambulatory care	$27,182	$584
Hospital care	$17,140	$368
Prescription drugs	$6,364	$137
Nursing home	$19,383	$417
Other care	$5,419	$116
Total	**$75,488**	**$1,623**
Total adult costs	**$157,360**	**$3,383**
Infant costs		
Smoking-attributable neonatal medical expenditures, 1996	$366	$704
Total costs	**$157,726**	**$3,391**

* Approximately 46.5 million U.S. residents aged ≥18 years smoked in 1999 (24,316,033 men and 22,199,233 women), based on the civilian noninstitutional population and respondents from the 1999 National Health Interview Survey. Smoking-attributable neonatal expenditures are per maternal smoker; average costs per adult smoker were approximately $8. Total productivity costs are weighted averages for men and women. Totals may not equal sum because of rounding.

† Data sources: Expenditure smoking-attributable fractions cited in reference 8 and 1998 personal health-care expenditure data obtained from the Centers for Medicare and Medicaid Services.

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Traumatic Brain Injury Among American Indians/Alaska Natives — United States, 1992–1996

Traumatic Brain Injury (TBI) is a major cause of morbidity and mortality in the United States, resulting in approximately 52,000 deaths, 230,000 hospitalizations, and 80,000 disabilities annually (*1*). Among American Indians/Alaska Natives (AI/ANs), injuries are the second leading cause of death (2); however, few published reports concern nonfatal injuries in this population, especially for injuries such as TBI. To describe the causes and impact of TBI among AI/ANs, CDC analyzed Indian Health Service (IHS) hospital discharge data. This report summarizes the results of this analysis, which indicate that prevention strategies should focus on the leading causes of TBI hospitalizations, including motor-vehicle crashes, assaults, and falls.

IHS hospitalization data during 1992–1996 were analyzed. These data contain all hospital discharge records of AI/ANs who received services at an IHS, tribal, or contract hospital. Data were coded according to the *International Classification of Diseases, Ninth Revision* (ICD-9-CM) (*3*). TBI cases were selected if at least one of the diagnosis codes listed in CDC's Guidelines for Surveillance of Central Nervous System Injury (*4*) appeared in the diagnostic fields. These included the nature-of-injury diagnosis codes 800.0–801.9, 803.0–804.9, and 850.0–854.1. All TBI cases were E-coded (E800–E999) for the underlying external cause of injury. The underlying causes of TBI-related injuries were categorized as motor-vehicle collisions (E810–E825), falls (E880–E886 and E888), assaults (E960–E969), other (all other E-codes), or unspecified (E928.9 and E988.9). Hospital discharges in this report were limited to single-incident visits. Readmissions (ascertained for each year by matching sex, date of service, state, county, date of birth, and residence codes) were excluded to eliminate duplicate cases. Readmission in a subsequent year was treated as a separate injury event. Data from the California and Portland IHS regions were excluded because these regions do not have IHS or tribal hospitals. Incidence rates were calculated per 100,000 AI/AN residents eligible for services by using AI/AN resident population estimates from the IHS Demographic Statistics Team for each year (IHS, unpublished data, 1992–1996). Rates were age-adjusted to the 2000 U.S. standard population by the direct method. The latest year for which IHS hospital discharge data were available was 1996.

During 1992–1996, IHS, tribal, or contract-care hospitals recorded 4,491 TBI-related hospitalizations among AI/ANs,

resulting in 21,107 hospital days (average length of stay: 4.7 days, range: 1–292 days). The average TBI-related hospitalization rate was 81.7 per 100,000 population (95% confidence interval=79.1–84.4) (Table 1). Of these 4,491 cases, 221 (5%) were fatal. Male TBI rates were 2.5 times greater than female rates. The AI/AN TBI rate was similar to the combined incidence rate of TBI hospitalizations reported by Colorado, Missouri, Oklahoma, and Utah (81.7 versus 84.8 per 100,000 population) (*5*), but lower than national TBI estimates (98.0) (*6*). The annual AI/AN TBI rate declined by 14% during 1992–1996. The major external causes of AI/AN TBI hospitalizations were motor-vehicle collisions (24%), assaults (17%), and falls (16%). Motor-vehicle–related hospitalization rates were highest among AI/ANs aged 15–24 years (34.2 per 100,000 population). For AI/ANs aged 25–34 years and those aged 35–44 years, assaults were the most common cause of TBI (28.2 and 23.6 per 100,000 population, respectively). Five of the assault cases involved firearms. For AI/ANs aged ≤14 years and those aged ≥45 years, falls were the leading cause of injury (17.7 and 19.4 per 100,000 population, respectively). AI/AN TBI-related hospitalization rates differed by geographic region with the highest rates occurring in the Northern Plains states and Alaska. Of the 1,418 records (32%) of TBI-related hospitalizations coded with "unspecified"* E-codes, 1,309 (92%) were from contract health-care providers.

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Editorial Note: TBIs among AI/ANs have serious consequences for patients, their families, and health-care delivery systems. These consequences partially are reflected by the number of hospital days for persons sustaining a TBI. Persons with TBI might experience substantial losses in quality of life, including physical, cognitive, and psychosocial impairments that require long-term rehabilitation therapy. Among AI/ANs, motor-vehicle crashes were involved in approximately one fourth of TBI-related hospitalizations. Because motor-vehicle–related injury is a major cause of TBI (*5*,*6*), increases in safety belt and child restraint use, enactment and enforcement of primary-occupant restraint laws, and policies focused on impaired driving are needed to reduce motor-vehicle–related TBI. During 1990–1994, 73% of motor-vehicle crashes resulting in AI/AN fatalities were alcohol-related (*7*). Fatally injured AI/AN drivers and passengers have some of the lowest safety belt use of any racial/ethnic group in the nation (15.2% for drivers and 11.4% for passengers, respectively) (*7*). Enactment and enforcement of a law mandating safety belt use led to increases in safety belt use and a 29% reduction in motor-vehicle–related injury hospitalizations among Navajo Nation residents (*8*).

The proportion of TBIs attributed to nonfirearm assault among AI/ANs is approximately twice that shown in combined TBI data from Colorado, Missouri, Oklahoma, and Utah (17% versus 9%, respectively) (*5*). Falls contribute to TBI incidence among AI/ANs almost as much as assaults. Additional information about the circumstances and risk factors for these assault and fall injuries can assist agencies, tribes,

TABLE 1. Number of nonfatal traumatic brain injury hospitalizations and rates* among American Indians/Alaska Natives, by selected characteristics — United States†, 1992–1996

Characteristics	Number	Rate	(95% CI§)
Year			
1992	944	90.3	(83.8– 96.7)
1993	820	76.9	(71.1– 82.8)
1994	959	85.9	(79.9– 92.0)
1995	881	78.4	(72.7– 84.2)
1996	887	77.7	(72.1– 83.4)
Total	**4,491**	**81.7**	(79.1– 84.4)
Sex			
Female	1,287	46.7	(46.2– 49.3)
Male	3,204	119.9	(115.8–124.1)
Age (yrs)			
0–14	994	54.4	(51.0– 57.8)
15–24	1,085	112.9	(106.2–119.6)
25–34	1,023	111.7	(104.8–118.5)
35–44	645	93.9	(86.7–101.2)
≥45	744	71.8	(66.6– 77.0)
External cause			
Motor Vehicles	1,062	19.6	(18.4– 20.8)
Assaults	757	14.0	(13.0– 15.0)
Falls	736	13.6	(12.6– 14.6)
Other	518	9.5	(8.7– 10.4)
Unspecified	1,418	26.1	(24.8– 27.5)
Region¶			
Alaska	585	117.1	(106.8–127.4)
East	94	27.8	(21.3– 34.2)
Northern Plains	1,348	122.6	(115.5–129.8)
Oklahoma	456	32.9	(29.5– 36.3)
Southwest	2,008	93.9	(89.3– 98.6)

* Per 100,000 population; rates adjusted to the 2000 U.S. standard population.
† Excludes data from the California and Portland Indian Health Service regions.
§ Confidence interval.
¶ Alaska, East (Nashville), Northern Plains (Aberdeen, Bemidji, and Billings), Oklahoma, and Southwest (Albuquerque, Navajo, Phoenix, and Tucson)

* 1,279 records were coded to E988.9 (i.e., injury by other and unspecified means, or undetermined whether accidentally or purposely inflicted); 139 records were coded to E928.9 (i.e., unspecified accident).

and community practitioners in planning effective prevention strategies.

Several reasons might account for why the AI/AN TBI-related hospitalization rate is lower than the estimated national TBI-related hospitalization rate. First, the true number of TBI hospitalizations among AI/AN might be underreported because of the use of non-IHS or tribal treatment facilities by AI/AN residents. In Nevada, an estimated 73% of AI/AN injury hospitalizations were entered into the IHS data system (*9*). Second, injured AI/ANs covered under Medicare, Medicaid, or private health insurance might not be captured in the IHS data system (*9*). Third, access to advanced emergency medical care by AI/ANs residing in rural areas might be delayed when an injury occurs because greater travel distance might limit their chances of survival. Finally, risk-taking behaviors such as drinking and driving and not wearing safety belts (*8*) might indicate that AI/ANs are less likely to survive following a motor-vehicle crash, and thus will not be hospitalized and included in the IHS data system.

Although all IHS TBI-related hospitalization records are E-coded, the usefulness of these data is diminished because approximately one third of the records are coded "unspecified." Most (92%) "unspecified" E-codes reported for TBI cases occur among the IHS contract hospitals. Hospital discharge data that are E-coded have been used to evaluate injury trends, establish injury control priorities, and help in evaluating injury-prevention programs (*8*,*10*). Accurate and reliable external cause-of-injury information is needed to target and evaluate TBI injury-prevention programs among AI/ANs. Even a small reduction in TBI-related hospitalization will yield a major impact on the health of AI/ANs.

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Progress Toward Poliomyelitis Eradication — Egypt, 2001

The 1988 World Health Assembly resolved to eradicate poliomyelitis worldwide by 2000. Since then, the estimated number of polio cases has decreased by >99%. The Americas and the Western Pacific regions of the World Health Organization (WHO) have been certified polio-free (*1,2*), and it is expected that the European Region will be certified this year. Progress also has been made in the Eastern Mediterranean Region (EMR), where polio is endemic in five of 22 countries (Afghanistan, Egypt, Pakistan, Somalia, and Sudan) (*3*). This report summarizes progress toward polio eradication from 1997 through 2001 in Egypt, where several independent chains of wild poliovirus type 1 continue to circulate despite a long history of eradication efforts. The findings indicate the need to improve surveillance and vaccination activities.

Since 1968 in Egypt, routine vaccination coverage of infants with ≥3 doses of oral poliovirus vaccine (OPV) has increased steadily, and has been >90% since 1994. In 2001, the reported routine coverage was >95% nationwide with only five of 245 districts reporting levels <90%*.

Since 1976, Egypt has been conducting OPV supplementary vaccination activities and in 1989 began implementing annual National Immunization Days (NIDs)†. The campaigns have improved substantially since 2000, with house-to-house vaccine delivery extended to urban areas in Upper Egypt and to high-risk areas and slums in Lower Egypt. Microplanning at the local level was implemented during 2001. The Ministry of Health and Population (MOHP) intensified supervision in high-risk areas using monitors from outside MOHP.

* Coverage calculated by using the number of OPV doses administered as the numerator and the number of registered infants as the denominator.
† Mass campaigns over a short period (days) in which 2 doses of OPV are administered to all children in the target group (usually those aged <5 years) regardless of previous vaccination history.

MOHP conducted extensive supplementary vaccination activities in Upper Egypt during 2001, with targeted campaigns in selected districts of seven governorates in July and August, three subnational rounds in all of Upper Egypt in March, April, and September, and three NID rounds in January, November, and December. Thus, high-risk areas in Upper Egypt were covered by eight rounds over a 12-month period in 2001.

Surveillance for acute flaccid paralysis (AFP) was initiated in Egypt in August 1990 (*4*). Surveillance performance has improved during the past 5 years (Table 1). The national target level of sensitivity (≥1 nonpolio AFP case per 100,000 children aged <15 years) has been reached each year since 1998. The 252 AFP cases in 2001 were reported from 23 of the 27 governorates, representing approximately 98% of the population. Three of the four governorates that reported no AFP have small populations. Fifteen governorates achieved nonpolio AFP rates of ≥1.

All stool samples collected from AFP cases were tested at the national polio laboratory (Vacsera), which is accredited by WHO as a regional reference laboratory in the global poliovirus laboratory network. Since 1996, genetic sequence analyses have been performed routinely on all wild poliovirus isolates detected in Egypt. Results indicate that all are closely related to poliovirus lineages that have been indigenous to Egypt for ≥5 years. The genetic sequence data also highlight progress being made, with decreasing genetic diversity of polioviruses and fewer lineages surviving each successive low transmission season.

Even with improved case detection, the number of confirmed cases of polio has decreased from 100 in 1996 to five in 2001. Poliovirus type 2 was last detected in Egypt in 1994; types 1 and 3 were isolated in 2000 and only type 1 was isolated in 2001.

Since late 1999, wild poliovirus detection through AFP surveillance has been localized in a few districts of Upper Egypt. In 2000, four virologically confirmed polio cases were detected in three governorates: Asyut Governorate (one type 1 with January onset and one type 3 with February onset), Qena Governorate (one type 1 with May onset), and Fayoum Governorate (one type 3 with December onset). In 2001, five type 1 virologically confirmed polio cases were reported in Egypt: three from Minya Governorate (one January onset case from Malawi district, and two from Abu Qurqas district with onsets in January and February) and two from Qena Governorate (October and November onsets).

During 1999–2001, 18 patients with virologically confirmed cases were aged 7–19 months. Among 13 patients reported in 1999 and 2000, two had received <3 valid[§] doses of OPV, while the other 10 patients received 4–7 valid doses through either routine or supplementary vaccination. All five patients reported in 2001 received ≥6 valid doses.

In July 2000, MOHP began to supplement AFP surveillance with environmental surveillance (i.e., collecting and testing wastewater samples) for the presence of wild polioviruses. Ten sampling sites were selected in seven governorates of Upper Egypt: Minya, Fayoum, Beni Suef, Asyut, Sohag, Aswan, and Qena. One site was selected from Gharbia Governorate in Lower Egypt.

During September 2000–December 2001, a total of 194 samples were tested; 64 (33%) yielded wild poliovirus type 1. Wild poliovirus was detected in every study governorate. All isolates were characterized further by partial genomic sequencing, which indicated that the viruses from wastewater samples were closely related to the type 1 polioviruses isolated from paralytic cases. The genetic data indicate that a single genotype of poliovirus type 1 virus with multiple lineages has persisted in Egypt ≥6 years.

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Editorial Note: Before the eradication initiative, Egypt was one of the most intensely polio-endemic countries in the world. The conditions that contributed to intense transmission, such as extremely high population density and poor sanitation, still exist and pose important challenges to disease eradication efforts. To interrupt transmission, it is essential to

[§] Doses of OPV administered ≥4 weeks apart.

TABLE 1. Acute Flaccid Paralysis (AFP) surveillance performance — Egypt, 1997–2001

Indicators	1997	1998	1999	2000	2001
Number of persons with AFP	217	295	276	275	257
Number of persons with poliomyelitis	14	35	9	4	5
Rate of persons per 100,000 population aged <15 years reporting AFP	0.9	1.2	1.2	1.3	1.2
Percentage of persons with AFP detected within 1 week of symptom onset	70%	68%	65%	82%	83%
Percentage of persons with AFP with adequate stool samples (i.e., two samples collected at least 24 hours apart and within 14 days of paralysis onset)	82%	81%	79%	90%	91%
Percentage of stool samples with nonpolio enterovirus isolates	10%	22%	16%	9%	16%

sustain high-quality surveillance and conduct well-organized vaccination activities.

Case investigations and reports from independent monitors in Upper Egypt have identified several barriers to polio eradication, including delayed or missed birth registrations, delayed routine vaccination doses, difficult-to-reach areas with poor access to health services, and irregular outreach activities. In past years, security concerns resulted in restricted access to some children. In some areas, cold chain problems have threatened the quality of the vaccine being administered. Other barriers identified were an insufficient number of field supervisors during vaccination campaigns and an insufficient number of vaccination teams to conduct a house-to-house vaccination strategy, especially in urban areas. Finally, some surveillance deficiencies were noted at the subnational level, with a lack of active surveillance in some areas.

To reduce these barriers, MOHP, with assistance from WHO, has assessed and rehabilitated the cold chain, introduced Vaccine Vial Monitors for OPV used in both campaigns and routine vaccination, and tested the quality of the OPV being used. MOHP has used community census data to prepare local registers of children for tracking routine vaccination and strengthened the system for tracing children with insufficient vaccination. To improve vaccination coverage, MOHP has included an optional birth dose of OPV for children born in Upper Egypt, implemented high-quality targeted campaigns in Upper Egypt and other high-risk areas, and raised the upper age limit of children targeted for supplemental activities from 4 to 5 years. Finally, MOHP has improved the AFP surveillance system by involving both private and university hospitals and clinics.

Conditions in Egypt are probably particularly favorable for intense poliovirus transmission. The continued transmission of wild poliovirus after many years of intense efforts reflects the need to implement fully in Egypt those strategies that have proved successful in other parts of the world, such as intensified searching for cases and high-quality house-to-house campaigns. The intensified eradication strategies require the full support of all of the agencies and organizations involved.

WHO continues to seek the opinions and support of international experts. Several consultations have been held in the past 3 years. A recently established Technical Advisory Group held its inaugural meeting and review in March 2002. If poliovirus transmission is to be interrupted in Egypt, the eradication effort will require sustained political support of the Egyptian government, high-quality program execution by MOHP, and technical support from WHO and others.

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Notice to Readers

Epidemiology in Action

CDC and Emory University's Rollins School of Public Health will co-sponsor a course, "Epidemiology in Action," during April 29–May 10, 2002, at CDC and Emory University campuses. The course is designed for state and local public health professionals.

The course emphasizes the practical application of epidemiology to public health problems and will consist of lectures, workshops, classroom exercises (including actual epidemiologic problems), and roundtable discussions. Topics covered include descriptive epidemiology and biostatistics, analytic epidemiology, epidemic investigations, public health surveillance, surveys and sampling, Epi Info 2000 (Windows version) training, and discussions of selected prevalent diseases. There is a tuition charge. Additional information and applications are available from Emory University, International Health Dept. (PIA), 1518 Clifton Rd. N.E., Rm. 746, Atlanta, GA 30322; telephone 404-727-3485; fax 404-727-4590; or at http://www.sph.emory.edu/Epicourses; or e-mail pvaleri@sph.emory.edu.

Notice to Readers

Epi Info 2000: A Course for Developers of Public Health Information Systems

CDC and Emory University's Rollins School of Public Health will co-sponsor a course, "Developing Public Health Software Applications Using Epi Info 2000," during May 14–17, 2002, at Emory University. The course is designed for practitioners of epidemiology and computing with intermediate to advanced computing skills who wish to develop software applications using Epi Info 2000 for Windows 95, 98, NT, and 2000.

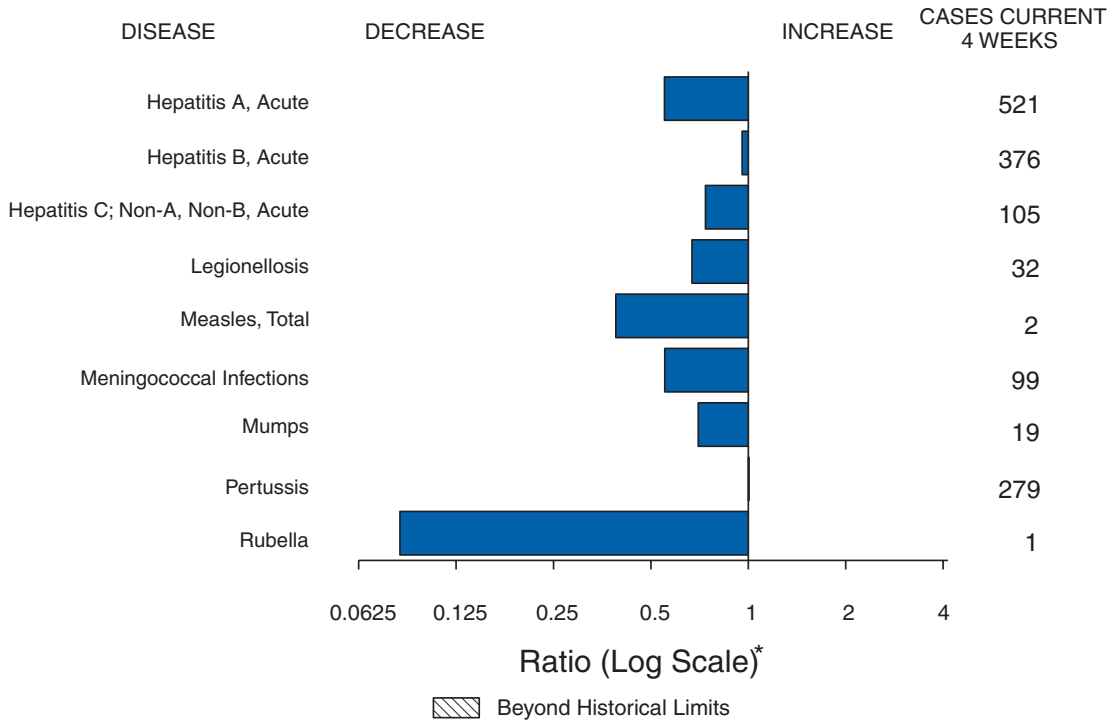
The 4-day course covers hands-on experience with the new Windows version of Epi Info, programming Epi Info software at the intermediate to advanced level, and computerized interactive exercises for developing a public health information system. There is a tuition charge.

Additional information and applications are available from Emory University's Rollins School of Public Health, International Health Dept. (PIA), 1518 Clifton Rd. N.E., Rm. 746, Atlanta, GA 30322; telephone 404-727-3485; fax 404-727-4590; or e-mail pvaleri@sph.emory.edu.

Errata: Vol 51, No. 13

In the article "Alcohol Use Among Women of Childbearing Age—United States, 1991–1999," two errors occurred in the first paragraph on page 273. The second sentence should read, "One of the national health objectives for 2010 is to increase to 94% the percentage of pregnant women abstaining from alcohol use." The sixth sentence should read, "However, rates of binge drinking (i.e., ≥5 drinks on any one occasion) and frequent drinking (i.e., ≥7 drinks per week or ≥5 drinks on any one occasion) during pregnancy have not declined, and these rates also have not declined among nonpregnant women of childbearing age."

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending April 6, 2002, with historical data



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

TABLE I. Summary of provisional cases of selected notifiable diseases, United States, cumulative, week ending April 6, 2002 (14th Week)*

		Cum. 2002	Cum. 2001		Cum. 2002	Cum. 2001
Anthrax		1	-	Encephalitis: West Nile†	5	-
Botulism:	foodborne	5	5	Hansen disease (leprosy)†	19	27
	infant	11	28	Hantavirus pulmonary syndrome†	-	2
	other (wound & unspecified)	6	1	Hemolytic uremic syndrome, postdiarrheal†	22	22
Brucellosis†		18	18	HIV infection, pediatric†§	31	49
Chancroid		17	9	Plague	-	-
Cholera		1	-	Poliomyelitis, paralytic	-	-
Cyclosporiasis†		27	38	Psittacosis†	9	3
Diphtheria		-	-	Q fever†	6	2
Ehrlichiosis:	human granulocytic (HGE)†	10	21	Rabies, human	-	-
	human monocytic (HME)†	7	7	Streptococcal toxic-shock syndrome†	13	29
	other and unspecified	-	-	Tetanus	2	6
Encephalitis:	California serogroup viral†	6	1	Toxic-shock syndrome	32	46
	eastern equine†	-	-	Trichinosis	3	7
	Powassan†	-	-	Tularemia†	6	6
	St. Louis†	-	-	Yellow fever	1	-
	western equine†	-	-			

-:No reported cases.
* Incidence data for reporting year 2001 and 2002 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 February 24, 2002.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending April 6, 2002, and April 7, 2001 (14th Week)*

Reporting Area	AIDS		Chlamydia†		Cryptosporidiosis		*Escherichia coli* O157:H7		*Escherichia coli* Shiga Toxin Positive, Serogroup non-O157	
	Cum. 2002§	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	10,377	10,393	174,669	198,888	480	465	290	291	15	17
NEW ENGLAND	320	309	6,778	6,139	20	12	22	26	2	7
Maine	1	3	372	339	-	-	-	3	-	-
N.H.	9	12	420	332	5	-	1	3	-	2
Vt.	5	10	199	156	5	5	-	1	-	-
Mass.	178	191	2,898	2,454	4	3	13	17	2	1
R.I.	35	33	734	800	3	2	2	-	-	-
Conn.	92	60	2,155	2,058	3	2	6	2	-	4
MID. ATLANTIC	2,133	3,267	15,263	20,378	44	68	20	26	-	-
Upstate N.Y.	158	567	1,850	3,279	9	17	16	14	-	-
N.Y. City	1,299	1,870	7,766	7,917	25	30	-	1	-	-
N.J.	403	473	776	2,951	1	2	4	11	-	-
Pa.	273	357	4,871	6,231	9	19	N	N	-	-
E.N. CENTRAL	973	662	28,256	38,181	129	150	88	70	-	-
Ohio	197	99	4,063	9,953	38	27	15	19	-	-
Ind.	133	64	4,479	4,343	13	14	6	9	-	-
Ill.	476	329	7,971	11,441	15	12	22	12	-	-
Mich.	117	137	8,812	7,875	27	31	21	12	-	-
Wis.	50	33	2,931	4,569	36	66	24	18	-	-
W.N. CENTRAL	147	175	8,127	10,336	38	17	43	26	3	1
Minn.	29	35	2,231	2,236	15	-	19	13	3	-
Iowa	34	18	461	1,006	5	7	9	3	-	-
Mo.	48	72	2,551	3,587	10	6	11	4	-	-
N. Dak.	-	1	228	269	2	-	-	-	-	-
S. Dak.	2	-	584	497	3	1	1	1	-	1
Nebr.	15	25	314	1,003	-	3	-	-	-	-
Kans.	19	24	1,758	1,738	3	-	3	5	-	-
S. ATLANTIC	3,619	2,972	36,713	38,222	115	94	41	35	8	7
Del.	58	54	706	829	1	1	1	-	-	-
Md.	420	245	3,700	4,023	3	18	-	1	-	-
D.C.	157	233	799	907	2	3	-	-	-	-
Va.	235	263	4,386	4,624	1	5	5	6	-	1
W. Va.	21	17	626	613	1	-	-	1	-	-
N.C.	280	116	5,431	5,819	13	11	6	16	-	-
S.C.	267	214	3,049	4,681	2	1	-	1	-	-
Ga.	651	270	8,178	8,223	62	38	22	5	5	5
Fla.	1,530	1,560	9,838	8,503	30	17	7	5	3	1
E.S. CENTRAL	425	482	13,448	13,485	26	12	7	11	-	-
Ky.	46	74	2,115	2,352	1	1	2	1	-	-
Tenn.	204	160	4,246	4,014	10	2	4	5	-	-
Ala.	85	118	4,520	3,593	13	4	-	4	-	-
Miss.	90	130	2,567	3,526	2	5	1	1	-	-
W.S. CENTRAL	1,077	815	26,797	28,952	5	11	-	28	-	-
Ark.	59	64	1,365	2,198	2	2	-	-	-	-
La.	269	257	4,755	4,725	1	4	-	-	-	-
Okla.	48	44	2,086	2,584	2	1	-	6	-	-
Tex.	701	450	18,591	19,445	-	4	-	22	-	-
MOUNTAIN	328	345	10,645	11,120	30	34	24	23	1	-
Mont.	4	3	548	464	1	1	4	2	-	-
Idaho	6	5	642	510	9	5	1	3	-	-
Wyo.	2	-	219	206	1	-	-	-	1	-
Colo.	64	82	1,137	3,238	8	12	2	9	-	-
N. Mex.	11	30	1,989	1,593	3	8	2	1	-	-
Ariz.	148	123	3,124	3,434	4	1	4	5	-	-
Utah	18	34	1,503	279	2	7	5	2	-	-
Nev.	75	68	1,483	1,396	2	-	6	1	-	-
PACIFIC	1,355	1,366	28,642	32,075	73	67	45	46	1	2
Wash.	147	150	3,680	3,714	15	U	7	9	-	-
Oreg.	129	52	1,798	1,961	8	8	15	3	1	2
Calif.	1,064	1,144	21,265	24,587	49	59	20	30	-	-
Alaska	2	8	913	691	-	-	-	-	-	-
Hawaii	13	12	986	1,122	1	-	3	4	-	-
Guam	1	6	-	-	-	-	N	N	-	-
P.R.	273	326	-	1,171	-	-	-	-	-	-
V.I.	53	1	-	53	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	37	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 year 2001 and 2002 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 March 31, 2002.

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 6, 2002, and April 7, 2001 (14th Week)*

Reporting Area	*Escherichia coli* Shiga Toxin Positive, Not Serogrouped		Giardiasis	Gonorrhea		*Haemophilus influenzae*, Invasive			
						All Ages, All Serotypes		Age <5 Years Serotype B	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	1	3	3,046	76,358	90,935	423	461	3	7
NEW ENGLAND	-	-	344	2,062	1,641	32	15	-	1
Maine	-	-	44	20	43	1	1	-	-
N.H.	-	-	16	34	34	4	-	-	-
Vt.	-	-	26	25	24	3	-	-	-
Mass.	-	-	147	976	725	16	13	-	1
R.I.	-	-	18	255	201	-	-	-	-
Conn.	-	-	93	752	614	8	1	-	-
MID. ATLANTIC	-	-	494	6,677	9,678	53	67	1	-
Upstate N.Y.	-	-	115	988	1,946	20	12	1	-
N.Y. City	-	-	249	3,202	3,336	20	20	-	-
N.J.	-	-	-	560	1,307	9	29	-	-
Pa.	-	-	130	1,927	3,089	4	6	-	-
E.N. CENTRAL	1	2	595	13,539	19,131	61	71	1	1
Ohio	1	2	229	2,277	5,268	36	24	-	1
Ind.	-	-	-	2,035	1,843	14	10	-	-
Ill.	-	-	94	4,501	5,978	-	27	-	-
Mich.	-	-	196	3,879	4,457	6	3	1	-
Wis.	-	-	76	847	1,585	5	7	-	-
W.N. CENTRAL	-	-	379	3,621	4,276	14	14	-	-
Minn.	-	-	163	708	712	11	8	-	-
Iowa	-	-	61	134	289	1	-	-	-
Mo.	-	-	102	1,859	2,067	2	6	-	-
N. Dak.	-	-	3	12	8	-	-	-	-
S. Dak.	-	-	17	72	56	-	-	-	-
Nebr.	-	-	-	118	378	-	-	-	-
Kans.	-	-	33	718	766	-	-	-	-
S. ATLANTIC	-	-	615	22,016	23,691	121	147	-	1
Del.	-	-	12	447	439	-	-	-	-
Md.	-	-	28	2,061	2,285	27	35	-	-
D.C.	-	-	12	681	856	-	-	-	-
Va.	-	-	36	2,857	2,489	8	9	-	-
W. Va.	-	-	8	257	131	1	4	-	1
N.C.	-	-	-	4,379	4,644	11	20	-	-
S.C.	-	-	6	1,761	3,584	5	2	-	-
Ga.	-	-	226	4,337	4,513	43	40	-	-
Fla.	-	-	287	5,236	4,750	26	37	-	-
E.S. CENTRAL	-	1	78	7,628	8,671	18	24	1	-
Ky.	-	1	-	835	932	2	1	-	-
Tenn.	-	-	33	2,332	2,636	10	10	-	-
Ala.	-	-	45	2,888	2,947	5	12	1	-
Miss.	-	-	-	1,573	2,156	1	1	-	-
W.S. CENTRAL	-	-	14	12,060	14,035	21	10	-	1
Ark.	-	-	14	873	1,458	1	-	-	-
La.	-	-	-	3,020	3,206	1	2	-	-
Okla.	-	-	-	936	1,230	19	7	-	-
Tex.	-	-	-	7,231	8,141	-	1	-	1
MOUNTAIN	-	-	302	2,576	2,687	58	70	-	2
Mont.	-	-	17	33	25	-	-	-	-
Idaho	-	-	9	28	26	1	1	-	-
Wyo.	-	-	2	16	16	1	-	-	-
Colo.	-	-	111	766	899	14	14	-	-
N. Mex.	-	-	34	368	266	13	10	-	-
Ariz.	-	-	46	782	924	19	37	-	1
Utah	-	-	50	117	26	8	1	-	-
Nev.	-	-	33	466	505	2	7	-	1
PACIFIC	-	-	225	6,179	7,125	45	43	-	1
Wash.	-	-	59	830	835	-	1	-	-
Oreg.	-	-	115	245	337	27	4	-	-
Calif.	-	-	-	4,814	5,689	6	24	-	1
Alaska	-	-	21	161	85	1	1	-	-
Hawaii	-	-	30	129	179	11	13	-	-
Guam	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	291	-	-	-	-
V.I.	-	-	-	-	6	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	3	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 6, 2002, and April 7, 2001 (14th Week)*

Reporting Area	*Haemophilus influenzae*, Invasive				Hepatitis (Viral, Acute), By Type					
	Age <5 Years									
	Non-Serotype B		Unknown Serotype		A		B		C; Non-A, Non-B	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	74	83	4	8	2,205	3,287	1,493	1,902	399	1,337
NEW ENGLAND	5	4	-	-	98	110	49	34	7	19
Maine	-	-	-	-	4	1	1	1	-	-
N.H.	-	-	-	-	6	4	5	5	-	-
Vt.	-	-	-	-	-	2	2	2	4	5
Mass.	3	4	-	-	48	40	28	5	3	14
R.I.	-	-	-	-	4	4	1	6	-	-
Conn.	2	-	-	-	36	59	12	15	-	-
MID. ATLANTIC	8	11	-	-	239	374	306	413	109	627
Upstate N.Y.	4	-	-	-	21	56	19	29	5	9
N.Y. City	3	4	-	-	114	105	175	172	-	-
N.J.	1	3	-	-	36	161	59	135	101	599
Pa.	-	4	-	-	68	52	53	77	3	19
E.N. CENTRAL	9	15	-	-	275	719	230	176	30	79
Ohio	4	3	-	-	86	75	29	33	4	4
Ind.	4	3	-	-	13	24	6	4	-	-
Ill.	-	7	-	-	83	492	20	14	3	20
Mich.	-	-	-	-	64	102	175	125	23	55
Wis.	1	2	-	-	29	26	-	-	-	-
W.N. CENTRAL	1	1	2	1	99	127	54	56	117	350
Minn.	1	1	1	-	14	7	2	4	-	-
Iowa	-	-	-	-	26	10	6	6	1	-
Mo.	-	-	1	1	19	40	38	34	116	347
N. Dak.	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	3	1	-	1	-	-
Nebr.	-	-	-	-	-	17	-	5	-	1
Kans.	-	-	-	-	37	52	8	6	-	2
S. ATLANTIC	19	24	-	4	739	561	420	442	36	29
Del.	-	-	-	-	2	2	1	4	3	1
Md.	-	3	-	-	86	67	34	39	6	7
D.C.	-	-	-	-	29	13	5	3	-	-
Va.	2	4	-	-	24	38	54	36	-	-
W. Va.	-	-	-	-	6	1	7	3	-	1
N.C.	1	1	-	4	91	34	46	79	6	7
S.C.	1	-	-	-	15	17	17	1	3	2
Ga.	9	10	-	-	176	242	152	189	2	1
Fla.	6	6	-	-	310	147	104	88	16	10
E.S. CENTRAL	4	4	-	1	48	80	44	113	49	24
Ky.	-	-	-	-	22	10	11	18	1	3
Tenn.	2	1	-	-	-	35	-	38	10	16
Ala.	2	2	-	1	8	30	15	29	2	1
Miss.	-	1	-	-	18	5	18	28	36	4
W.S. CENTRAL	4	1	-	-	30	548	94	216	3	158
Ark.	-	-	-	-	11	16	26	25	-	2
La.	-	-	-	-	6	27	5	29	3	74
Okla.	4	1	-	-	12	51	1	24	-	1
Tex.	-	-	-	-	1	454	62	138	-	81
MOUNTAIN	15	8	1	1	173	228	106	137	20	20
Mont.	-	-	-	-	5	4	2	1	-	-
Idaho	-	-	-	-	-	25	-	4	-	1
Wyo.	-	-	-	-	3	1	6	-	4	3
Colo.	2	-	-	-	29	24	27	29	11	4
N. Mex.	4	4	-	1	4	7	11	35	-	8
Ariz.	5	4	-	-	91	114	40	50	-	1
Utah	3	-	-	-	19	20	10	5	-	-
Nev.	1	-	1	-	22	33	10	13	5	3
PACIFIC	9	15	1	1	504	540	190	315	28	31
Wash.	-	-	-	1	38	20	11	21	3	9
Oreg.	4	-	-	-	34	11	34	12	7	2
Calif.	3	14	1	-	426	498	141	272	18	20
Alaska	1	-	-	-	6	10	2	3	-	-
Hawaii	1	1	-	-	-	1	2	7	-	-
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	24	28	14	57	-	1
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	4	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 6, 2002, and April 7, 2001 (14th Week)*

Reporting Area	Legionellosis		Listeriosis		Lyme Disease		Malaria		Measles Total	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	150	228	88	113	697	1,120	232	298	1†	39§
NEW ENGLAND	6	7	10	10	46	177	13	25	-	5
Maine	1	-	2	-	-	-	1	1	-	-
N.H.	1	1	2	-	14	2	4	1	-	-
Vt.	-	3	-	-	1	1	-	-	-	1
Mass.	2	2	4	6	28	60	3	11	-	3
R.I.	-	-	-	-	3	-	-	-	-	-
Conn.	2	1	2	4	-	114	5	12	-	1
MID. ATLANTIC	22	54	13	21	496	746	43	73	-	5
Upstate N.Y.	3	11	6	3	299	183	7	10	-	4
N.Y. City	6	4	3	4	22	10	26	39	-	-
N.J.	1	8	-	10	32	133	6	16	-	-
Pa.	12	31	4	4	143	420	4	8	-	1
E.N. CENTRAL	53	64	14	13	9	34	29	47	-	7
Ohio	31	28	8	1	8	5	7	5	-	2
Ind.	3	4	-	1	1	-	1	8	-	2
Ill.	-	8	-	4	-	4	4	14	-	3
Mich.	15	14	4	5	-	-	13	13	-	-
Wis.	4	10	2	2	U	25	4	7	-	-
W.N. CENTRAL	7	12	4	2	11	16	17	7	-	3
Minn.	1	1	-	-	5	10	7	1	-	1
Iowa	-	3	1	-	3	1	2	1	-	-
Mo.	5	5	1	1	3	4	5	3	-	2
N. Dak.	-	-	1	-	-	-	-	-	-	-
S. Dak.	1	-	-	-	-	-	-	-	-	-
Nebr.	-	2	-	-	-	-	-	1	-	-
Kans.	-	1	1	1	-	1	3	1	-	-
S. ATLANTIC	33	26	13	14	99	101	82	75	1	3
Del.	3	-	-	-	5	6	1	1	-	-
Md.	4	7	3	2	56	82	21	25	-	3
D.C.	-	1	-	-	5	6	2	4	-	-
Va.	2	4	1	2	1	4	5	11	-	-
W. Va.	N	N	-	1	-	1	-	-	-	-
N.C.	3	2	1	-	11	2	7	1	-	-
S.C.	3	-	2	-	1	-	2	2	-	-
Ga.	3	3	3	3	-	-	33	20	-	-
Fla.	15	9	3	6	20	-	11	11	1	-
E.S. CENTRAL	5	20	5	7	2	2	3	8	-	-
Ky.	3	6	1	1	1	2	-	2	-	-
Tenn.	-	7	2	3	1	-	1	3	-	-
Ala.	2	3	2	3	-	-	1	3	-	-
Miss.	-	4	-	-	-	-	1	-	-	-
W.S. CENTRAL	1	4	3	12	2	24	2	3	-	1
Ark.	-	-	-	1	-	-	-	-	-	-
La.	-	2	-	-	1	2	2	1	-	-
Okla.	1	1	3	-	-	-	-	1	-	-
Tex.	-	1	-	11	1	22	-	1	-	1
MOUNTAIN	11	12	8	7	6	1	9	17	-	1
Mont.	1	-	-	-	-	-	-	1	-	-
Idaho	-	-	-	-	1	-	-	1	-	1
Wyo.	3	1	-	-	-	-	-	-	-	-
Colo.	4	4	2	1	2	-	4	9	-	-
N. Mex.	1	1	-	2	1	-	-	1	-	-
Ariz.	-	4	4	1	1	-	2	1	-	-
Utah	2	-	2	1	1	-	2	2	-	-
Nev.	-	2	-	2	-	1	1	2	-	-
PACIFIC	12	29	18	27	26	19	34	43	-	14
Wash.	1	5	1	1	-	1	2	1	-	-
Oreg.	N	N	1	3	1	1	1	2	-	2
Calif.	11	20	16	23	25	17	28	37	-	10
Alaska	-	1	-	-	-	-	1	1	-	-
Hawaii	-	3	-	-	N	N	2	2	-	2
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	2	-	-	N	N	-	1	-	-
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 year 2001 and 2002 are provisional and cumulative (year-to-date).
† Of one case reported, zero was indigenous and one was imported from another country.
§ Of 39 cases reported, 16 were indigenous and 23 were imported from another country.

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 6, 2002, and April 7, 2001 (14th Week)*

Reporting Area	Meningococcal Disease		Mumps		Pertussis		Rabies, Animal	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	446	961	74	46	1,151	1,470	994	1,547
NEW ENGLAND	38	51	4	-	189	164	189	134
Maine	2	-	-	-	3	-	12	18
N.H.	4	4	3	-	2	16	2	4
Vt.	3	4	-	-	31	22	39	26
Mass.	20	29	1	-	149	120	64	37
R.I.	2	1	-	-	-	-	4	14
Conn.	7	13	-	-	4	6	68	35
MID. ATLANTIC	33	113	9	3	46	108	83	89
Upstate N.Y.	9	28	1	1	21	67	43	-
N.Y. City	4	19	1	2	5	11	7	1
N.J.	6	42	1	-	-	2	-	31
Pa.	14	24	6	-	20	28	33	57
E.N. CENTRAL	64	114	9	5	190	160	3	8
Ohio	30	34	2	1	117	104	1	-
Ind.	11	4	-	-	15	5	1	1
Ill.	-	32	2	4	28	14	1	-
Mich.	15	27	5	-	22	17	-	3
Wis.	8	17	-	-	8	20	-	4
W.N. CENTRAL	44	54	6	2	150	44	78	90
Minn.	10	6	-	-	46	-	7	15
Iowa	5	11	-	-	48	7	9	14
Mo.	23	23	3	-	35	24	4	5
N. Dak.	-	2	-	-	-	-	1	14
S. Dak.	2	2	-	-	5	2	16	13
Nebr.	-	2	-	-	-	1	-	-
Kans.	4	8	3	2	16	10	41	29
S. ATLANTIC	94	162	12	4	98	66	489	532
Del.	3	-	-	-	1	-	3	10
Md.	3	21	2	2	12	10	75	88
D.C.	-	-	-	-	-	-	-	-
Va.	14	17	2	1	31	8	144	96
W. Va.	-	4	-	-	1	1	40	36
N.C.	11	39	1	-	13	23	146	143
S.C.	11	13	1	1	21	8	20	27
Ga.	14	27	2	-	10	9	59	85
Fla.	38	41	4	-	9	7	2	47
E.S. CENTRAL	21	60	4	-	40	31	34	115
Ky.	3	10	1	-	14	9	6	5
Tenn.	7	21	1	-	23	14	22	106
Ala.	9	22	1	-	3	5	6	4
Miss.	2	7	1	-	-	3	-	-
W.S. CENTRAL	17	204	4	7	122	71	26	410
Ark.	7	9	-	1	5	4	-	-
La.	3	40	-	2	-	1	-	2
Okla.	6	13	-	-	12	2	26	21
Tex.	1	142	4	4	105	64	-	387
MOUNTAIN	39	44	3	4	168	610	36	62
Mont.	1	-	-	-	2	3	4	5
Idaho	1	3	1	-	22	151	-	-
Wyo.	-	-	-	1	3	-	1	16
Colo.	13	17	-	1	86	133	-	-
N. Mex.	1	7	-	2	22	39	-	1
Ariz.	12	9	-	-	19	274	31	40
Utah	4	5	2	-	10	9	-	-
Nev.	7	3	-	-	4	1	-	-
PACIFIC	96	159	23	21	148	216	56	107
Wash.	15	25	-	-	79	27	-	-
Oreg.	17	6	N	N	14	5	-	-
Calif.	60	121	18	12	49	175	34	76
Alaska	1	1	-	1	3	-	22	31
Hawaii	3	6	5	8	3	9	-	-
Guam	-	-	-	-	-	-	-	-
P.R.	1	1	-	-	-	2	18	32
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	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 year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 6, 2002, and April 7, 2001 (14th Week)*

Reporting Area	Rocky Mountain Spotted Fever		Rubella				Salmonellosis	
			Rubella		Congenital Rubella			
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	76	22	1	5	1	-	5,816	6,590
NEW ENGLAND	-	-	-	-	-	-	343	446
Maine	-	-	-	-	-	-	46	27
N.H.	-	-	-	-	-	-	15	32
Vt.	-	-	-	-	-	-	16	20
Mass.	-	-	-	-	-	-	181	273
R.I.	-	-	-	-	-	-	5	21
Conn.	-	-	-	-	-	-	80	73
MID. ATLANTIC	6	1	-	3	-	-	608	1,038
Upstate N.Y.	1	-	-	1	-	-	154	172
N.Y. City	-	-	-	2	-	-	234	223
N.J.	-	-	-	-	-	-	76	389
Pa.	5	1	-	-	-	-	144	254
E.N. CENTRAL	3	2	-	1	-	-	990	906
Ohio	3	-	-	-	-	-	301	284
Ind.	-	1	-	-	-	-	50	61
Ill.	-	1	-	1	-	-	322	256
Mich.	-	-	-	-	-	-	206	157
Wis.	-	-	-	-	-	-	111	148
W.N. CENTRAL	8	3	-	-	-	-	460	387
Minn.	-	-	-	-	-	-	98	126
Iowa	-	-	-	-	-	-	67	56
Mo.	8	3	-	-	-	-	212	97
N. Dak.	-	-	-	-	-	-	5	1
S. Dak.	-	-	-	-	-	-	20	23
Nebr.	-	-	-	-	-	-	-	32
Kans.	-	-	-	-	-	-	58	52
S. ATLANTIC	53	12	1	-	-	-	1,658	1,477
Del.	-	-	-	-	-	-	11	20
Md.	5	2	1	-	-	-	140	141
D.C.	-	-	-	-	-	-	19	18
Va.	1	-	-	-	-	-	143	150
W. Va.	-	-	-	-	-	-	10	9
N.C.	31	7	-	-	-	-	233	258
S.C.	6	1	-	-	-	-	77	146
Ga.	9	-	-	-	-	-	460	391
Fla.	1	2	-	-	-	-	565	344
E.S. CENTRAL	5	3	-	-	-	-	332	349
Ky.	-	-	-	-	-	-	46	63
Tenn.	4	2	-	-	-	-	102	93
Ala.	1	1	-	-	-	-	109	130
Miss.	-	-	-	-	-	-	75	63
W.S. CENTRAL	-	-	-	-	-	-	124	686
Ark.	-	-	-	-	-	-	49	55
La.	-	-	-	-	-	-	13	147
Okla.	-	-	-	-	-	-	60	29
Tex.	-	-	-	-	-	-	2	455
MOUNTAIN	1	1	-	-	-	-	409	395
Mont.	-	-	-	-	-	-	10	12
Idaho	-	1	-	-	-	-	23	18
Wyo.	-	-	-	-	-	-	11	20
Colo.	-	-	-	-	-	-	117	106
N. Mex.	-	-	-	-	-	-	61	51
Ariz.	-	-	-	-	-	-	100	123
Utah	-	-	-	-	-	-	38	41
Nev.	1	-	-	-	-	-	49	24
PACIFIC	-	-	-	1	1	-	892	906
Wash.	-	-	-	-	-	-	41	84
Oreg.	-	-	-	-	-	-	63	20
Calif.	-	-	-	-	-	-	725	713
Alaska	-	-	-	-	-	-	15	10
Hawaii	-	-	-	1	1	-	48	79
Guam	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	-	-	41	193
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	2	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 6, 2002, and April 7, 2001 (14th Week)*

Reporting Area	Shigellosis		Streptococcal Disease, Invasive, Group A		*Streptococcus pneumoniae*, Drug Resistant, Invasive		*Streptococcus pneumoniae*, Invasive (<5 Years)	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	3,015	3,364	1,051	1,281	788	1,027	38	41
NEW ENGLAND	60	56	50	45	1	4	1	1
Maine	2	1	14	7	-	-	-	-
N.H.	3	1	16	5	-	-	-	-
Vt.	-	1	2	6	1	4	1	-
Mass.	42	41	18	25	-	-	-	-
R.I.	-	2	-	2	-	-	-	1
Conn.	13	10	-	-	-	-	-	-
MID. ATLANTIC	128	433	123	208	14	54	11	34
Upstate N.Y.	22	116	54	79	14	53	11	34
N.Y. City	67	110	34	72	U	U	-	-
N.J.	13	129	22	46	-	-	-	-
Pa.	26	78	13	11	-	1	-	-
E.N. CENTRAL	392	478	160	307	49	69	9	5
Ohio	237	115	64	73	-	-	1	-
Ind.	14	69	7	7	49	69	8	5
Ill.	72	147	1	119	-	-	-	-
Mich.	44	89	88	87	-	-	-	-
Wis.	25	58	-	21	-	-	-	-
W.N. CENTRAL	260	357	81	119	185	15	14	1
Minn.	44	155	42	44	138	-	14	-
Iowa	26	59	-	-	-	-	-	-
Mo.	38	69	22	28	4	5	-	-
N. Dak.	-	9	-	4	-	1	-	1
S. Dak.	114	15	3	2	1	-	-	-
Nebr.	-	21	-	12	-	3	-	-
Kans.	38	29	14	29	42	6	-	-
S. ATLANTIC	1,306	486	245	249	454	720	3	-
Del.	3	3	-	1	3	-	-	-
Md.	151	29	32	19	-	-	-	-
D.C.	17	16	3	-	26	2	1	-
Va.	264	30	27	45	-	-	-	-
W. Va.	2	4	2	8	15	14	-	-
N.C.	68	102	51	42	-	-	-	-
S.C.	14	29	17	2	66	113	2	-
Ga.	515	120	68	91	132	274	-	-
Fla.	272	153	45	41	212	317	-	-
E.S. CENTRAL	255	264	39	29	56	102	-	-
Ky.	45	94	5	13	5	10	-	-
Tenn.	16	26	34	16	51	91	-	-
Ala.	108	59	-	-	-	1	-	-
Miss.	86	85	-	-	-	-	-	-
W.S. CENTRAL	94	623	12	132	11	42	-	-
Ark.	24	139	-	-	2	10	-	-
La.	11	60	-	-	9	32	-	-
Okla.	58	4	11	20	-	-	-	-
Tex.	1	420	1	112	-	-	-	-
MOUNTAIN	113	175	179	128	18	20	-	-
Mont.	-	-	-	-	-	-	-	-
Idaho	2	5	3	2	-	-	-	-
Wyo.	1	-	3	2	7	2	-	-
Colo.	31	36	94	57	-	-	-	-
N. Mex.	17	35	35	30	10	18	-	-
Ariz.	45	76	44	35	1	-	-	-
Utah	10	9	-	2	-	-	-	-
Nev.	7	14	-	-	-	-	-	-
PACIFIC	407	492	162	64	-	1	-	-
Wash.	15	49	26	-	-	-	-	-
Oreg.	30	8	-	-	-	-	-	-
Calif.	346	421	120	49	-	-	-	-
Alaska	1	2	-	-	-	-	-	-
Hawaii	15	12	16	15	-	1	-	-
Guam	-	-	-	-	-	-	-	-
P.R.	1	6	-	-	-	-	-	-
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	-	-	U	U
C.N.M.I.	-	U	-	U	-	-	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
*Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 6, 2002, and April 7, 2001 (14th Week)*

Reporting Area	Syphilis				Tuberculosis		Typhoid Fever	
	Primary & Secondary		Congenital†					
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	1,441	1,479	18	128	1,756	2,687	57	72
NEW ENGLAND	22	9	-	1	82	90	6	4
Maine	-	-	-	-	-	-	-	-
N.H.	-	-	-	-	4	7	-	-
Vt.	-	-	-	-	-	2	-	-
Mass.	13	6	-	1	38	47	5	4
R.I.	2	-	-	-	11	9	-	-
Conn.	7	3	-	-	29	25	1	-
MID. ATLANTIC	147	114	2	21	358	417	14	29
Upstate N.Y.	4	4	1	13	39	-	3	4
N.Y. City	91	68	-	-	246	239	8	4
N.J.	33	18	1	5	12	110	3	21
Pa.	19	24	-	3	61	68	-	-
E.N. CENTRAL	295	245	-	23	241	242	9	4
Ohio	41	21	-	1	43	54	4	1
Ind.	16	45	-	3	29	21	1	-
Ill.	73	80	-	17	119	116	-	1
Mich.	160	92	-	2	44	33	3	1
Wis.	5	7	-	-	6	18	1	1
W.N. CENTRAL	13	22	-	3	96	100	1	4
Minn.	3	12	-	-	51	53	-	-
Iowa	-	-	-	-	-	9	-	-
Mo.	5	5	-	1	37	23	1	4
N. Dak.	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	5	2	-	-
Nebr.	3	-	-	-	-	13	-	-
Kans.	2	5	-	2	3	-	-	-
S. ATLANTIC	384	552	2	32	373	522	10	10
Del.	5	4	-	-	-	-	-	-
Md.	31	73	-	1	36	41	1	3
D.C.	18	11	-	1	-	22	-	-
Va.	8	39	-	1	26	51	-	1
W. Va.	-	-	-	-	8	9	-	-
N.C.	91	135	-	2	68	68	-	1
S.C.	33	79	-	8	27	48	-	-
Ga.	56	75	-	8	42	96	6	3
Fla.	142	136	2	11	166	187	3	2
E.S. CENTRAL	169	151	1	7	178	189	1	-
Ky.	19	12	-	-	26	19	1	-
Tenn.	67	83	-	4	76	63	-	-
Ala.	63	26	1	2	53	74	-	-
Miss.	20	30	-	1	23	33	-	-
W.S. CENTRAL	182	193	13	22	56	418	-	4
Ark.	6	14	-	2	19	34	-	-
La.	35	38	-	-	-	-	-	-
Okla.	14	23	-	1	37	18	-	-
Tex.	127	118	13	19	-	366	-	4
MOUNTAIN	66	49	-	5	43	105	4	2
Mont.	-	-	-	-	-	-	-	1
Idaho	1	-	-	-	-	4	-	-
Wyo.	-	-	-	-	1	-	-	-
Colo.	-	5	-	-	11	25	2	-
N. Mex.	13	4	-	-	7	14	-	-
Ariz.	46	32	-	5	17	36	-	-
Utah	5	6	-	-	5	5	1	-
Nev.	1	2	-	-	2	21	1	1
PACIFIC	163	144	-	14	329	604	12	15
Wash.	16	19	-	-	55	46	-	1
Oreg.	4	3	-	-	19	22	2	-
Calif.	142	119	-	14	204	483	10	13
Alaska	-	-	-	-	19	13	-	-
Hawaii	1	3	-	-	32	40	-	1
Guam	-	-	-	-	-	-	-	-
P.R.	-	111	-	4	8	23	-	-
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	-	U	11	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).
† Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE III. Deaths in 122 U.S. cities,* week ending April 6, 2002 (14th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	400	288	80	22	6	4	8
Boston, Mass.	U	U	U	U	U	U	U
Bridgeport, Conn.	35	24	8	2	-	1	2
Cambridge, Mass.	9	6	3	-	-	-	-
Fall River, Mass.	33	25	7	1	-	-	5
Hartford, Conn.	44	29	12	2	1	-	5
Lowell, Mass.	25	18	3	3	-	1	4
Lynn, Mass.	16	13	2	1	-	-	1
New Bedford, Mass.	35	30	4	-	1	-	4
New Haven, Conn.	42	27	9	4	1	1	3
Providence, R.I.	U	U	U	U	U	U	U
Somerville, Mass.	6	4	1	1	-	-	-
Springfield, Mass.	48	33	10	3	2	-	9
Waterbury, Conn.	27	18	7	1	1	-	6
Worcester, Mass.	80	61	14	4	-	1	9
MID. ATLANTIC	2,224	1,554	444	145	37	43	102
Albany, N.Y.	42	36	5	1	-	-	3
Allentown, Pa.	16	12	4	-	-	-	-
Buffalo, N.Y.	92	72	12	4	2	2	13
Camden, N.J.	32	16	9	2	1	4	3
Elizabeth, N.J.	23	16	5	1	-	1	1
Erie, Pa.	44	33	10	1	-	-	2
Jersey City, N.J.	45	23	13	2	1	6	-
New York City, N.Y.	1,136	781	235	83	21	15	32
Newark, N.J.	60	28	19	8	1	4	3
Paterson, N.J.	16	10	3	3	-	-	-
Philadelphia, Pa.	317	219	66	25	6	1	7
Pittsburgh, Pa.§	28	26	1	-	-	1	3
Reading, Pa.	19	13	4	2	-	-	3
Rochester, N.Y.	142	113	16	8	1	4	14
Schenectady, N.Y.	21	16	3	1	-	1	3
Scranton, Pa.	49	41	4	3	1	-	4
Syracuse, N.Y.	87	62	20	1	3	1	11
Trenton, N.J.	35	24	8	-	-	3	-
Utica, N.Y.	20	13	7	-	-	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	1,789	1,262	331	112	45	39	142
Akron, Ohio	U	U	U	U	U	U	U
Canton, Ohio	41	33	6	2	-	-	9
Chicago, Ill.	U	U	U	U	U	U	U
Cincinnati, Ohio	111	86	14	3	4	4	17
Cleveland, Ohio	178	119	38	10	5	6	9
Columbus, Ohio	180	127	38	10	3	2	15
Dayton, Ohio	134	102	20	9	-	3	14
Detroit, Mich.	173	90	48	22	9	4	11
Evansville, Ind.	53	40	10	2	1	-	3
Fort Wayne, Ind.	71	58	10	-	1	2	8
Gary, Ind.	17	11	3	1	2	-	1
Grand Rapids, Mich.	78	56	11	4	3	4	13
Indianapolis, Ind.	189	115	49	17	5	3	8
Lansing, Mich.	38	30	3	5	-	-	5
Milwaukee, Wis.	137	105	20	6	3	3	11
Peoria, Ill.	58	44	6	2	4	2	7
Rockford, Ill.	54	38	14	1	1	-	-
South Bend, Ind.	84	57	18	6	1	2	3
Toledo, Ohio	110	86	11	7	2	4	6
Youngstown, Ohio	83	65	12	5	1	-	2
W.N. CENTRAL	694	514	123	30	12	15	71
Des Moines, Iowa	145	117	22	5	1	-	32
Duluth, Minn.	39	30	9	-	-	-	4
Kansas City, Kans.	U	U	U	U	U	U	U
Kansas City, Mo.	85	63	17	4	-	1	8
Lincoln, Nebr.	48	40	6	2	-	-	3
Minneapolis, Minn.	89	60	19	6	3	1	10
Omaha, Nebr.	93	74	10	4	2	3	8
St. Louis, Mo.	111	64	29	5	3	10	-
St. Paul, Minn.	84	66	11	4	3	-	6
Wichita, Kans.	U	U	U	U	U	U	U
S. ATLANTIC	1,459	920	338	122	47	31	112
Atlanta, Ga.	210	109	61	25	5	10	16
Baltimore, Md.	187	106	51	18	9	3	19
Charlotte, N.C.	127	92	20	8	3	4	17
Jacksonville, Fla.	161	111	31	10	6	3	14
Miami, Fla.	103	65	23	13	2	-	11
Norfolk, Va.	52	38	9	2	1	2	1
Richmond, Va.	54	29	17	6	2	-	3
Savannah, Ga.	48	32	12	2	1	1	10
St. Petersburg, Fla.	101	76	16	4	2	3	3
Tampa, Fla.	202	131	47	17	5	2	15
Washington, D.C.	200	122	51	17	6	3	3
Wilmington, Del.	14	9	-	-	5	-	-
E.S. CENTRAL	1,053	706	220	82	20	25	78
Birmingham, Ala.	173	119	39	4	6	5	11
Chattanooga, Tenn.	120	85	26	5	1	3	9
Knoxville, Tenn.	125	86	34	4	1	-	6
Lexington, Ky.	102	64	24	7	1	6	9
Memphis, Tenn.	243	163	39	30	6	5	13
Mobile, Ala.	77	50	16	11	-	-	4
Montgomery, Ala.	69	52	10	4	2	1	16
Nashville, Tenn.	144	87	32	17	3	5	10
W.S. CENTRAL	1,325	875	265	118	42	25	108
Austin, Tex.	76	52	16	4	1	3	9
Baton Rouge, La.	21	12	6	3	-	-	-
Corpus Christi, Tex.	U	U	U	U	U	U	U
Dallas, Tex.	250	145	59	28	10	8	26
El Paso, Tex.	100	70	17	10	2	1	6
Ft. Worth, Tex.	U	U	U	U	U	U	U
Houston, Tex.	375	234	82	37	15	7	25
Little Rock, Ark.	U	U	U	U	U	U	U
New Orleans, La.	60	38	11	7	4	-	-
San Antonio, Tex.	253	184	40	18	6	5	12
Shreveport, La.	60	37	18	3	1	1	2
Tulsa, Okla.	130	103	16	8	3	-	28
MOUNTAIN	975	716	152	56	27	24	78
Albuquerque, N.M.	153	109	29	8	6	1	7
Boise, Idaho	50	36	6	4	1	3	6
Colo. Springs, Colo.	68	58	5	4	1	-	1
Denver, Colo.	123	80	24	10	3	6	10
Las Vegas, Nev.	251	190	43	11	3	4	22
Ogden, Utah	27	21	5	1	-	-	2
Phoenix, Ariz.	U	U	U	U	U	U	U
Pueblo, Colo.	30	22	7	1	-	-	2
Salt Lake City, Utah	122	85	13	10	7	7	20
Tucson, Ariz.	151	115	20	7	6	3	8
PACIFIC	1,349	978	237	81	34	19	143
Berkeley, Calif.	12	10	2	-	-	-	1
Fresno, Calif.	56	41	7	4	3	1	6
Glendale, Calif.	16	11	4	-	-	1	-
Honolulu, Hawaii	91	67	16	5	-	3	7
Long Beach, Calif.	65	46	15	2	-	2	14
Los Angeles, Calif.	248	166	50	24	7	1	2
Pasadena, Calif.	24	19	4	1	-	-	10
Portland, Oreg.	17	12	4	1	-	-	1
Sacramento, Calif.	231	167	39	10	9	6	36
San Diego, Calif.	174	137	20	11	3	3	18
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	188	144	31	10	2	1	24
Santa Cruz, Calif.	28	21	2	3	2	-	3
Seattle, Wash.	143	100	28	7	7	1	15
Spokane, Wash.	56	37	15	3	1	-	6
Tacoma, Wash.	U	U	U	U	U	U	U
TOTAL	11,268¶	7,813	2,190	768	270	225	882

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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