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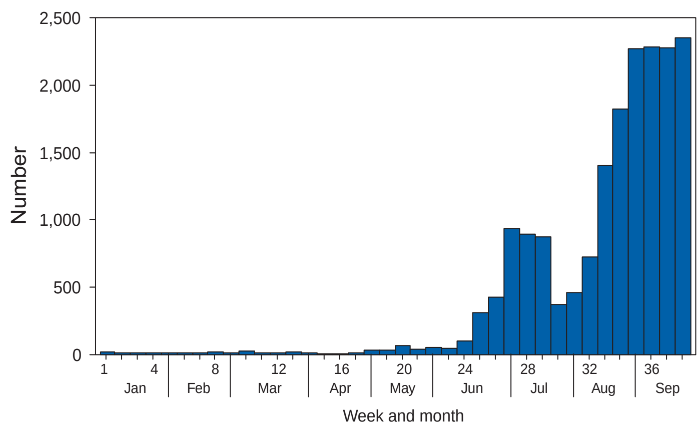
Cholera Epidemic After Increased Civil Conflict — Monrovia, Liberia, June–September 2003

Since 1989, civil war in Liberia has resulted in the displacement of hundreds of thousands of persons. In June 2003, as rebel forces approached the capital city of Monrovia (2003 estimated population: one million), an estimated 300,000 internally displaced persons (IDPs) settled in private homes with family members, public buildings, and other sites. Because of fighting during June–July, the normal collection of health data by the Liberian Ministry of Health (MoH) was interrupted. In June, cases of cholera were confirmed by international nongovernment organizations. To estimate the magnitude of the outbreak, in August, the World Health Organization (WHO) conducted a retrospective review of data collected by health organizations during June–August 2003 but not reported to MoH. Additional data were collected from an emergency surveillance system that began operation on August 25. This report summarizes the results of that analysis, which indicated that as of September 22, a cholera epidemic was ongoing in Monrovia. During the week ending October 20, a total of 1,252 cases of suspected cholera were reported (WHO, MoH, unpublished data, 2003). As of November 12, the epidemic was contining. The epidemic began in June (Figure) and was associated temporally with increased fighting and the movement of IDPs. Because cholera transmission was probably attributable to an acute shortage of clean water, poor sanitation, and crowded living conditions, international and Liberian organizations attempted to supply IDP settlements with sufficient potable water and began chlorinating wells. To stop cholera transmission and avoid additional illness and death, further preventive measures are needed.

Although the majority of health-care facilities in Monrovia were closed during June–July, by mid-August, local and international organizations and MoH were operating five inpatient hospitals, four cholera-treatment centers, seven oral

FIGURE. Number of cholera cases reported, by week and month — Monrovia, Liberia, January–September 2003



rehydration clinics, and at least 30 general outpatient clinics. Before August 25, each organization classified cases of diarrheal disease differently, making it difficult to apply a standard surveillance definition. Cases most closely approximating the standard WHO-recommended case definition for use in cholera outbreaks (i.e., acute watery diarrhea in a person aged

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>5 years) were included in retrospective case counts. After August 25, the majority of facilities that reported data to the emergency surveillance system used a case definition that included acute watery diarrhea in children aged 2–4 years.

During June, the number of persons treated for cholera increased from 49 to 426 per week. During June 2–September 22, of an estimated one million permanent residents and 172,000 IDPs in Monrovia (*1*), 16,969 (1.4%) persons sought medical care for an illness consistent with the surveillance case definition for cholera. The number of persons treated for cholera increased sharply in early June, and stool cultures confirmed the presence of *Vibrio cholerae* O1; the case-fatality ratio in cholera-treatment centers was <1%. The number of persons treated per week peaked in mid-July at 935, declined to 387 in the last week in July, and increased again to 2,352 during September 16–22, the last week for which data are available.

V. cholerae O1 was isolated in the laboratory of St. Joseph Catholic Hospital in Monrovia from stool specimens obtained from six patients during June 9–13; no additional serotyping or antimicrobial susceptibility data were available. *V. cholerae* was isolated again at the same laboratory later in the outbreak from stool specimens obtained on August 26 from five of six adults with suspected cholera who were admitted to cholera-treatment centers at Samuel K. Doe Stadium and John F. Kennedy (JFK) Hospital, the main referral hospital in Monrovia.

Community-based mortality data were unavailable. However, three cholera-treatment centers operated by Médecins sans Frontières (MSF) reported that during June 2–September 15, of 4,746 hospitalized patients with illnesses consistent with a diagnosis of cholera, 37 (0.8%) patients died. During this period, 3,073 (64.8%) hospitalized patients had severe dehydration. Data from the cholera-treatment center operated at JFK Hospital by MSF Belgium were used to compare the outbreak in 2003 with the number of reported cholera cases in previous years. This center, unlike other health facilities that provided services in Monrovia during the 2003 outbreak, has treated cholera patients for the previous 4 years. During June–August, a total of 2,648 cholera patients were treated in this facility, compared with 450–655 patients during comparable periods in the previous 4 years.

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Editorial Note: Although the precise number of cholera cases and cholera deaths is unknown, available data indicate that a large cholera epidemic is occurring in Monrovia. Cholera is endemic in Liberia during the rainy season (March–November), but the number of persons treated during June–August 2003 was substantially higher than the number treated during comparable periods in recent years. Cholera transmission is facilitated by crowded conditions, poor sanitation, and lack of clean water, all of which were exacerbated in Monrovia during June–July by increased fighting and population movement. The supply of clean water in Monrovia is limited, and for the previous 10 years, the piped water distribution system has not functioned in the majority of Monrovia neighborhoods. Availability of water from other sources (e.g., vendors or wells) was disrupted by the fighting, and frequent heavy rains washed contamination into shallow, unprotected wells from which a substantial number of persons obtain water. In addition, the trucking system that provides IDP sites with chlorinated water from deep borehole wells has not supplied sufficient quantities. An assessment on August 22 indicated that in 14 selected IDP sites, the water supply averaged 1.8 liters of clean water per person per day (*2*), compared with the recommended minimum in emergencies of 15 liters per person per day (*3*).

The case-fatality ratio in cholera-treatment centers operated by MSF was substantially lower than that observed in other large cholera outbreaks (*4*). Treatment in these centers, which specialize in the rehydration of cholera patients, probably was adequate. In addition, because cholera is endemic in Monrovia, the population might have had some immunity, leading to less severe or shorter duration of illness.

The surveillance data described in this report likely underestimate the total number of cholera cases and deaths in Monrovia. Reporting of illnesses from health facilities was incomplete, the cholera case definition varied initially by facility, and mortality reporting was lacking. In addition, not all ill patients might have sought treatment. In other major cholera outbreaks in similar emergencies, a substantial proportion of persons ill with cholera did not report to health-care facilities and thus never were recorded by health-care facility–based surveillance (*4*). The majority of health-care facilities in Monrovia stopped functioning or were inaccessible during the worst periods of fighting, which probably reduced the number of cholera patients seeking treatment. The number of deaths that occurred at health-care facilities not operated by MSF is unknown.

Public health authorities use morbidity and mortality surveillance data to evaluate the effectiveness of curative and preventive interventions in emergency situations. If collection of such data ceases in an emergency, public health surveillance should be reestablished as soon as possible. All public health organizations should agree on which agency is responsible for coordinating surveillance data collection, analysis, and distribution. In addition, health-care facilities should use standard case definitions and report data with the same periodicity.

Although cholera in Monrovia is most likely waterborne, which water sources are primarily responsible for cholera transmission is unknown. Other routes of transmission, including transmission by contaminated food, also might exist. Investigations are needed to identify the specific routes of cholera transmission so that targeted and effective preventive interventions can be implemented. Until such investigations are completed, past experience and empirical data should guide prevention efforts. Chlorination of wells is expensive and has not been proven effective during a cholera epidemic (*5*). Cholera transmission is more effectively prevented by provision of increased amounts of clean water (*6*), health education (*7*), and chlorination of water in protected household containers (*8*). In previous years, the seasonal increase in the number of cholera cases persisted through December. Until effective control measures are taken, the current epidemic will result in additional cases of illness and death.

References

1. United Nations Office for the Coordination of Humanitarian Affairs. Liberia humanitarian briefing issue 1. Monrovia, Liberia: United Nations Office for the Coordination of Humanitarian Affairs, August 26, 2003.
2. United Nations Children's Fund (UNICEF). Preliminary report on a rapid assessment of the water and sanitation situation in greater Monrovia. Monrovia, Liberia: United Nations Children's Fund, August 12–22, 2003.
3. The Sphere Project. The Sphere Project: Humanitarian Charter and Minimum Standards in Disaster Response. Geneva, Switzerland: Oxfam Publishing, 2000.
4. Goma Epidemiology Group. Public health impact of Rwandan refugee crisis: what happened in Goma, Zaire, in July, 1994? Lancet 1995; 345:339–44.
5. Rowe A, Angulo F, Roberts L, Tauxe R. Chlorinating well water with liquid bleach was not an effective water disinfection strategy in Guinea-Bissau. Int J Environ Health Res 1998;8:339–40.
6. World Health Organization. Guidelines for Cholera Control. Geneva, Switzerland: World Health Organization, 1993.
7. Quick RE, Thompson BL, Zuniga A, et al. Epidemic cholera in rural El Salvador: risk factors in a region covered by a cholera prevention campaign. Epidemiol Infect 1995;114:249–55.
8. Reller ME, Mong YJ, Hoekstra RM, Quick RE. Cholera prevention with traditional and novel water treatment methods: an outbreak investigation in Fort-Dauphin, Madagascar. Am J Public Health 2001; 91:1608–10.

Tobacco Use Among Middle and High School Students — United States, 2002

Each day in the United States, approximately 4,400 youths aged 12–17 years try their first cigarette (*1*). An estimated one third of these young smokers are expected to die from a smoking-related disease (*2*). The National Youth Tobacco Survey (NYTS), conducted by the American Legacy Foundation, provides estimates of usage among U.S. middle and high school students for various tobacco products (i.e., cigarettes, cigars, smokeless tobacco, pipes, bidis [leaf-wrapped, flavored cigarettes from India], and kreteks [clove cigarettes]). This report summarizes tobacco use prevalence estimates from the 2002 NYTS and describes changes in prevalence since 2000. Both tobacco use and cigarette smoking among students in high school (i.e., grades 9–12) decreased by approximately 18% during 2000–2002; however, a decrease among students in middle school (i.e., grades 6–8) was not statistically significant. The lack of progress among middle school students suggests that health officials should improve implementation of proven antismoking strategies and develop new strategies to promote continued declines in youth smoking.

Sampling frames for the 2002 NYTS were stratified by U.S. Census Bureau region; black, Hispanic, and Asian students were oversampled. A partial panel design was used (i.e., comprising a newly drawn sample and a sampling of schools that participated in the 2000 NYTS). The sampling frame for the drawn sample consisted of all public and private schools in the United States. A total of 94 primary sampling units (PSUs) (i.e., large counties or groups of counties) were selected in the first stage of the sampling, and 215 schools were selected from these PSUs in the second stage of the sampling; 83 additional schools were selected randomly for the panel sample. Of these 298 eligible schools, 246 (83%) participated in the 2002 NYTS. Approximately 125 students were then drawn from each school by selecting classes randomly, depending on the average class size of each school, from a required subject area (e.g., English or social studies). Participation was voluntary and anonymous, and school parental permission procedures were followed; students recorded their responses on a computer-scannable sheet.

Among youths attending the 246 participating schools, 26,119 (90%) (i.e., 12,581 middle school students and 13,538 high school students) completed the survey, resulting in an overall response of 75%. Data were weighted to be nationally representative. STATA 7 was used to compute 95% confidence intervals for prevalence estimates, which were used to identify differences among populations. Current use of a specific tobacco product was defined as having used that product on at least one occasion during the 30 days preceding the survey. Current use of any tobacco product was defined as having used any of the listed products on at least one occasion during the 30 days preceding the survey.

In 2002, a total of 13.3% of middle school students reported current use of any tobacco product (Table 1). Cigarettes (10.1%) were the most commonly used product, with no statistically significant differences in usage by sex. Cigars (6.0%) were the second most commonly used tobacco product, followed by smokeless tobacco (3.7%), pipes (3.5%), bidis (2.4%), and kreteks (2.0%). Males were more likely than females to use all tobacco products except for cigarettes. No significant differences were found for any type of tobacco use by race/ethnicity.

Among high school students, 28.4% reported current use of any tobacco product (Table 2). Cigarettes (22.9%) were the most commonly used product, with no difference by sex; however, white students were more likely to use cigarettes than black, Hispanic, or Asian students. Cigars (11.6%) were the second most common tobacco product, followed by smokeless tobacco (6.1%), pipes (3.2%), kreteks (2.7%), and bidis (2.6%). Males were more likely than females to use all tobacco products except for cigarettes. Asian students were less likely to use cigars, and white students were more likely to use smokeless tobacco than students in other racial/ethnic groups.

During 2000–2002, current use of any tobacco product among high school students decreased from 34.5% to 28.4%; cigarette use decreased from 28.0% to 22.9%, cigar use from 14.8% to 11.6%, bidi use from 4.1% to 2.6%, and kretek use from 4.2% to 2.7% (Table 2). However, no significant change was found among middle school students in the prevalence of tobacco use (Table 1).

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Editorial Note: The declines in cigarette smoking and overall tobacco use among high school students reflect downward national trends since 1997 (*3,4*). The declining use of cigars, bidis, and kreteks and the unchanged use of smokeless tobacco and pipes among high school students suggests that students are not substituting other tobacco products for cigarettes and that efforts to reduce cigarette smoking might be reducing use of all tobacco products. However, the lack of any statistically significant decline in tobacco usage among middle school students is cause for concern.

TABLE 1. Percentage of students in middle school (i.e., grades 6–8) who were current users* of any tobacco product, by product type, sex, and race/ethnicity— National Youth Tobacco Survey, United States, 2002 and 2000

	Any tobacco†		Cigarettes		Cigars		Smokeless tobacco		Pipes		Bidis		Kreteks	
Characteristic	%	(95% CI§)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Middle school, 2002														
Sex														
Male	14.8	(±1.6)	10.2	(±1.3)	7.9	(±1.1)	5.6	(±1.3)	5.1	(±0.8)	3.1	(±0.6)	2.7	(±0.6)
Female	11.8	(±1.4)	10.0	(±1.4)	4.1	(±0.7)	1.8	(±0.4)	1.9	(±0.4)	1.7	(±0.4)	1.1	(±0.3)
Race/Ethnicity														
White	13.3	(±1.9)	10.4	(±1.6)	5.5	(±1.0)	4.0	(±1.1)	2.8	(±0.6)	1.8	(±0.4)	1.5	(±0.4)
Black	13.6	(±2.4)	9.4	(±2.4)	7.3	(±1.7)	2.9	(±1.1)	3.9	(±1.4)	3.1	(±1.0)	2.3	(±0.9)
Hispanic	12.5	(±1.9)	9.1	(±1.6)	6.3	(±1.1)	2.9	(±0.7)	4.4	(±0.9)	2.9	(±0.7)	2.6	(±0.7)
Asian	8.6	(±3.2)	7.4	(±3.2)	4.8	(±2.8)	3.6	(±2.7)	4.4	(±2.7)	2.9	(±2.1)	3.6	(±2.8)
Total	**13.3**	**(±1.4)**	**10.1**	**(±1.2)**	**6.0**	**(±0.7)**	**3.7**	**(±0.8)**	**3.5**	**(±0.5)**	**2.4**	**(±0.3)**	**2.0**	**(±0.3)**
Middle school, 2000														
Sex														
Male	17.6	(±2.2)	11.7	(±1.7)	9.7	(±1.5)	5.7	(±1.8)	4.3	(±0.7)	3.4	(±0.6)	2.7	(±0.5)
Female	12.7	(±1.5)	10.2	(±1.3)	4.6	(±0.8)	1.5	(±0.3)	1.8	(±0.4)	1.4	(±0.3)	1.5	(±0.3)
Race/Ethnicity														
White	14.3	(±1.9)	10.8	(±1.6)	6.1	(±1.1)	3.9	(±1.3)	2.7	(±0.5)	1.9	(±0.4)	1.9	(±0.4)
Black	17.5	(±3.0)	11.2	(±2.0)	9.8	(±2.5)	2.4	(±0.7)	2.2	(±0.7)	2.9	(±0.8)	1.7	(±0.5)
Hispanic	16.0	(±2.0)	11.4	(±1.7)	8.8	(±1.4)	2.9	(±0.7)	5.3	(±1.1)	3.6	(±0.9)	2.6	(±0.8)
Asian	7.5	(±2.6)	5.3	(±2.3)	4.1	(±1.9)	1.7	(±1.2)	2.8	(±1.5)	2.9	(±1.7)	2.3	(±1.4)
Total	**15.1**	**(±1.5)**	**11.0**	**(±1.2)**	**7.1**	**(±1.0)**	**3.6**	**(±0.9)**	**3.0**	**(±0.4)**	**2.4**	**(±0.4)**	**2.1**	**(±0.4)**

* Used tobacco on at least one occasion during the 30 days preceding the survey.
† Cigarettes, cigars, smokeless tobacco, pipes, bidis (leaf-wrapped, flavored cigarettes from India), or kreteks (clove cigarettes).
§ Confidence interval.

TABLE 2. Percentage of students in high school (i.e., grades 9–12) who were current users* of any tobacco product, by product type, sex, and race/ethnicity — National Youth Tobacco Survey, United States, 2002 and 2000

	Any tobacco†		Cigarettes		Cigars		Smokeless tobacco		Pipes		Bidis		Kreteks	
Characteristic	%	(95% CI§)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
High school, 2002														
Sex														
Male	32.9	(±2.3)	24.6	(±2.1)	16.9	(±1.4)	10.8	(±2.0)	5.0	(±0.9)	3.7	(±0.8)	3.5	(±0.7)
Female	23.9	(±1.8)	21.2	(±1.8)	6.2	(±0.9)	1.4	(±0.4)	1.4	(±0.4)	1.5	(±0.4)	1.8	(±0.5)
Race/Ethnicity														
White	31.1	(±2.1)	25.5	(±1.8)	11.8	(±1.0)	7.4	(±1.4)	2.8	(±0.6)	2.2	(±0.5)	2.7	(±0.6)
Black	21.8	(±2.9)	14.3	(±2.8)	12.0	(±1.9)	2.3	(±0.8)	3.8	(±1.2)	3.4	(±1.1)	1.9	(±0.8)
Hispanic	24.5	(±2.7)	20.5	(±2.5)	10.8	(±1.5)	3.8	(±1.3)	4.6	(±1.1)	3.5	(±0.9)	3.0	(±0.8)
Asian	15.0	(±3.9)	12.8	(±3.5)	5.4	(±2.3)	2.3	(±1.5)	2.7	(±1.5)	2.9	(±1.7)	2.1	(±1.7)
Total	**28.4**	**(±1.7)**	**22.9**	**(±1.6)**	**11.6**	**(±0.9)**	**6.1**	**(±1.1)**	**3.2**	**(±0.6)**	**2.6**	**(±0.5)**	**2.7**	**(±0.5)**
High school, 2000														
Sex														
Male	39.1	(±2.2)	28.8	(±1.9)	22.0	(±1.5)	11.8	(±1.7)	5.2	(±0.7)	5.4	(±0.6)	5.3	(±0.7)
Female	29.8	(±1.9)	27.3	(±2.0)	7.3	(±0.9)	1.4	(±0.4)	1.4	(±0.3)	2.8	(±0.4)	3.0	(±0.5)
Race/Ethnicity														
White	38.0	(±2.3)	31.8	(±2.1)	15.1	(±1.2)	8.2	(±1.2)	3.3	(±0.5)	3.6	(±0.5)	4.5	(±0.6)
Black	26.5	(±3.6)	16.8	(±3.0)	15.3	(±2.9)	2.6	(±0.9)	2.2	(±0.8)	4.9	(±1.0)	2.2	(±0.7)
Hispanic	28.4	(±2.5)	22.6	(±2.4)	13.6	(±1.6)	4.0	(±1.2)	4.2	(±0.9)	5.7	(±1.1)	4.0	(±0.8)
Asian	22.9	(±3.7)	20.6	(±3.5)	7.4	(±2.1)	1.9	(±0.9)	2.5	(±1.1)	3.0	(±1.3)	3.2	(±1.4)
Total	**34.5**	**(±1.9)**	**28.0**	**(±1.7)**	**14.8**	**(±1.1)**	**6.6**	**(±0.9)**	**3.3**	**(±0.4)**	**4.1**	**(±0.4)**	**4.2**	**(±0.5)**

* Used tobacco on at least one occasion during the 30 days preceding the survey.
† Cigarettes, cigars, smokeless tobacco, pipes, bidis (leaf-wrapped, flavored cigarettes from India), or kreteks (clove cigarettes).
§ Confidence interval.

The findings in this report are subject to at least two limitations. First, these data apply only to youth who attended middle school or high school and are not representative of all youths in these age groups. Nationally, approximately 5% of youths aged 16–17 years were no longer in school (*4*). Second, the data were from self-reports of survey participants. Although underreporting of tobacco use by youths has been minimal in previous surveys (*5*), recent declines in the acceptability of smoking might have led to increased underreporting.

Why middle school and high school students appear to be responding differently to the current antismoking environment is not clear. Factors expected to discourage youth from smoking include increases in cigarette prices (i.e., approximately 88% from December 1997 to December 2002) (*6*); implementation of smoke-free laws and policies; restrictions on tobacco advertising; and local, state, and national antitobacco campaigns (e.g., the truth® campaign) (*7*). However, spending on tobacco industry marketing doubled during 1997–2001 (*8*), and tobacco industry-sponsored media campaigns have been determined to reduce the impact of public health campaigns (*7*).

The data in this report suggest that further refinements in evidence-based strategies will be needed to decrease tobacco use among middle school students. Efforts might focus on 1) devising more targeted and effective media campaigns, 2) reducing depictions of tobacco use in entertainment media (*9*), 3) instituting campaigns to discourage family and friends from providing cigarettes to youths, 4) promoting smoke-free homes, 5) instituting comprehensive school-based programs and policies in conjunction with supportive community activities, and 6) decreasing the number of adult smokers (e.g., parents) to present more nonsmoking role models.

Because tobacco use is the leading cause of preventable death in the United States, efforts to reduce tobacco use must remain a public health priority. Preventing tobacco use among youth is essential to reduce future smoking-related illness and associated costs. However, in 2003, states cut spending for tobacco use prevention and control programs by $86.2 million (11.2%) (*10*). For the decline in tobacco use among youth in the United States to continue, such funding must be restored and perhaps expanded.

References

1. Substance Abuse and Mental Health Services Administration. Summary of findings from the 2001 National Household Survey on Drug Abuse: Volume II. Technical appendices and selected data tables. Rockville, Maryland: U.S. Department of Health and Human Services, 2002; NHSDA Series H-18; DHHS publication no. (SMA)02-3759.
2. CDC. Projected smoking-related deaths among youth. MMWR 1996;45:971–4.
3. Johnston LD, O'Malley PM, Bachman JG. Monitoring the future: national survey results on drug use, 1975–2002. Volume 1: secondary school students. Bethesda, Maryland: National Institutes of Health, National Institute on Drug Abuse, 2003; DHHS publication no. (NIH) 03-5375.
4. Grunbaum JA, Kann L, Kinchen S, et al. Youth risk behavior surveillance—United States, 2001. In: Surveillance Summaries (June 28). MMWR 2002;51(No. SS-4).
5. Office on Smoking and Health. Preventing tobacco use among young people: a report of the Surgeon General. Atlanta, Georgia: U.S. Department of Health and Human Services, CDC, National Center for Chronic Disease Prevention and Health Promotion, 1994.
6. U.S. Department of Labor, Bureau of Labor Statistics. Consumer price index—all urban consumers (current series). Washington, DC: U.S. Department of Labor, 2003. Available at http://data.bls.gov/labjava/outside.jsp?survey=cu.
7. Farrelly MC, Healton CG, Davis KC, Messeri P, Hersey JC, Haviland ML. Getting to the truth: evaluating national tobacco countermarketing campaigns. Am J Public Health 2002;92:901–7.
8. Federal Trade Commission. Cigarette report for 2001. Federal Trade Commission, 2003. Available at http://www.ftc.gov/opa/2003/06/2001cigrpt.htm.
9. Sargent JD, Dalton MA, Beach ML, et al. Viewing tobacco use in movies: does it shape attitudes that mediate adolescent smoking? Am J Prev Med 2002;22:137–45.
10. Campaign for Tobacco-Free Kids, American Lung Association, American Cancer Society, American Heart Association, SmokeLess States National Tobacco Policy Initiative. Show us the money: a report on the states' allocation of the tobacco settlement dollars. Washington, DC: National Center for Tobacco-Free Kids, 2003. Available at http://www.tobaccofreekids.org/reports/settlements/2003/fullreport.pdf.

History of Foot Ulcer Among Persons with Diabetes — United States, 2000–2002

Foot ulcers and lower extremity amputations (LEAs) are disabling complications of diabetes and lower extremity disease (*1,2*). In the United States, approximately 60% of all LEAs occur among persons with diabetes (*3*); of these LEAs, approximately 85% are preceded by a foot ulcer (*4*). To estimate the percentage of U.S. adults with diabetes who had a history of a foot ulcer, CDC analyzed data from the 2000–2002 Behavioral Risk Factor Surveillance System (BRFSS). This report summarizes the findings of that analysis, which indicate that persons with longer duration of diabetes who used insulin and who smoked were most likely to have a history of foot ulcer. Persons with diabetes can benefit from interventions that prevent or delay foot ulcer and LEAs.

BRFSS is a state-based, random-digit–dialed telephone survey of the U.S. civilian, noninstitutionalized population aged ≥18 years. BRFSS is conducted in the 50 states, the District of Columbia (DC), Puerto Rico, Guam, and the U.S. Virgin Islands. The median response rate was 48.9% (range: 28.8%–71.8%) in 2000, 51.1% (range: 33.3%–81.5%) in 2001, and

58.6% (range: 42.2%–82.6%) in 2002. Persons with diabetes were defined as respondents who answered "yes" to the question, "Have you ever been told by a doctor that you have diabetes?" Women who were told they had diabetes only during pregnancy were excluded. Persons who reported they had diabetes were asked questions regarding foot ulcer from the diabetes module. Persons with a history of foot ulcer were defined as those who responded "yes" to the question, "Have you ever had any sores or irritations on your feet that took >4 weeks to heal?" Other questions from the diabetes module included the following: "How old were you when you were told you had diabetes?"; "Are you now taking insulin?"; "About how often do you check your blood for glucose or sugar?"; and "Have you ever taken a course or class in how to manage your diabetes?" A total of 44 states and DC reported information from the diabetes module for at least 2 years during 2000–2002. Data were weighted to reflect the age, sex, and racial/ethnic distribution in each area. The percentage of persons with diabetes who had a history of foot ulcer was analyzed by using the selected questions from the diabetes module, selected sociodemographic characteristics, obesity (body mass index ≥30), smoking status, and area of residence. Logistic regression analysis was used to determine the independent associations of various risk factors among persons with a history of foot ulcer. All analyses were conducted by using SAS v8 software with SUDAAN to estimate standard errors and confidence intervals, and t-tests were used to test for significant differences between groups. Prevalence was age-adjusted according to the 2000 U.S. standard population.

During 2000–2002, an estimated 11.8% of U.S. adults with diabetes had a history of foot ulcer (Table 1). The percentage decreased with increasing

TABLE 1. Crude prevalence of a history of foot ulcer among adults aged ≥18 years with diagnosed diabetes, by selected characteristics — Behavioral Risk Factor Surveillance System, United States*, 2000–2002

Characteristic	%	(95% CI†)	p value§	OR¶	(95% CI)
Age group (yrs)					
18–44**	13.7	(11.8–15.5)			
45–64	13.4	(12.2–14.5)	0.600	1.1	(0.9–1.3)
65–74	9.6	(8.4–10.9)	0.004	0.7	(0.5–0.9)
≥75	9.0	(7.2–10.7)	<0.001	0.6	(0.4–0.7)
Diabetes duration (yrs)					
<6**	8.8	(7.6–10.1)			
6–10	10.4	(9.1–11.7)	0.062	1.2	(1.0–1.5)
11–20	14.0	(12.3–15.6)	<0.001	1.6	(1.3–2.0)
≥21	18.6	(16.6–20.6)	<0.001	2.3	(1.9–2.9)
Sex					
Women**	11.8	(10.8–12.7)			
Men	11.9	(10.9–13.0)	0.242	—	—
Race/Ethnicity					
White, non-Hispanic**	11.6	(10.9–12.3)			
Black, non-Hispanic	9.5	(8.1–11.0)	<0.001	0.6	(0.5–0.7)
Hispanic	15.4	(11.8–19.0)	0.239	1.2	(0.9–1.7)
Married or cohabitating					
No	13.8	(12.6–15.0)	<0.001	1.4	(1.2–1.7)
Yes**	10.6	(9.7–11.5)			
Obesity††					
No**	10.4	(9.6–11.3)			
Yes	13.3	(12.2–14.5)	<0.001	1.4	(1.2–1.6)
Insulin use					
No**	9.7	(8.9–10.4)			
Yes	17.7	(16.0–19.4)	<0.001	1.6	(1.4–1.9)
Smoking status					
Nonsmoker**	10.3	(9.3–11.3)			
Former smoker	11.9	(10.7–13.1)	0.001	1.3	(1.1–1.6)
Current smoker	15.8	(13.7–17.8)	<0.001	1.6	(1.3–2.0)
Education level					
≤High school	12.2	(11.2–13.3)	0.371	—	—
≥Some college**	11.3	(10.4–12.3)			
Health insurance coverage					
No**	13.5	(11.2–15.8)			
Yes	11.6	(10.9–12.4)	0.496	—	—
Blood sugar monitoring					
No**	10.3	(9.2–11.3)			
Yes	13.2	(12.2–14.2)	0.426	—	—
Diabetes management education					
No**	10.9	(9.9–11.9)			
Yes	12.7	(11.7–13.7)	0.499	—	—
Total	**11.8**	**(11.1–12.6)**			

* Excludes territories and states with only 1 year of data; missing values also are excluded from the analysis.
† Confidence interval.
§ Full model, including all variables.
¶ Odds ratio; final model, including significant variables only.
** Reference level for characteristic.
†† Body mass index ≥30.

age and increased with longer duration of disease (p<0.001, t-test for trend). The percentage was lower among non-Hispanic blacks than among non-Hispanic whites or Hispanics (p<0.01) and lower among married or cohabitating persons than among persons who were not (p<0.001). Foot ulcers were significantly more prevalent among persons who were obese than among those who were not (p<0.001) and among insulin users than among persons who did not use insulin (p<0.001). The prevalence of foot ulcer increased with smoking, from 10.3% among nonsmokers to 11.9% among former smokers to 15.8% among current smokers (p<0.001, t-test for trend). The percentage did not differ significantly by sex, education level, health insurance coverage, blood sugar monitoring, and diabetes management education. In multivariate analyses, younger age, longer duration of disease, white race, Hispanic ethnicity, not being married or cohabitating, obesity, insulin use, and smoking all were associated independently with a history of foot ulcer. The strongest associations were duration of disease of ≥21 years (odds ratio [OR] = 2.3), insulin use (OR = 1.6), and current smoking (OR = 1.6).

Overall, the age-adjusted prevalence of a history of foot ulcer among persons with diabetes was 12.7% (Table 2). Of the 45 areas (44 states and DC) that reported information from the BRFSS diabetes module, Indiana (16.3%), California (16.2%), and Nevada (16.2%) had the highest age-adjusted prevalence of a history of foot ulcer among persons with diabetes, and Colorado (7.4%), Wisconsin (8.8%), and Hawaii (8.9%) had the lowest (Table 2).

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Editorial Note: The findings in this report indicate that approximately 12% of U.S. adults with diabetes had a history of foot ulcer, a risk factor for further ulceration or LEA. This analysis identifies risk factors for foot ulcer and underscores the need to improve foot-related preventive care practices among persons with diabetes, particularly those with longer duration of disease who use insulin and who smoke.

Among persons with diabetes, foot ulcers and LEAs can be reduced by 44%–85% (*5*). These persons should receive annual foot examinations to identify high-risk foot conditions (e.g., peripheral neuropathy, peripheral arterial disease, foot deformities, and history of ulcer or LEAs), and persons with one or more high-risk foot conditions should receive more frequent evaluations (*6*). Preventive strategies should focus on 1) glycemic control to reduce neuropathy, 2) smoking cessation or prevention, 3) early detection and appropriate management of persons with high-risk foot conditions, 4) provider education, 5) patient education on daily foot care, 6) use of proper footwear, and 7) health-care interventions to improve care (e.g., chart reminders and patient tracking) (*6–8*).

TABLE 2. Age-adjusted prevalence* of a history of foot ulcer among adults aged ≥18 years with diagnosed diabetes, by state/area — Behavioral Risk Factor Surveillance System, United States†, 2000–2002

State/Area	%	(95% CI§)
Alabama	13.3	(10.4–16.2)
Alaska	12.8	(7.7–18.0)
Arizona	12.8	(6.2–19.5)
Arkansas	13.4	(10.3–16.6)
California	16.2	(12.3–20.2)
Colorado	7.4	(4.1–10.7)
Connecticut	10.5	(8.0–13.0)
District of Columbia	9.7	(4.9–14.6)
Florida	10.6	(8.3–12.9)
Georgia	13.0	(10.2–15.9)
Hawaii	8.9	(6.1–11.8)
Idaho	12.4	(9.5–15.3)
Indiana	16.3	(12.4–20.1)
Iowa	10.5	(7.2–13.8)
Kansas	11.4	(8.8–14.0)
Kentucky	13.5	(11.1–15.9)
Louisiana	12.8	(8.9–16.8)
Maine	14.7	(8.8–20.6)
Massachusetts	13.5	(10.9–16.0)
Michigan	14.5	(10.8–18.2)
Minnesota	13.0	(9.2–16.8)
Mississippi	10.6	(7.5–13.7)
Montana	10.3	(6.8–13.9)
Nebraska	12.7	(9.2–16.2)
Nevada	16.2	(9.6–22.8)
New Hampshire	10.1	(7.2–13.1)
New Jersey	11.1	(8.3–14.0)
New Mexico	12.7	(9.7–15.6)
North Carolina	9.8	(6.6–13.0)
North Dakota	9.7	(6.4–13.1)
Ohio	9.9	(7.1–12.6)
Oklahoma	13.2	(10.5–15.9)
Pennsylvania	11.4	(7.9–15.0)
Rhode Island	10.9	(7.7–14.1)
South Carolina	13.4	(10.4–16.3)
South Dakota	12.8	(9.3–16.4)
Tennessee	14.5	(10.3–18.7)
Texas	12.2	(9.9–14.5)
Utah	11.4	(7.8–15.0)
Vermont	10.4	(7.4–13.5)
Virginia	11.7	(8.2–15.2)
Washington	13.3	(9.7–16.9)
West Virginia	9.9	(7.4–12.4)
Wisconsin	8.8	(5.9–11.7)
Wyoming	10.9	(7.2–14.5)
Total	**12.7**	**(11.9–13.6)**

* Age-adjusted with persons aged <65 years and aged ≥65 years according to the 2000 U.S. standard population.
† Excludes territories and states with only 1 year of data; missing values also are excluded from the analysis.
§ Confidence interval.

The findings in this report are subject to at least five limitations. First, BRFSS does not include institutionalized persons (e.g., nursing home residents) or persons without telephones. Second, BRFSS data are self-reported and subject to recall bias. These two limitations might explain in part why younger age was associated with a higher prevalence of a history of foot ulcer. Third, factors that were not significant in the analysis (e.g., blood glucose monitoring and diabetes management education) might be confounded with longer duration and severity of disease (e.g., insulin use), and health insurance coverage might not include appropriate foot care. Fourth, the median BRFSS response rate was only 58.6% in 2002; however, BRFSS data have minimal bias compared with census data (http://www.cdc.gov/brfss). Finally, the analysis included data from 44 states and DC and therefore might not be representative of the entire country.

CDC conducts surveillance on foot-related preventive care practices and LEAs (http://www.cdc.gov/diabetes/statistics/index.htm) in the United States. To estimate the extent of lower extremity disease and its risk factors, in 1999, CDC and the National Institutes of Health (NIH) included assessments of peripheral vascular disease, peripheral neuropathy, foot deformities, ulcers, and LEAs in the National Health and Nutrition Examination Survey. This information can assist clinicians and public health providers in developing preventive care and community-based interventions.

Increasing the proportion of persons with diabetes who receive preventive foot care and reducing LEAs are high public health priorities in the United States and, as such, were included in the national health objectives for 2010. The prevalence of annual foot examinations among persons with diabetes increased during 1995–2001, from 56.0% to 62.3% (*9*), which is still below the national target of 75% (objective no. 5-14) (*10*). To improve diabetes-related preventive practices, CDC provides technical assistance to state diabetes prevention and control programs. CDC also collaborates with the Health Resources and Services Administration in the Health Disparities Collaboratives, participates with 13 other agencies in the National Diabetes Quality Improvement Alliance, and cosponsors the National Diabetes Education Program (NDEP) with NIH. NDEP patient education materials on making foot care an essential part of diabetes care are available at http://www.ndep.nih.gov/diabetes/pubs/feet_kit_eng.pdf.

References

1. Reiber GE, Boyko EJ, Smith DG. Lower extremity foot ulcers and amputations in diabetes. In: Harris MI, Cowie CC, Stern MP, Boydo EJ, Reiber GE, Bennett PH, eds. Diabetes in America, 2nd ed. Washington, DC: U.S. Government Printing Office, 1995; DHHS publication no. (NIH)95-1468.
2. Ramsey SD, Newton K, Blough D, et al. Incidence, outcomes, and cost of foot ulcers in patients with diabetes. Diabetes Care 1999; 22:382–7.
3. CDC. Hospital discharge rates for nontraumatic lower extremity amputation by diabetes status—United States, 1997. MMWR 2001; 50:954–8.

4. Pecoraro RE, Reiber GE, Burgess EM. Pathways to diabetic limb amputation: basis for prevention. Diabetes Care 1990;13:513–21.
5. Bild DE, Selby JV, Pomeroy S, Browner WS, Braveman P, Showstack JA. Lower-extremity amputation in people with diabetes: epidemiology and prevention. Diabetes Care 1989;12:24–31.
6. American Diabetes Association. Preventive foot care in people with diabetes. Diabetes Care 2003;26(suppl 1):S78–S79.
7. Mayfield JA, Reiber GE, Sanders LJ, Janisse D, Pogach LM. Preventive foot care in people with diabetes. Diabetes Care 1998;21:2161–77.
8. Rith-Najarian SJ, Reiber GE. Prevention of foot problems in persons with diabetes. J Fam Practice 2000;49:S30–S39.
9. CDC. Preventive-care practices among persons with diabetes—United States, 1995 and 2001. MMWR 2002;51:965–9.
10. U.S. Department of Health and Human Services. Healthy people 2010, 2nd ed. With understanding and improving health and objectives for improving health (2 vols.). Washington, DC: U.S. Department of Health and Human Services, 2000.

First Human Death Associated with Raccoon Rabies — Virginia, 2003

Rabies is an acute, progressive, incurable viral encephalitis, caused by the bite of an infected animal. In March 2003, a previously healthy man aged 25 years from northern Virginia died from a diagnosed illness of meningoencephalitis of unknown etiology after a 3-week illness. Histopathologic review of central nervous system tissues at CDC revealed viral inclusions suggestive of Negri bodies, and subsequent tests confirmed a diagnosis of rabies. Genetic sequencing identified a rabies virus variant associated with raccoons, but how the patient became infected remains unknown. This report summarizes the investigation of the first documented case of human rabies associated with a raccoon rabies virus variant in the United States and highlights the importance of continued education in the prevention and diagnosis of rabies.

In February 2003, the patient visited his physician with head and body aches, nausea, abdominal pain, chills, fever of 99°–100° F (37.2° C–37.7° C), dry cough, and listlessness. Upon retrospective questioning, his wife reported that he had showed mild personality changes during the previous days. Six days later, the patient awoke disoriented with unsteady gait and slurred speech. He was evaluated in a local emergency department and admitted to the hospital. Physical examination revealed mild ataxia and confusion. Laboratory values were substantial for decreased sodium. A lumbar puncture revealed a white blood cell count of 24/μL (normal: 0–5 cells/μL), a red blood cell count of 10/μL (normal: 0–5 cells/μL), a glucose concentration of 58 mg/dL (normal: 40–70 mg/dL), and a protein concentration of 81 mg/dL (normal: 15–45 mg/dL). An electroencephalogram demonstrated generalized slowing. Magnetic resonance imaging of the brain was interpreted with a high T2 signal in the hypothalamus and bilateral mesial temporal lobes.

The patient remained febrile and hyponatremic (range: 119–125 mmol/L) with declining mental status. On the fifth day of hospitalization, the patient was intubated, and twitching on his right side was noted. On day six, he was unresponsive and had near-constant myoclonic activity. On the 11th day, a computerized tomography scan of the head showed sulcal effacement and diffuse cerebral edema. The patient remained comatose and intermittently febrile. Despite aggressive critical care management, the patient died on the 14th hospital day.

At autopsy, histopathologic evaluation showed severe meningoencephalitis involving the cortex and white matter of the cerebral hemispheres, deep gray nuclei, cerebellum, and spinal cord. Brain tissue submitted to a research laboratory was positive by polymerase chain reaction (PCR) for *Naegleria*.

The possibility of rabies was discussed briefly during hospitalization but was discarded from further consideration on the basis of a review of the history and clinical signs and symptoms. A brain biopsy was planned but was canceled because of hemodynamic instability. Initial microscopic examination of brain tissue did not detect any inclusions suggestive of viral infection.

Tissues were forwarded to CDC for pathologic evaluation for *Naegleria*. Immunohistochemical (IHC) assays for various amoebae, including *Naegleria fowleri*, were negative. However, abundant intracytoplasmic inclusions of neurons in several areas of the brain suggested a diagnosis of rabies. The diagnosis was confirmed by IHC stains for rabies virus. Further testing, including both indirect and direct fluorescent antibody tests and reverse transcriptase-PCR of fixed brain tissue, supported the diagnosis of rabies. Nucleotide sequence analysis and antigenic typing with monoclonal antibodies on frozen brain tissue indicated that the specific etiologic agent was a southeastern raccoon rabies virus variant. Genetic sequence analysis indicated 100% homology with a raccoon rabies virus variant from Virginia.

Approximately 125 family members and friends and 173 health-care workers were questioned retrospectively about direct unprotected exposures to the patient's secretions and tissues. After detailed investigation, five family members and three hospital employees received postexposure prophylaxis for potential exposure to patient secretions.

The patient was an office worker who for the previous 6 years had lived, worked, and recreated in areas in which raccoon rabies was endemic. However, extensive interviews with family, friends, and co-workers revealed that he had no specific exposure to terrestrial animals likely to be infected with the raccoon rabies virus variant. The patient did not spend much time outdoors, but the potential existed for encountering a rabid mammal while camping or in a trash can, wood pile, or other outdoor environment.

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Editorial Note: Approximately 7,000–9,000 cases of animal rabies are diagnosed annually in the United States (*1*). This report describes the first documented case of human rabies associated with a raccoon rabies virus variant. Of the 37 human rabies cases reported in the United States since 1990, no history of suspicious animal bite exposure was documented for 28 of the 30 cases presumed to be acquired in the United States. With the isolation of raccoon rabies virus from this patient, human cases have been associated with all of the major reservoirs and vectors of the disease in the United States, including dogs, cats, bats, foxes, skunks, coyotes, and bobcats. Human rabies cases without a definitive history of animal exposure are associated commonly with bat rabies viruses (*2*). Challenges to implicating an animal source readily can include failure to seek medical care for perceived minor lesions, nonrecognition of the actual exposure event, communication (i.e., language) barriers, and recall bias from memory loss or impaired speech in encephalitic patients. Incubation periods range typically from 1 to 3 months after exposure but in rare cases can exceed 1 year in duration, further complicating collection of an adequate history.

During the late 1970s, rabid raccoons were identified in Virginia and West Virginia after probable translocation of infected animals from the southeastern United States. Raccoon rabies spread throughout the region, with approximately 50,000 rabid raccoons diagnosed to date. During 2003, Tennessee became the twentieth affected state, and the enzootic area now stretches from eastern Canada to Florida (*3*).

Rabies should be considered in the differential diagnosis of any acute, rapidly progressive encephalitis, regardless of documented history of animal bite. Prompt ante- or postmortem diagnosis is necessary for accurate reporting of human rabies to public health officials and implementation of appropriate infection-control measures, including prompt administration of prophylaxis to exposed persons.

The Advisory Committee on Immunization Practices publishes guidelines for human rabies prevention (*4*), and recommendations have been published for the management of suspected cases (*5*). Human rabies postexposure prophylaxis is effective when administered promptly and properly. Human-to-human transmission is a concern, but no cases among health-care workers exposed to a rabies patient have been reported (*6,7*). In the case described in this report, careful risk assessment based on identifiable contact with the patient's secretions limited the number of persons receiving prophylaxis. Emergency medicine physicians, infectious-disease consultants, and state and national public health officials can provide advice on rabies prophylaxis for complicated or unusual exposure scenarios to prevent this fatal disease and aid in its diagnosis.

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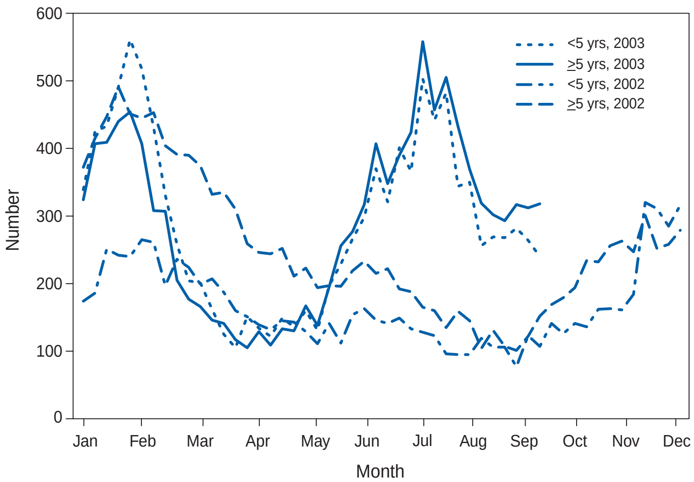
References

1. Krebs JW, Noll HR, Rupprecht CE, Childs JE. Rabies surveillance in the United States during 2001. J Am Vet Med Assoc 2002;221:1690–701.
2. Messenger SL, Smith JS, Rupprecht CE. Emerging epidemiology of bat-associated cryptic cases of rabies in the United States. Clin Infect Dis 2002;35:738–47.
3. Guerra MA, Curns AT, Rupprecht CE, Hanlon CA, Krebs JW, Childs JE. Skunk and raccoon rabies in the eastern United States: temporal and spatial analysis. Emerg Infect Dis 2003;9:1143–50.
4. CDC. Human rabies prevention—United States, 1999. Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1999;48(No. RR-1).
5. Jackson AC, Warrell MJ, Rupprecht CE, et al. Management of rabies in humans. Clin Infect Dis 2003;36:60–3.
6. Helmick CG, Tauxe RV, Vernon AA. Is there a risk to contacts of patients with rabies? Rev Infect Dis 1987;9:511–8.
7. Noah DL, Drenzek CL, Smith JS, et al. Epidemiology of human rabies in the United States, 1980 to 1996. Ann Intern Med 1998;128:922–30.

Outbreak of Severe Rotavirus Gastroenteritis Among Children — Jamaica, 2003

In late May 2003, the Jamaican Ministry of Health (MoH) identified a sharp increase in the number of acute gastroenteritis (AGE) cases reported throughout the country (Figure), accompanied by increases in AGE-associated hospital admissions and deaths among children. The greatest increase in AGE cases was observed among children aged <5 years in the southeastern parish of Kingston and St. Andrew. During June–July, 12 AGE-associated deaths were reported among children aged <8 years. MoH began an investigation to determine the etiology of the outbreak, ascertain risk factors for illness and death, and identify appropriate control measures. This report presents the preliminary results of that investigation, which determined that the AGE cases were associated with rotavirus

FIGURE. Number of acute gastroenteritis cases in persons aged <5 years and ≥5 years, by month — National Sentinel Surveillance System, Jamaica, January 2002–October 2003



and deaths might have been reduced by appropriate AGE case management, indicating a need for additional education of caregivers regarding AGE treatment.

The increase in AGE cases was detected by Jamaica's National Sentinel Surveillance System (NSSS), which receives weekly reports that include the number of patient visits for AGE among children at 55 sentinel sites. In addition, review of admissions at two Kingston and St. Andrew hospitals identified an increase in the number of children hospitalized for AGE. Mandatory investigation and reporting to MoH found a concurrent increase in the number of diarrheal deaths among children.

Interviews with primary caregivers suggested that eight of the 12 deaths were attributable to diarrhea. These eight deaths occurred among children aged 4 months–3 years (mean: 17 months). All eight children had watery diarrhea and vomiting that began 1–5 days before death. All had visited a public or private health-care provider at least once for treatment. Five children had received oral rehydration therapy (ORT) for their diarrheal illness; three received no ORT during their clinic visits. Three children were treated with antibiotics, two with antidiarrheals, and three with antiemetic injections.

Testing for *Salmonella*, *Shigella*, *Vibrio cholerae*, and *Escherichia coli* O157:H7 on 43 stool specimens collected during June–July as part of NSSS surveillance identified four *Shigella* spp. and nine *Salmonella* spp. isolates. This was an expected finding for that time of the year. However, rotavirus was identified by latex agglutination in 21 (49%) of the initial 43 stool specimens and by enzyme-linked immunosorbent assay in 33 (50%) of an additional 66 stool specimens collected from children aged <5 years as part of the MoH investigation. Further testing at CDC identified rotavirus in five of seven stool specimens from persons aged >5 years. Testing of 32 stool specimens was negative for norovirus, sapovirus, and astrovirus; however, adenovirus was identified in three specimens, all of which also had evidence of rotavirus. Initial characterization of 23 rotavirus samples obtained as part of the MoH investigation indicated the presence of three common serotypes; no vaccine strain was identified.

An epidemiologic investigation of this rotavirus-associated outbreak continues to identify risk factors for severe illness and death. As of November 12, no food or water source had been identified. Preventive efforts have focused on advising parents and physicians of the benefits of ORT for children with AGE.

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Editorial Note: In Jamaica, rotavirus is usually confined to winter months (*1*), occurs among children aged <3 years, and is no longer associated with substantial mortality. Identification of rotavirus as the etiologic agent of this large outbreak of severe AGE seemed improbable because the outbreak occurred during the summer, included children aged >3 years, and resulted in multiple deaths. However, laboratory tests confirmed rotavirus as the etiologic agent, and identified multiple common rotavirus strains. Environmental exposures are being considered as explanations for this unusual outbreak. Ongoing studies are examining heavy rainfalls that occurred in late May and might have flooded latrines in crowded urban areas, causing fecal contamination of water sources. Communitywide outbreaks of rotavirus attributed to fecally contaminated water have been reported but are uncommon (*2*).

This outbreak underscores the importance of surveillance for rotavirus disease. Rotavirus remains a major cause of diarrheal deaths worldwide (*3*), many of which might be prevented by aggressive use of ORT (*4*) and vaccines (*5*). The investigation of the outbreak in Jamaica suggested that AGE-associated deaths might be attributable to inappropriate case management. Certain children did not receive adequate ORT treatment, nor was home use of ORT emphasized. Certain children received antiemetic and antidiarrheal injections, which are not part of standard diarrhea management. Additional education of physicians, parents, and other caregivers regarding ORT can reduce the severity and mortality from diarrhea during AGE outbreaks (*6*).

References

1. Dowe G, King SD, Maitland PB, Swaby-Ellis DE. Laboratory investigations on rotavirus in infantile gastroenteritis in Jamaica. Trans R Soc Trop Med Hyg 1988;82:155–9.
2. Hopkins RS, Gaspard GB, Williams FP Jr, Karlin RJ, Cukor G, Blacklow NR. A community waterborne gastroenteritis outbreak: evidence for rotavirus as the agent. Am J Public Health 1984;74:263–5.
3. Miller MA, McCann L. Policy analysis of the use of hepatitis B, *Haemophilus influenzae* type b-, *Streptococcus pneumoniae*-conjugate and rotavirus vaccines in national immunization schedules. Health Econ 2000;9:19–35.
4. Santosham M. Oral rehydration therapy: reverse transfer of technology. Arch Pediatr Adolesc Med 2002;156:1177–9.
5. Bresee JS, Glass RI, Ivanoff B, Gentsch JR. Current status and future priorities for rotavirus vaccine development, evaluation and implementation in developing countries. Vaccine 1999;17:2207–22.
6. Walker GJ, Ashley DE, Hayes RJ. The quality of care is related to death rates: hospital inpatient management of infants with acute gastroenteritis in Jamaica. Am J Public Health 1988;78:149–52.

West Nile Virus Activity — United States, November 6–12, 2003

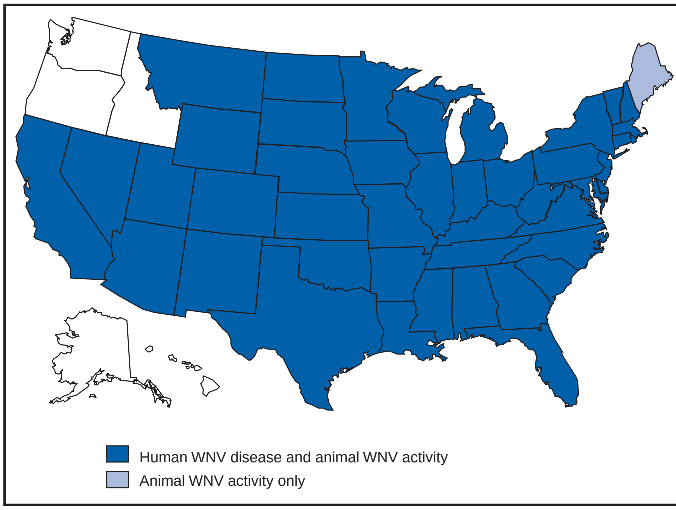
This report summarizes West Nile virus (WNV) surveillance data reported to CDC through ArboNET as of 3 a.m., Mountain Standard Time, November 12, 2003.

During the reporting week of November 6–12, a total of 176 human cases of WNV infection were reported from 12 states (Arizona, Georgia, Kansas, Louisiana, Maryland, Nebraska, New Jersey, New Mexico, Pennsylvania, South Dakota, Tennessee, and Virginia), including two fatal cases from Louisiana. During the same period, WNV infections were reported in 39 dead birds, 12 mosquito pools, 93 horses, one cat, and five dogs.

During 2003, a total of 8,393 human cases of WNV infection have been reported from Colorado (n = 2,477), Nebraska (n = 1,698), South Dakota (n = 989), Texas (n = 513), North Dakota (n = 422), Wyoming (n = 339), Pennsylvania (n = 225), Montana (n = 220), New Mexico (n = 201), Minnesota (n = 144), Iowa (n = 143), Ohio (n = 104), Louisiana (n = 103), Kansas (n = 88), Oklahoma (n = 75), New York (n = 67), Mississippi (n = 62), Missouri (n = 59), Maryland (n = 56), Illinois (n = 50), Georgia (n = 41), Alabama (n = 33), Florida (n = 32), Indiana (n = 30), New Jersey (n = 29), North Carolina (n = 24), Tennessee (n = 23), Virginia (n = 23), Arkansas (n = 21), Massachusetts (n = 16), Kentucky (n = 14), Delaware (n = 13), Wisconsin (n = 13), Connecticut (n = 12), Michigan (n = eight), Rhode Island (n = six), Arizona (n = four), District of Columbia (n = three), New Hampshire (n = three), Vermont (n = three), California (n = two), Nevada (n = two), South Carolina (n = one), Utah (n = one), and West Virginia (n = one) (Figure). Of 8,256 (98%) cases for which demographic data were available, 4,251 (53%) occurred among males; the median age was 47 years (range: 1 month–99 years), and the dates of illness onset ranged from March 28 to October 28. Of the 8,256 cases, 184 fatal cases were reported from Colorado (n = 45), Texas (n = 26), Nebraska (n = 21), South Dakota (n = 13), New York (n = eight), Wyoming (n = eight), Pennsylvania (n = seven), Maryland (n = five), Missouri (n = five), Georgia (n = four), Iowa (n = four), Kansas (n = four), Minnesota (n = four), New Mexico (n = four), North Dakota (n = four), Alabama (n = three), Louisiana (n = three), Ohio (n = three), Indiana (n = two), Montana (n = two), New Jersey (n = two), Delaware (n = one), Illinois (n = one), Kentucky (n = one), Michigan (n = one), Mississippi (n = one), Tennessee (n = one), and Virginia (n = one). A total of 718 presumptive West Nile viremic blood donors have been reported to ArboNET, including 625 (87%) from the following nine western and midwestern states: Colorado, Kansas, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming. Of the 587 donors for whom data were reported completely, six (1%) subsequently had neuroinvasive disease (median age: 45 years; range: 28–76 years), and 90 (15%) had West Nile fever.

In addition, 11,115 dead birds with WNV infection have been reported from 42 states, the District of Columbia, and New York City. WNV infections also have been reported from 41 states in horses (n = 4,084), dogs (n = 26), squirrels (n = 17), cats (n = one), and unidentified animal species (n = 31). During 2003, WNV seroconversions have been reported in 1,377 sentinel chicken flocks from 15 states. Of the 61 seropositive sentinel horses reported, Illinois reported 43, West Virginia reported eight, Minnesota reported seven,

FIGURE. Areas reporting West Nile virus (WNV) activity — United States, 2003*



* As of 3 a.m., Mountain Standard Time, November 12, 2003.

and South Dakota reported three. In addition, seropositivity was reported from one other unidentified animal species. A total of 7,602 WNV-positive mosquito pools have been reported from 38 states, the District of Columbia, and New York City.

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

Notice to Readers

SMART BRFSS Provides Data Comparisons by Metropolitan and Micropolitan Statistical Area (MMSA)

Growth in sample sizes now enables CDC to offer data comparisons at the metropolitan level in the Behavioral Risk Factor Surveillance System (BRFSS). BRFSS prevalence estimates can be generated for the U.S. Census Bureau's metropolitan and micropolitan areas (MMSAs) and metropolitan divisions. MMSA data comparing 30 health risk factors will be offered to the public next week via Selected Metropolitan/Micropolitan Area Risk Trends (SMART) BRFSS, a searchable Internet site.

For approximately 20 years, BRFSS has tracked health-risk behaviors, preventive health practices, and health-care access among different U.S. populations, identifying those at greatest risk for morbidity and mortality. However, while BRFSS has routinely provided data comparisons by sex, race/ethnicity, and age group, comparisons by geographic area have been limited to states and territories.

SMART BRFSS, with standardized methodology and timely (i.e., approximately 3 months) delivery of results, can be a vital tool for local public health officials, filling a critical need for local surveillance data to support implementation and evaluation of targeted programs and better planning of prevention efforts. In one SMART BRFSS comparison of data from 98 MMSAs, the unadjusted prevalence of self-rated fair or poor health ranged widely, from 6.7% in Bethesda-Frederick-Gaithersburg, Maryland, to 26.2% in Huntington-Ashland, West Virginia-Kentucky-Ohio (median: 13.7%). The SMART BRFSS Internet site will be available at http://www.cdc.gov/brfss.

Notice to Readers

Great American Smokeout — November 20, 2003

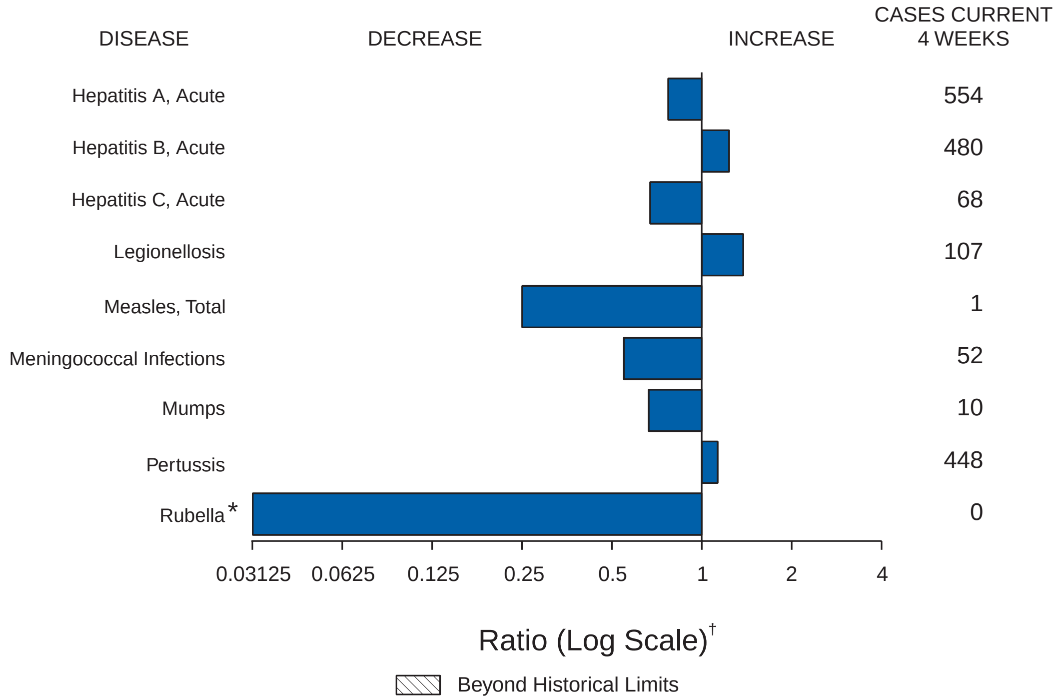
In 2001, an estimated 22.8% of U.S. adults (*1*) and in 2002 an estimated 22.9% of U.S. high school students (*2*) were current cigarette smokers. An estimated 70% of smokers want to quit (*3*). To help smokers quit, each year the American Cancer Society (ACS) sponsors the Great American Smokeout on the third Thursday in November. Since 1977, ACS has encouraged smokers to quit for 24 hours in the hope they might quit for good. Last year, 19% of smokers participated in the Great American Smokeout, and of those smokers, 6% had not resumed 1–5 days later. Additional information about the Great American Smokeout is available from ACS, telephone 1-800-227-2345.

The likelihood of quitting smoking permanently is increased when effective therapies are used (*4*). Telephone quitlines exist in only 34 states (*5*), leaving an estimated 14 million U.S. smokers without access to state-based services in their home states. The American Legacy Foundation is working with CDC to provide quitline funding for up to five additional states.

References

1. CDC. Cigarette smoking among adults—United States, 2001. MMWR 2003;52:953–6.
2. CDC. Tobacco use among middle and high school students—United States, 2002. MMWR 2003;52:1096–98.
3. CDC. Cigarette smoking among adults—United States, 2000. MMWR 2002;51:642–5.
4. Fiore MC, Bailey WC, Cohen SJ, et al. Treating tobacco use and dependence: clinical practice guideline. Rockville, Maryland: U.S. Department of Health and Human Services, Public Health Service, 2000; DHHS publication no. (AHRQ)00-0032.
5. Tobacco Control Research Branch. Talk to an expert: find help in your state. Bethesda, Maryland: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute, 2003. Available at http://smokefree.gov/usmap.html.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals November 8, 2003, with historical data



* No rubella cases were reported for the current 4-week period yielding a ratio for week 45 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 November 8, 2003 (45th Week)*

	Cum. 2003	Cum. 2002		Cum. 2003	Cum. 2002
Anthrax	-	2	Hansen disease (leprosy)†	49	75
Botulism:	-	-	Hantavirus pulmonary syndrome†	15	17
foodborne	11	25	Hemolytic uremic syndrome, postdiarrheal†	134	180
infant	54	57	HIV infection, pediatric†§	187	135
other (wound & unspecified)	24	17	Measles, total	43¶	32**
Brucellosis†	72	102	Mumps	167	235
Chancroid	42	61	Plague	1	1
Cholera	1	2	Poliomyelitis, paralytic	-	-
Cyclosporiasis†	59	154	Psittacosis†	14	14
Diphtheria	1	1	Q fever†	64	49
Ehrlichiosis:	-	-	Rabies, human	3	3
human granulocytic (HGE)†	298	275	Rubella	7	16
human monocytic (HME)†	170	180	Rubella, congenital	-	1
other and unspecified	35	20	Streptococcal toxic-shock syndrome†	132	98
Encephalitis/Meningitis:	-	-	Tetanus	13	20
California serogroup viral†	74	139	Toxic-shock syndrome	109	92
eastern equine†	8	5	Trichinosis	3	13
Powassan†	-	1	Tularemia†	72	69
St. Louis†	28	20	Yellow fever	-	-
western equine†	2	-			

-: No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).
† Not notifiable in all states.
§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update October 26, 2003.
¶ Of 43 cases reported, 32 were indigenous, and 11 were imported from another country.
** Of 32 cases reported, 18 were indigenous, and 14 were imported from another country.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending November 8, 2003, and November 9, 2002 (45th Week)*

Reporting area	AIDS		Chlamydia†		Coccidiodomycosis		Cryptosporidiosis		Encephalitis/Meningitis West Nile	
	Cum. 2003§	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	38,482	35,422	707,403	718,878	3,325	3,719	2,809	2,658	1,607	2,487
NEW ENGLAND	1,277	1,370	23,358	24,009	-	-	149	176	-	27
Maine	49	28	1,600	1,489	N	N	18	10	-	-
N.H.	34	30	1,037	1,362	-	-	11	29	-	-
Vt.	15	12	905	815	-	-	29	31	-	-
Mass.	518	693	9,894	9,523	-	-	61	71	-	18
R.I.	90	86	2,534	2,384	-	-	15	19	-	-
Conn.	571	521	7,388	8,436	N	N	15	16	-	9
MID. ATLANTIC	9,040	8,273	95,305	80,941	-	-	331	356	154	124
Upstate N.Y.	853	659	17,197	14,604	N	N	114	116	4	38
N.Y. City	4,989	4,949	28,932	26,372	-	-	75	129	-	28
N.J.	1,356	1,214	11,103	12,243	-	-	7	15	16	23
Pa.	1,842	1,451	38,073	27,722	N	N	135	96	134	35
E.N. CENTRAL	3,556	3,864	120,490	132,027	7	21	831	901	102	1,407
Ohio	718	726	28,177	33,109	-	-	135	116	97	267
Ind.	482	463	14,262	15,006	N	N	80	52	-	18
Ill.	1,609	1,866	36,709	41,928	-	2	68	115	1	554
Mich.	581	645	27,671	27,218	7	19	122	122	4	518
Wis.	166	164	13,671	14,766	-	-	426	496	-	50
W.N. CENTRAL	685	610	40,851	40,759	1	1	522	374	329	176
Minn.	144	131	8,489	9,002	N	N	140	181	49	17
Iowa	72	71	3,344	4,972	N	N	114	42	75	-
Mo.	319	278	15,536	13,908	-	-	40	35	29	103
N. Dak.	2	2	1,027	1,042	N	N	13	24	5	-
S. Dak.	10	10	2,298	1,875	-	-	37	28	40	14
Nebr.¶	52	58	4,234	4,077	1	1	18	48	45	32
Kans.	86	60	5,923	5,883	N	N	160	16	86	10
S. ATLANTIC	10,692	10,296	135,891	136,190	5	4	345	287	157	63
Del.	195	165	2,613	2,309	N	N	4	3	12	-
Md.	1,285	1,510	14,055	14,279	5	4	21	19	35	21
D.C.	859	616	2,719	2,901	-	-	16	4	-	-
Va.	819	712	15,016	15,698	-	-	41	21	17	-
W. Va.	79	76	2,254	2,156	N	N	4	2	1	2
N.C.	1,006	835	22,771	21,423	N	N	44	32	-	-
S.C.¶	719	747	13,885	12,638	-	-	8	6	1	1
Ga.	1,667	1,431	27,378	28,235	-	-	115	110	44	21
Fla.	4,063	4,204	35,200	36,551	N	N	92	90	47	18
E.S. CENTRAL	1,704	1,675	44,846	45,666	N	N	109	113	41	272
Ky.	175	277	7,066	7,681	N	N	22	8	11	41
Tenn.	738	691	17,535	13,938	N	N	36	53	15	8
Ala.	390	342	10,599	13,965	-	-	41	45	15	33
Miss.	401	365	9,646	10,082	N	N	10	7	-	190
W.S. CENTRAL	4,110	3,635	85,774	94,087	4	11	77	60	509	416
Ark.	165	206	6,764	6,442	-	-	16	8	19	11
La.	522	879	14,764	16,691	N	N	2	9	43	203
Okla.	176	166	9,670	9,707	N	N	13	16	25	-
Tex.	3,247	2,384	54,576	61,247	4	11	46	27	422	202
MOUNTAIN	1,342	1,170	38,046	44,601	2,017	2,312	122	143	311	2
Mont.	13	10	1,625	1,926	N	N	18	5	216	1
Idaho	21	26	2,167	2,160	N	N	26	28	-	1
Wyo.	7	8	835	801	1	-	5	9	88	-
Colo.	328	255	9,360	12,303	N	N	32	51	-	-
N. Mex.	103	78	5,933	6,591	6	7	9	18	3	-
Ariz.	584	486	10,791	12,995	1,964	2,254	6	15	1	-
Utah	60	57	2,905	2,652	15	11	19	13	1	-
Nev.	226	250	4,430	5,173	31	40	7	4	2	-
PACIFIC	6,076	4,529	122,842	120,598	1,290	1,369	323	248	4	-
Wash.	422	412	14,337	12,799	N	N	43	28	-	-
Oreg.	229	288	6,340	5,896	-	-	36	37	4	-
Calif.	5,321	3,710	95,908	94,812	1,290	1,369	243	180	-	-
Alaska	15	28	3,121	3,191	-	-	1	1	-	-
Hawaii	89	91	3,136	3,900	-	-	-	2	-	-
Guam	6	2	-	578	-	-	-	-	-	-
P.R.	944	1,042	1,693	2,169	N	N	N	N	-	-
V.I.	31	63	208	125	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).
† Chlamydia refers to genital infections caused by *C. trachomatis*.
§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update October 26, 2003.
¶ Contains data reported through National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 8, 2003, and November 9, 2002 (45th Week)*

Reporting area	*Escherichia coli*, Enterohemorrhagic (EHEC) O157:H7 Cum. 2003	O157:H7 Cum. 2002	Shiga toxin positive, serogroup non-O157 Cum. 2003	Shiga toxin positive, serogroup non-O157 Cum. 2002	Shiga toxin positive, not serogrouped Cum. 2003	Shiga toxin positive, not serogrouped Cum. 2002	Giardiasis Cum. 2003	Giardiasis Cum. 2002	Gonorrhea Cum. 2003	Gonorrhea Cum. 2002
UNITED STATES	2,271	3,334	227	172	121	44	15,615	17,967	270,174	305,205
NEW ENGLAND	145	248	49	46	15	5	1,174	1,587	6,171	6,750
Maine	10	35	1	8	1	-	163	183	162	118
N.H.	12	32	2	-	-	-	22	40	76	110
Vt.	15	12	-	1	-	1	109	124	71	81
Mass.	61	114	7	19	14	4	565	859	2,639	2,861
R.I.	1	11	-	1	-	-	95	138	824	788
Conn.	46	44	39	17	-	-	220	243	2,399	2,792
MID. ATLANTIC	216	375	16	1	35	7	3,067	3,674	36,431	36,909
Upstate N.Y.	87	153	10	-	18	-	909	1,075	6,744	7,485
N.Y. City	5	16	-	-	-	-	987	1,280	11,438	11,048
N.J.	20	58	1	-	-	1	314	424	6,292	6,734
Pa.	104	148	5	1	17	6	857	895	11,957	11,642
E.N. CENTRAL	514	784	23	30	20	4	2,585	3,153	54,350	64,436
Ohio	125	140	17	10	19	3	796	818	15,553	18,955
Ind.	79	72	-	1	-	-	-	-	5,689	6,489
Ill.	103	173	-	6	-	-	660	893	16,539	21,090
Mich.	83	130	-	3	-	1	643	824	12,078	12,480
Wis.	124	269	6	10	1	-	486	618	4,491	5,422
W.N. CENTRAL	408	473	45	30	20	4	1,769	1,823	14,449	15,666
Minn.	129	150	19	25	1	-	695	691	2,402	2,713
Iowa	96	113	-	-	-	-	243	282	775	1,166
Mo.	82	68	13	-	1	-	433	438	7,418	7,782
N. Dak.	13	16	4	-	8	-	33	30	56	64
S. Dak.	27	39	4	2	-	-	71	68	200	230
Nebr.	33	58	4	3	-	-	107	150	1,414	1,324
Kans.	28	29	1	-	10	4	187	164	2,184	2,387
S. ATLANTIC	134	310	61	30	9	1	2,428	2,577	67,549	77,382
Del.	9	8	N	N	N	N	40	50	1,001	1,376
Md.	10	26	-	-	-	-	101	105	6,721	7,944
D.C.	1	-	-	-	-	-	44	43	2,163	2,305
Va.	35	60	9	9	-	-	315	270	6,923	8,830
W. Va.	5	9	-	-	-	1	37	50	757	840
N.C.	4	102	26	-	-	-	N	N	13,126	13,823
S.C.	2	5	-	-	-	-	126	118	7,551	8,038
Ga.	27	41	3	7	-	-	818	819	13,732	15,539
Fla.	41	59	23	14	9	-	947	1,122	15,575	18,687
E.S. CENTRAL	74	103	2	-	7	10	306	339	22,159	26,425
Ky.	24	30	2	-	7	10	N	N	3,143	3,287
Tenn.	31	44	-	-	-	-	156	165	7,344	8,201
Ala.	13	18	-	-	-	-	150	174	6,715	8,985
Miss.	6	11	-	-	-	-	-	-	4,957	5,952
W.S. CENTRAL	79	103	5	1	10	8	255	218	35,575	42,201
Ark.	10	11	-	-	-	-	131	147	3,453	4,085
La.	3	4	-	-	-	-	9	6	8,976	10,284
Okla.	25	21	-	-	-	-	114	63	4,003	4,151
Tex.	41	67	5	1	10	8	1	2	19,143	23,681
MOUNTAIN	296	323	23	27	5	5	1,392	1,459	8,313	9,786
Mont.	16	28	-	-	-	-	95	78	91	95
Idaho	76	41	15	16	-	-	179	115	66	80
Wyo.	3	14	1	2	-	-	20	29	39	55
Colo.	69	96	3	6	5	5	390	488	2,278	3,033
N. Mex.	10	11	3	3	-	-	43	131	958	1,312
Ariz.	31	33	N	N	N	N	224	187	2,976	3,233
Utah	69	72	-	-	-	-	326	292	306	274
Nev.	22	28	1	-	-	-	115	139	1,599	1,704
PACIFIC	405	615	3	7	-	-	2,639	3,137	25,177	25,650
Wash.	102	134	1	-	-	-	301	376	2,385	2,508
Oreg.	92	201	2	7	-	-	347	388	850	754
Calif.	199	238	-	-	-	-	1,845	2,193	20,749	21,227
Alaska	4	7	-	-	-	-	74	101	448	534
Hawaii	8	35	-	-	-	-	72	79	745	627
Guam	N	N	-	-	-	-	-	7	-	41
P.R.	-	1	-	-	36	-	127	79	178	310
V.I.	-	-	-	-	-	-	-	-	55	31
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 8, 2003, and November 9, 2002 (45th Week)*

Reporting area	*Haemophilus influenzae*, invasive[†] All ages, All serotypes Cum. 2003	All ages, All serotypes Cum. 2002	Age <5 years, Serotype b Cum. 2003	Age <5 years, Serotype b Cum. 2002	Age <5 years, Non-serotype b Cum. 2003	Age <5 years, Non-serotype b Cum. 2002	Age <5 years, Unknown serotype Cum. 2003	Age <5 years, Unknown serotype Cum. 2002	Hepatitis (viral, acute), by type A Cum. 2003	Hepatitis A Cum. 2002
UNITED STATES	1,443	1,410	19	26	79	109	163	131	5,763	7,848
NEW ENGLAND	106	91	1	-	6	8	5	2	289	270
Maine	4	1	-	-	-	-	1	-	14	8
N.H.	11	8	1	-	-	-	-	-	11	11
Vt.	8	7	-	-	-	-	-	-	6	1
Mass.	47	42	-	-	6	4	3	2	176	130
R.I.	6	10	-	-	-	-	1	-	14	30
Conn.	30	23	-	-	-	4	-	-	68	90
MID. ATLANTIC	323	268	-	2	1	14	45	21	1,161	1,009
Upstate N.Y.	119	102	-	2	1	4	13	7	126	162
N.Y. City	53	62	-	-	-	-	10	9	382	406
N.J.	55	52	-	-	-	-	7	5	137	168
Pa.	96	52	-	-	-	10	15	-	516	273
E.N. CENTRAL	205	279	4	3	8	11	31	41	570	957
Ohio	63	70	-	-	-	1	11	8	105	269
Ind.	42	37	1	1	4	7	-	-	61	43
Ill.	62	111	-	-	-	-	15	20	176	248
Mich.	21	14	3	2	4	3	1	-	186	210
Wis.	17	47	-	-	-	-	4	13	42	187
W.N. CENTRAL	110	62	2	1	7	2	15	6	159	267
Minn.	44	42	2	1	7	2	2	4	37	38
Iowa	-	1	-	-	-	-	-	-	25	61
Mo.	40	11	-	-	-	-	12	2	58	78
N. Dak.	3	4	-	-	-	-	-	-	1	1
S. Dak.	1	1	-	-	-	-	-	-	-	3
Nebr.	3	-	-	-	-	-	-	-	11	17
Kans.	19	3	-	-	-	-	1	-	27	69
S. ATLANTIC	340	315	3	5	14	15	20	23	1,552	2,147
Del.	-	-	-	-	-	-	-	-	7	15
Md.	80	79	1	2	6	3	1	1	152	277
D.C.	-	-	-	-	-	-	-	-	38	72
Va.	49	29	-	-	-	-	6	4	93	127
W. Va.	14	17	-	-	-	1	-	1	14	17
N.C.	36	30	-	-	3	3	2	-	98	195
S.C.	4	12	-	-	-	-	1	2	35	56
Ga.	57	69	-	-	-	-	5	10	733	428
Fla.	100	79	2	3	5	8	5	5	382	960
E.S. CENTRAL	70	61	1	1	1	5	10	11	203	248
Ky.	5	5	-	-	1	1	-	1	29	41
Tenn.	43	31	-	-	-	1	6	7	144	111
Ala.	20	16	1	1	-	3	3	1	15	35
Miss.	2	9	-	-	-	-	1	2	15	61
W.S. CENTRAL	62	53	1	2	8	10	5	2	345	950
Ark.	7	1	-	-	1	-	-	-	19	66
La.	12	7	-	-	-	-	5	2	51	81
Okla.	41	43	-	-	7	10	-	-	17	46
Tex.	2	2	1	2	-	-	-	-	258	757
MOUNTAIN	141	150	4	4	19	26	21	14	406	488
Mont.	-	-	-	-	-	-	-	-	8	13
Idaho	4	2	-	-	-	-	1	1	-	26
Wyo.	1	2	-	-	-	-	-	-	1	3
Colo.	35	31	-	-	-	-	7	3	66	71
N. Mex.	14	25	-	-	4	6	1	1	19	27
Ariz.	64	62	4	2	6	14	8	6	226	252
Utah	13	16	-	1	5	4	4	-	41	48
Nev.	10	12	-	1	4	2	-	3	45	48
PACIFIC	86	131	3	8	15	18	11	11	1,078	1,512
Wash.	11	3	-	2	7	1	3	-	57	142
Oreg.	39	50	-	-	-	-	3	3	52	56
Calif.	20	42	3	6	8	17	4	4	950	1,280
Alaska	-	1	-	-	-	-	-	1	8	10
Hawaii	16	35	-	-	-	-	1	3	11	24
Guam	-	-	-	-	-	-	-	-	-	1
P.R.	-	1	-	-	-	-	-	-	50	207
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

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

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

[†] Non-serotype b: nontypeable and type other than b; Unknown serotype: type unknown or not reported. Previously, cases reported without type information were counted as non-serotype b.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 8, 2003, and November 9, 2002 (45th Week)*

Reporting area	Hepatitis (viral, acute), by type: B Cum. 2003	B Cum. 2002	C Cum. 2003	C Cum. 2002	Legionellosis Cum. 2003	Legionellosis Cum. 2002	Listeriosis Cum. 2003	Listeriosis Cum. 2002	Lyme disease Cum. 2003	Lyme disease Cum. 2002
UNITED STATES	5,417	6,319	1,648	1,597	1,737	1,079	540	565	15,659	19,637
NEW ENGLAND	225	257	6	19	85	100	41	59	3,020	6,371
Maine	1	9	-	-	2	2	7	5	191	102
N.H.	11	20	-	-	6	5	3	4	95	235
Vt.	3	6	6	13	5	35	1	3	41	33
Mass.	175	134	-	6	35	42	13	33	961	1,761
R.I.	13	24	-	-	14	2	-	1	529	314
Conn.	22	64	U	U	23	14	17	13	1,203	3,926
MID. ATLANTIC	781	1,349	139	97	502	311	105	170	10,224	10,126
Upstate N.Y.	113	104	37	41	138	89	31	52	4,094	4,452
N.Y. City	262	667	-	-	45	60	15	36	5	57
N.J.	165	287	-	5	62	31	15	33	1,786	2,225
Pa.	241	291	102	51	257	131	44	49	4,339	3,392
E.N. CENTRAL	362	594	145	100	344	253	63	75	763	1,218
Ohio	125	83	10	2	203	103	22	21	76	65
Ind.	33	42	8	-	24	18	7	10	20	20
Ill.	1	138	16	21	3	23	7	18	33	47
Mich.	172	288	111	73	98	74	19	18	8	26
Wis.	31	43	-	4	16	35	8	8	626	1,060
W.N. CENTRAL	280	194	219	621	57	55	19	16	362	335
Minn.	31	27	8	2	3	11	10	1	254	240
Iowa	11	18	1	1	9	11	-	2	45	41
Mo.	195	99	209	605	28	16	5	9	51	39
N. Dak.	2	4	-	-	1	-	-	1	-	1
S. Dak.	2	2	-	1	2	4	-	1	1	2
Nebr.	22	23	1	12	4	13	4	1	2	6
Kans.	17	21	-	-	10	-	-	1	9	6
S. ATLANTIC	1,792	1,510	142	185	466	186	114	73	1,018	1,256
Del.	5	13	-	-	25	7	N	N	168	174
Md.	118	115	18	9	116	43	24	17	571	689
D.C.	10	21	-	-	17	6	-	-	9	22
Va.	159	175	7	15	88	24	8	7	81	144
W. Va.	27	18	3	3	16	-	6	-	22	17
N.C.	148	207	11	25	36	11	16	6	95	122
S.C.	145	110	24	4	7	8	4	8	8	20
Ga.	623	394	4	63	29	18	29	12	15	2
Fla.	557	457	75	66	132	69	27	23	49	66
E.S. CENTRAL	372	345	79	122	85	40	27	19	57	67
Ky.	61	50	14	4	37	18	6	3	14	21
Tenn.	172	121	22	26	32	14	7	11	15	24
Ala.	54	92	7	10	13	8	12	4	5	11
Miss.	85	82	36	82	3	-	2	1	23	11
W.S. CENTRAL	337	827	766	301	58	31	41	33	87	134
Ark.	59	104	3	10	2	-	1	-	-	3
La.	100	119	97	92	1	4	2	4	6	5
Okla.	41	62	2	5	7	3	3	9	-	-
Tex.	137	542	664	194	48	24	35	20	81	126
MOUNTAIN	522	531	47	49	59	44	29	27	17	16
Mont.	16	9	2	1	4	3	2	-	-	-
Idaho	-	6	-	1	3	1	2	2	3	4
Wyo.	29	17	-	5	2	2	-	-	2	1
Colo.	72	68	15	6	12	8	10	6	4	1
N. Mex.	31	144	-	2	2	2	2	3	1	1
Ariz.	245	190	7	4	10	9	9	12	1	3
Utah	56	43	-	4	20	13	-	3	3	5
Nev.	73	54	23	26	6	6	4	1	3	1
PACIFIC	746	712	105	103	81	59	101	93	111	114
Wash.	61	61	15	23	10	5	5	8	3	10
Oreg.	94	114	11	11	N	N	4	9	15	12
Calif.	563	521	76	68	71	53	87	68	90	89
Alaska	9	8	1	-	-	-	-	-	3	3
Hawaii	19	8	2	1	-	1	5	8	N	N
Guam	-	1	-	-	-	-	-	-	-	-
P.R.	78	165	-	-	-	-	-	2	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 8, 2003, and November 9, 2002 (45th Week)*

Reporting area	Malaria		Meningococcal disease		Pertussis		Rabies, animal		Rocky Mountain spotted fever	
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	998	1,247	1,376	1,543	6,375	7,191	5,022	6,865	780	954
NEW ENGLAND	39	69	65	83	828	702	506	824	-	6
Maine	3	5	6	4	12	17	61	53	-	-
N.H.	4	7	3	11	60	18	13	44	-	-
Vt.	2	4	3	4	60	134	30	86	-	-
Mass.	10	30	41	45	662	493	189	268	-	3
R.I.	2	5	2	5	17	13	55	69	-	3
Conn.	18	18	10	14	17	27	158	304	-	-
MID. ATLANTIC	241	344	161	186	764	438	845	1,159	34	53
Upstate N.Y.	51	43	43	43	452	293	376	629	2	-
N.Y. City	116	217	29	34	-	20	6	16	12	10
N.J.	37	39	22	27	65	-	62	167	10	16
Pa.	37	45	67	82	247	125	401	347	10	27
E.N. CENTRAL	79	152	190	233	548	843	152	160	16	31
Ohio	19	21	52	72	237	378	51	38	10	12
Ind.	2	13	40	29	61	120	27	31	1	4
Ill.	25	60	41	50	-	154	23	31	-	12
Mich.	23	45	39	38	100	50	44	46	5	3
Wis.	10	13	18	44	150	141	7	14	-	-
W.N. CENTRAL	44	57	136	131	378	662	514	439	64	103
Minn.	21	17	26	32	141	341	36	37	1	-
Iowa	5	4	24	22	109	111	97	72	2	3
Mo.	5	15	65	44	74	133	51	49	50	95
N. Dak.	1	1	1	-	6	5	51	47	-	-
S. Dak.	3	2	1	2	3	6	67	85	5	1
Nebr.	-	5	8	23	7	8	58	-	3	4
Kans.	9	13	11	8	38	58	154	149	3	-
S. ATLANTIC	279	294	236	253	587	382	2,282	2,372	474	450
Del.	3	5	8	7	8	3	57	24	1	1
Md.	67	100	24	8	73	59	255	359	101	39
D.C.	13	20	-	-	3	2	-	-	1	2
Va.	35	30	24	38	90	132	464	526	29	36
W. Va.	4	3	5	4	18	31	79	161	5	2
N.C.	21	21	32	30	118	40	700	636	234	270
S.C.	3	7	21	28	144	41	211	133	33	68
Ga.	55	47	29	28	32	26	346	370	60	19
Fla.	78	61	93	110	101	48	170	163	10	13
E.S. CENTRAL	18	19	75	87	125	232	168	205	97	123
Ky.	7	7	17	14	43	90	37	25	2	5
Tenn.	5	3	24	36	60	101	99	108	58	77
Ala.	3	4	15	20	16	32	31	68	12	14
Miss.	3	5	19	17	6	9	1	4	25	27
W.S. CENTRAL	80	71	157	189	536	1,496	202	1,130	83	171
Ark.	4	3	13	23	37	486	25	94	31	97
La.	4	4	32	39	6	7	-	-	-	-
Okla.	4	8	14	19	14	35	177	106	42	61
Tex.	68	56	98	108	479	968	-	930	10	13
MOUNTAIN	43	43	68	80	825	941	161	297	10	14
Mont.	-	2	5	2	5	5	20	18	1	1
Idaho	1	-	7	4	71	65	15	37	2	-
Wyo.	1	-	2	-	123	11	6	18	2	5
Colo.	21	23	22	23	290	369	38	59	2	2
N. Mex.	3	3	7	4	61	180	5	10	-	1
Ariz.	12	7	15	23	126	170	60	131	1	-
Utah	4	5	2	4	116	94	14	13	2	-
Nev.	1	3	8	20	33	47	3	11	-	5
PACIFIC	175	198	288	301	1,784	1,495	192	279	2	3
Wash.	24	22	28	58	627	395	-	-	-	-
Oreg.	10	9	53	43	407	168	6	14	-	2
Calif.	133	158	194	188	735	900	179	239	2	1
Alaska	1	2	3	4	5	4	7	26	-	-
Hawaii	7	7	10	8	10	28	-	-	-	-
Guam	-	-	-	1	-	2	-	-	-	-
P.R.	1	1	5	7	1	3	67	79	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 8, 2003, and November 9, 2002 (45th Week)*

Reporting area	Salmonellosis		Shigellosis		Streptococcal disease, invasive, group A		*Streptococcus pneumoniae*, invasive: Drug resistant, all ages		*Streptococcus pneumoniae*, invasive: Age <5 years	
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	35,765	38,059	19,170	18,188	4,621	4,019	1,794	2,109	379	304
NEW ENGLAND	1,835	1,998	281	302	347	290	40	99	8	3
Maine	115	132	6	8	26	20	-	-	-	-
N.H.	100	125	5	11	21	35	-	-	N	N
Vt.	64	70	7	1	19	9	6	5	4	2
Mass.	1,082	1,124	187	188	165	97	N	N	N	N
R.I.	118	149	15	16	14	15	10	12	4	1
Conn.	356	398	61	78	102	114	24	82	U	U
MID. ATLANTIC	4,011	5,119	1,974	1,566	817	634	110	98	85	70
Upstate N.Y.	1,008	1,342	445	261	329	250	61	79	67	57
N.Y. City	1,143	1,247	340	434	113	141	U	U	U	U
N.J.	483	952	240	564	134	139	N	N	N	N
Pa.	1,377	1,578	949	307	241	104	49	19	18	13
E.N. CENTRAL	4,680	4,974	1,491	1,910	941	858	376	198	154	122
Ohio	1,226	1,219	270	555	269	183	245	55	86	17
Ind.	518	501	146	101	97	46	131	141	44	55
Ill.	1,470	1,644	748	921	182	247	-	2	-	-
Mich.	694	793	220	163	324	271	N	N	N	N
Wis.	772	817	107	170	69	111	N	N	24	50
W.N. CENTRAL	2,268	2,314	726	945	299	219	141	417	52	53
Minn.	500	496	96	196	147	108	-	292	43	49
Iowa	353	449	75	115	N	N	N	N	N	N
Mo.	887	744	339	166	66	42	11	5	2	1
N. Dak.	37	40	4	18	14	-	3	1	7	3
S. Dak.	104	108	16	151	21	13	1	1	-	-
Nebr.	131	157	101	214	24	22	-	25	N	N
Kans.	256	320	95	85	27	34	126	93	N	N
S. ATLANTIC	9,531	9,823	6,422	5,989	803	655	926	963	18	30
Del.	86	86	154	269	6	2	1	3	N	N
Md.	774	829	539	1,012	241	105	-	-	-	21
D.C.	42	74	67	58	13	8	2	-	7	3
Va.	958	1,074	397	866	93	69	N	N	N	N
W. Va.	116	128	-	9	31	19	64	39	11	6
N.C.	1,193	1,334	883	396	93	112	N	N	U	U
S.C.	664	720	428	106	36	35	126	169	N	N
Ga.	1,890	1,754	1,501	1,465	107	120	216	241	N	N
Fla.	3,808	3,824	2,453	1,808	183	185	517	511	N	N
E.S. CENTRAL	2,374	2,909	799	1,279	180	106	124	119	-	-
Ky.	349	333	118	157	40	19	16	17	N	N
Tenn.	668	729	296	105	140	87	108	102	N	N
Ala.	461	767	227	695	-	-	-	-	N	N
Miss.	896	1,080	158	322	-	-	-	-	-	-
W.S. CENTRAL	4,633	4,224	4,215	2,786	320	263	53	168	57	22
Ark.	727	974	93	178	5	7	8	6	-	-
La.	420	728	226	431	1	1	45	162	8	7
Okla.	423	451	736	519	78	41	N	N	31	3
Tex.	3,063	2,071	3,160	1,658	236	214	N	N	18	12
MOUNTAIN	1,936	1,968	1,040	810	383	488	21	47	5	4
Mont.	96	80	2	3	2	-	-	-	-	-
Idaho	160	131	28	13	18	9	N	N	N	N
Wyo.	73	92	7	8	2	7	4	13	-	-
Colo.	429	536	265	183	119	108	-	-	-	-
N. Mex.	227	274	207	192	95	96	17	33	-	-
Ariz.	592	499	428	336	136	238	-	-	N	N
Utah	203	163	45	28	9	30	-	-	5	4
Nev.	156	193	58	47	2	-	-	1	-	-
PACIFIC	4,497	4,730	2,222	2,601	531	506	3	-	-	-
Wash.	478	465	137	145	53	56	-	-	N	N
Oreg.	369	311	203	94	N	N	N	N	N	N
Calif.	3,394	3,641	1,833	2,291	372	366	N	N	N	N
Alaska	62	74	9	5	-	-	-	-	N	N
Hawaii	194	239	40	66	106	84	3	-	-	-
Guam	-	38	-	32	-	-	-	4	-	-
P.R.	318	486	8	30	N	N	N	N	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 8, 2003, and November 9, 2002 (45th Week)*

Reporting area	Syphilis: Primary & secondary Cum. 2003	Syphilis: Primary & secondary Cum. 2002	Syphilis: Congenital Cum. 2003	Syphilis: Congenital Cum. 2002	Tuberculosis Cum. 2003	Tuberculosis Cum. 2002	Typhoid fever Cum. 2003	Typhoid fever Cum. 2002	Varicella (Chickenpox) Cum. 2003
UNITED STATES	5,806	5,845	313	370	9,488	10,999	271	285	10,946
NEW ENGLAND	174	126	1	1	281	361	23	13	1,575
Maine	7	2	1	-	5	20	-	-	768
N.H.	14	6	-	-	7	13	2	-	-
Vt.	1	1	-	-	7	4	-	-	651
Mass.	118	84	-	1	186	188	12	7	151
R.I.	16	6	-	-	28	46	2	-	5
Conn.	18	27	-	-	48	90	7	6	-
MID. ATLANTIC	734	642	55	57	1,841	1,904	47	72	33
Upstate N.Y.	37	29	9	4	242	267	10	8	N
N.Y. City	418	377	31	23	984	914	17	39	-
N.J.	142	142	15	29	359	438	14	17	-
Pa.	137	94	-	1	256	285	6	8	33
E.N. CENTRAL	749	1,067	64	57	950	1,120	17	31	4,776
Ohio	181	141	3	3	171	197	2	6	1,020
Ind.	44	53	10	3	112	107	4	2	-
Ill.	288	417	19	34	444	525	1	15	-
Mich.	225	432	32	17	171	232	10	4	3,042
Wis.	11	24	-	-	52	59	-	4	714
W.N. CENTRAL	124	112	4	2	407	453	4	9	49
Minn.	36	54	-	1	163	202	-	3	N
Iowa	7	2	-	-	25	24	2	-	N
Mo.	46	31	4	1	99	115	1	2	-
N. Dak.	2	-	-	-	-	4	-	-	49
S. Dak.	2	-	-	-	16	11	-	-	-
Nebr.	8	6	-	-	18	23	1	4	-
Kans.	23	19	-	-	86	74	-	-	-
S. ATLANTIC	1,562	1,487	57	82	1,930	2,272	45	40	1,887
Del.	6	10	-	-	23	14	-	-	28
Md.	252	176	10	15	207	253	8	7	-
D.C.	49	51	-	1	-	-	-	-	27
Va.	69	62	1	1	222	233	12	7	473
W. Va.	2	2	-	-	19	28	-	-	1,132
N.C.	138	255	16	18	281	305	9	2	N
S.C.	87	118	4	11	147	145	-	-	227
Ga.	400	322	6	13	315	457	7	5	-
Fla.	559	491	20	23	716	837	9	19	N
E.S. CENTRAL	273	422	10	26	566	653	5	4	1
Ky.	31	83	1	3	104	113	1	4	N
Tenn.	119	153	3	8	181	252	2	-	N
Ala.	104	143	4	9	197	179	2	-	-
Miss.	19	43	2	6	84	109	-	-	1
W.S. CENTRAL	817	736	56	80	1,234	1,616	34	28	2,095
Ark.	49	30	-	11	78	110	-	-	-
La.	144	133	-	-	-	-	-	-	11
Okla.	57	59	1	2	124	144	1	2	N
Tex.	567	514	55	67	1,032	1,362	33	26	2,084
MOUNTAIN	259	280	22	16	329	359	5	9	530
Mont.	-	-	-	-	5	6	-	-	N
Idaho	11	7	-	-	8	13	-	-	N
Wyo.	-	-	-	-	4	3	-	-	43
Colo.	24	58	3	2	62	82	3	4	-
N. Mex.	52	32	1	-	6	32	-	1	3
Ariz.	158	165	18	14	189	183	2	-	4
Utah	4	6	-	-	33	26	-	2	480
Nev.	10	12	-	-	22	14	-	2	-
PACIFIC	1,114	973	44	49	1,950	2,261	91	79	-
Wash.	69	53	-	1	212	211	3	4	-
Oreg.	40	20	-	-	88	100	5	2	-
Calif.	1,003	892	44	47	1,544	1,781	82	68	-
Alaska	-	-	-	-	47	43	-	-	-
Hawaii	2	8	-	1	59	126	1	5	-
Guam	-	6	-	-	-	61	-	-	-
P.R.	174	247	1	21	86	90	-	-	392
V.I.	1	1	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-

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

TABLE III. Deaths in 122 U.S. cities,* week ending November 8, 2003 (45th Week)

Reporting Area	All causes, by age (years)						P&I[†]
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	450	311	89	39	5	6	43
Boston, Mass.	132	82	30	16	3	1	12
Bridgeport, Conn.	28	19	7	2	-	-	2
Cambridge, Mass.	13	9	4	-	-	-	-
Fall River, Mass.	19	12	4	2	1	-	1
Hartford, Conn.	42	28	7	6	1	-	5
Lowell, Mass.	21	13	8	-	-	-	3
Lynn, Mass.	11	8	3	-	-	-	-
New Bedford, Mass.	29	21	4	1	-	3	3
New Haven, Conn.	U	U	U	U	U	U	U
Providence, R.I.	32	27	2	2	-	1	5
Somerville, Mass.	1	1	-	-	-	-	-
Springfield, Mass.	48	35	6	6	-	1	3
Waterbury, Conn.	32	26	5	1	-	-	1
Worcester, Mass.	42	30	9	3	-	-	8
MID. ATLANTIC	1,899	1,381	346	119	31	22	91
Albany, N.Y.	35	24	5	5	1	-	-
Allentown, Pa.	21	17	3	1	-	-	1
Buffalo, N.Y.	99	71	15	7	2	4	6
Camden, N.J.	16	8	5	3	-	-	2
Elizabeth, N.J.	18	12	3	2	1	-	-
Erie, Pa.	45	37	7	-	1	-	-
Jersey City, N.J.	30	24	4	1	1	-	-
New York City, N.Y.	800	578	154	50	9	9	27
Newark, N.J.	50	25	15	8	1	1	3
Paterson, N.J.	22	15	6	1	-	-	4
Philadelphia, Pa.	379	272	71	24	7	5	19
Pittsburgh, Pa.[§]	37	27	6	4	-	-	2
Reading, Pa.	30	26	3	1	-	-	1
Rochester, N.Y.	147	112	22	8	5	-	15
Schenectady, N.Y.	26	18	7	-	-	1	-
Scranton, Pa.	24	21	3	-	-	-	2
Syracuse, N.Y.	49	36	9	-	2	2	4
Trenton, N.J.	27	19	5	3	-	-	2
Utica, N.Y.	16	15	-	1	-	-	-
Yonkers, N.Y.	28	24	3	-	1	-	3
E.N. CENTRAL	1,322	917	268	87	26	24	74
Akron, Ohio	56	42	9	3	2	-	4
Canton, Ohio	33	25	5	3	-	-	4
Chicago, Ill.	U	U	U	U	U	U	U
Cincinnati, Ohio	78	54	17	6	-	1	5
Cleveland, Ohio	119	78	29	7	3	2	6
Columbus, Ohio	179	113	42	9	6	9	9
Dayton, Ohio	133	97	23	10	2	1	9
Detroit, Mich.	U	U	U	U	U	U	U
Evansville, Ind.	29	21	7	1	-	-	-
Fort Wayne, Ind.	52	35	12	4	-	1	4
Gary, Ind.	28	16	8	3	1	-	-
Grand Rapids, Mich.	56	40	9	4	1	2	5
Indianapolis, Ind.	158	106	35	9	4	4	8
Lansing, Mich.	45	37	6	2	-	-	5
Milwaukee, Wis.	103	68	22	9	1	3	7
Peoria, Ill.	U	U	U	U	U	U	U
Rockford, Ill.	35	25	7	2	1	-	1
South Bend, Ind.	48	39	6	3	-	-	3
Toledo, Ohio	100	69	18	9	3	1	3
Youngstown, Ohio	70	52	13	3	2	-	1
W.N. CENTRAL	545	367	119	30	18	11	27
Des Moines, Iowa	77	57	15	2	2	1	4
Duluth, Minn.	32	26	6	-	-	-	3
Kansas City, Kans.	33	18	9	2	2	2	3
Kansas City, Mo.	73	43	20	5	4	1	1
Lincoln, Nebr.	43	29	7	6	1	-	1
Minneapolis, Minn.	73	42	20	5	3	3	6
Omaha, Nebr.	71	53	12	2	2	2	6
St. Louis, Mo.	U	U	U	U	U	U	U
St. Paul, Minn.	50	38	8	2	2	-	-
Wichita, Kans.	93	61	22	6	2	2	3
S. ATLANTIC	1,181	768	257	87	40	29	62
Atlanta, Ga.	130	71	30	21	7	1	4
Baltimore, Md.	175	98	50	18	5	4	14
Charlotte, N.C.	106	60	31	6	3	6	7
Jacksonville, Fla.	135	93	24	8	7	3	6
Miami, Fla.	95	69	14	4	5	3	4
Norfolk, Va.	51	38	6	2	2	3	4
Richmond, Va.	68	46	17	3	-	2	4
Savannah, Ga.	51	40	8	1	1	1	4
St. Petersburg, Fla.	58	41	12	4	-	1	2
Tampa, Fla.	190	136	38	5	6	5	12
Washington, D.C.	100	62	22	12	4	-	-
Wilmington, Del.	22	14	5	3	-	-	1
E.S. CENTRAL	810	549	175	60	14	12	50
Birmingham, Ala.	172	120	35	15	2	-	15
Chattanooga, Tenn.	67	49	10	7	1	-	5
Knoxville, Tenn.	87	63	13	7	2	2	-
Lexington, Ky.	74	52	17	3	1	1	10
Memphis, Tenn.	139	100	27	9	1	2	9
Mobile, Ala.	61	39	15	2	2	3	1
Montgomery, Ala.	58	39	10	6	3	-	3
Nashville, Tenn.	152	87	48	11	2	4	7
W.S. CENTRAL	935	622	201	63	29	20	85
Austin, Tex.	78	49	18	5	2	4	5
Baton Rouge, La.	U	U	U	U	U	U	U
Corpus Christi, Tex.	65	45	13	6	1	-	4
Dallas, Tex.	185	110	44	16	7	8	15
El Paso, Tex.	81	51	19	9	2	-	6
Ft. Worth, Tex.	113	77	23	6	3	4	3
Houston, Tex.	U	U	U	U	U	U	U
Little Rock, Ark.	78	60	14	3	1	-	10
New Orleans, La.	40	24	10	-	6	-	-
San Antonio, Tex.	157	106	30	13	4	4	8
Shreveport, La.	42	29	12	1	-	-	2
Tulsa, Okla.	96	71	18	4	3	-	32
MOUNTAIN	858	595	157	63	22	20	51
Albuquerque, N.M.	102	71	21	8	-	2	5
Boise, Idaho	41	30	9	2	-	-	4
Colo. Springs, Colo.	70	53	9	4	4	-	2
Denver, Colo.	104	68	13	13	5	5	4
Las Vegas, Nev.	235	166	46	14	3	5	14
Ogden, Utah	37	29	6	1	1	-	5
Phoenix, Ariz.	U	U	U	U	U	U	U
Pueblo, Colo.	33	21	9	3	-	-	2
Salt Lake City, Utah	105	65	17	10	7	6	8
Tucson, Ariz.	131	92	27	8	2	2	7
PACIFIC	1,279	913	247	60	33	26	90
Berkeley, Calif.	15	13	2	-	-	-	3
Fresno, Calif.	69	41	15	12	1	-	4
Glendale, Calif.	14	12	2	-	-	-	2
Honolulu, Hawaii	64	53	5	3	2	1	6
Long Beach, Calif.	75	48	21	2	2	2	7
Los Angeles, Calif.	274	206	49	11	3	5	18
Pasadena, Calif.	23	17	4	1	-	1	1
Portland, Oreg.	131	97	24	3	5	2	6
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	172	120	32	11	7	2	13
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	170	125	30	7	4	4	16
Santa Cruz, Calif.	U	U	U	U	U	U	U
Seattle, Wash.	125	74	33	5	6	7	7
Spokane, Wash.	51	39	9	1	1	1	3
Tacoma, Wash.	96	68	21	4	2	1	4
TOTAL	9,279[¶]	6,423	1,859	608	218	170	573

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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