



Morbidity and Mortality Weekly Report

Weekly

April 14, 2006 / Vol. 55 / No. 14

Botulism from Home-Canned Bamboo Shoots — Nan Province, Thailand, March 2006

On March 15, 2006, multiple persons with symptoms of nausea, vomiting, abdominal pain, and dyspnea visited the emergency department at Baan Luang district hospital in Nan province, Thailand; one person required mechanical ventilation. A team from the Bureau of Epidemiology, Department of Disease Control, Thailand Ministry of Public Health (MOPH) initiated an investigation, in collaboration with the Surveillance and Rapid Response Team from Baan Luang district. This report summarizes the investigation conducted during March 15–26, which determined that the outbreak was caused by foodborne botulism from home-canned bamboo shoots and affected 163 rural villagers who shared a common meal. The last case was identified March 21; no further cases of foodborne botulism have been identified in the region.

On March 14, an annual religious rite was observed in Nawaimai village, Pakaluang subdistrict, Baan Luang district, Nan province. Villagers from Pakaluang and neighboring subdistricts joined the event. That day, several persons who attended the festival visited local health-care providers with symptoms of gastroenteritis. Personnel from the MOPH Field Epidemiology Training Program (FETP) were notified of a possible foodborne outbreak on March 15. Illnesses progressed to include bulbar muscle paralysis, with respiratory depression requiring ventilatory support in three patients, at which time a botulism outbreak was suspected. A quick door-to-door survey conducted by village volunteers identified 354 villagers who had attended the event, of whom 200 (56%) ate food served at the event.

A case was defined as one or more symptoms* of food poisoning in a person who attended the religious rite. Active case finding among health facilities and communities in the

*Abdominal pain, colicky pain, nausea, vomiting, diarrhea, headache, sweating, dry mouth, dysphagia, diplopia, ptosis, weakness of extremities, and dyspnea. affected districts was initiated; all provinces were asked to report patients with similar symptoms. During March 15–26, a total of 163 persons (82% of the 200 persons who ate at the festival) had illness consistent with the case definition. The median age of ill persons was 45 years (range: 13–75 years); 113 (69%) were female. The first patient had illness onset at 2:00 p.m. on March 14, and 87 (53%) patients had illness onset on March 15 (Figure 1). The last patient had illness onset on March 18.

Of the 163 persons with illness, 141 (86.5%) were admitted to area hospitals. All 141 hospitalized patients and 10 patients treated as outpatients were systematically queried about their symptoms (Figure 2). The majority of those patients experienced abdominal pain (116; 76.8%), dry mouth (76; 50.3%), and nausea (76; 50.3%); some had dysphagia (52; 37.7%), vomiting (53; 35.1%), diplopia (26; 17.2%), ptosis (16; 10.6%), and weakness of extremities (14; 9.3%). Forty-two (29.8%) of the hospitalized patients required mechanical ventilation.

INSIDE

- 392 Preliminary FoodNet Data on the Incidence of Infection with Pathogens Transmitted Commonly Through Food 10 States, United States, 2005
- 395 Multisite Outbreak of Norovirus Associated with a Franchise Restaurant — Kent County, Michigan, May 2005
- 398 Survey of Lymphocytic Choriomeningitis Virus Diagnosis and Testing Connecticut, 2005
- 400 Fusarium Keratitis Multiple States, 2006
- 401 Exposure to Mumps During Air Travel United States, April 2006
- 402 Update: Influenza Activity United States, March 26– April 1, 2006
- 405 QuickStats

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

SUGGESTED CITATION

Centers for Disease Control and Prevention. [Article title]. MMWR 2006;55:[inclusive page numbers].

Centers for Disease Control and Prevention

Julie L. Gerberding, MD, MPH

Director

Dixie E. Snider, MD, MPH Chief Science Officer

Tanja Popovic, MD, PhD Associate Director for Science

Coordinating Center for Health Information and Service

Steven L. Solomon, MD Director

National Center for Health Marketing

Jay M. Bernhardt, PhD, MPH Director

Division of Scientific Communications

Judith R. Aguilar (Acting) Director

Mary Lou Lindegren, MD *Editor*, MMWR *Series*

Suzanne M. Hewitt, MPA

Managing Editor, MMWR Series

Douglas W. Weatherwax (Acting) Lead Technical Writer-Editor

Stephanie M. Neitzel Jude C. Rutledge *Writers-Editors*

Lynda G. Cupell Malbea A. LaPete Visual Information Specialists

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

Notifiable Disease Morbidity and 122 Cities Mortality Data

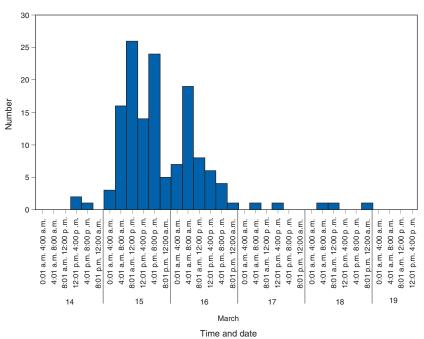
Patsy A. Hall Deborah A. Adams Lenee Blanton Rosaline Dhara Pearl C. Sharp

Local public health officials and FETP epidemiologists interviewed 145 of 200 persons who attended the festival by using a standard questionnaire to assess food consumed and possible illness. Food served at the religious rite included homecanned bamboo shoots eaten with chili and shrimp paste, wax gourds, chicken curry, sticky rice, water, and ice. Home-canned bamboo shoots were the only item eaten by 100% of affected persons, although bamboo shoots were routinely consumed with the chili and shrimp paste. The bamboo shoots had been produced locally by a women's group in the village. The shoots had been processed in 20-liter cans with approximately 13 kg of shoots per can. A total of 53 cans were produced during September 2005; 46 cans were sold during September 2005– February 2006, primarily in the district where they were made. No other recent reports of similar illness in the area occurred before this outbreak. The morning of the day of the festival, bamboo shoots from two cans had been combined, washed and sliced into pieces, and placed into plastic bags before being distributed at lunch. One food preparer reported that one of the two cans of bamboo shoots appeared turbid before mixing, but the bamboo shoots were not discarded.

On the basis of clinical manifestations of the patients and results of the epidemiologic investigation, the most probable cause of illness was botulinum toxin from *Clostridium botulinum*. Samples of the leftover canned bamboo shoots were cultured by the MOPH Department of Medical Sciences on March 20 and grew *C. botulinum* on March 24. On April 10, multiplex polymerase chain reaction identified toxin type A. Thai and CDC scientists are collaborating to test patient specimens, including serum, vomitus, and gastric fluid.

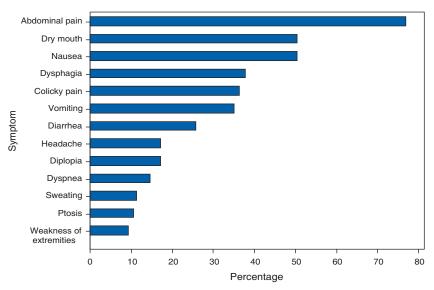
Because of the cluster of patients with symptoms consistent with botulism, the number of patients requiring mechanical ventilation, and the progression of disease in several villagers, MOPH requested assistance from international partners in obtaining botulism antitoxin; no local source of antitoxin was available. Twenty vials of heptavalent antitoxin (A–G) were provided by the United Kingdom Department of Health with assistance from the World Health Organization, 50 vials of bivalent antitoxin (A, B) were donated by CDC, and 23 vials of trivalent antitoxin (A, B, E) were donated by the National Institute of Infectious Diseases in Japan. Thailand purchased an additional 10 vials of bivalent antitoxin (A, B) from a Canadian company. Antitoxin was administered to patients with the most severe symptoms; 70 vials were administered on March 19 and 20, and the last of the 93 vials used was administered on March 23. Although published data suggest that antitoxin is most effective if administered within the first 24 hours of illness onset (1), botulism antitoxin was administered to patients later in the course of illness to halt the progression of paralysis and potentially shorten the duration of

FIGURE 1. Epidemic curve of botulism outbreak, by time and date of symptom onset* — Nan province, Thailand, March 2006



^{*}Among patients for whom data regarding time of symptom onset were available (n = 145).

FIGURE 2. Percentage of patients* with symptoms of food poisoning caused by botulism, by symptom — Nan province, Thailand, March 2006



^{*}Includes 141 hospitalized patients and 10 persons treated as outpatients who were queried about their symptoms (n = 151).

illness. A study to assess the short- and long-term outcomes of a subset of patients is under way.

On March 21, a team of critical care specialists (pulmonologists, a neurologist, and a toxicologist) from Bangkok traveled to Nan province to assess the respiratory care capabilities in the province. Because patients with severe botulism might remain on a ventilator for a month or longer requiring round-the-clock care, 26 patients were transferred on March 22 by the Thai Air Force to neighboring provincial hospitals and to tertiary care hospitals in Bangkok for long-term respiratory care. As of April 10, a total of 25 patients remained hospitalized, and 9 (36%) were still on respirators; no patients had died.

Reported by: Surveillance and Rapid Response Teams from Baan Luang district and Nan Provincial Health Office; Nan Provincial Hospital; Office of Disease Prevention and Control 10, Dept of Disease Control (DDC), Ministry of Public Health (MOPH), Chiang Mai; Field Epidemiology Training Program, Bur of Epidemiology, DDC, MOPH; Thailand MOPH–U.S. CDC Collaboration; World Health Organization representative to Thailand, Nonthaburi, Thailand. Div of Foodborne, Bacterial and Mycotic Diseases, National Center for Zoonotic, Vector-Borne and Enteric Diseases, CDC.

Editorial Note: In 1998, a smaller outbreak of botulism associated with home-canned bamboo shoots was reported in the same Thai province (2). Recommendations for home-canned food production were disseminated widely to all provinces. However, this recurrence 8 years later indicates the importance of long-term follow up and continuous inspection and assurance of the quality of food canning.

As a result of this investigation, MOPH recommended increasing control of home-canned food production in all provinces and strengthening surveillance for foodborne botulism. The provincial government prohibited sale of all left-over cans and advised the population to buy only Thai Food and Drug Administration—approved, commercially canned food products, to boil home-canned bamboo shoots for 10 minutes before eating, and to discard cans with defects (e.g., dents, swelling, discoloration, rust, or foul

smell). Warnings about the outbreak were issued through local radio stations and the Internet, with educational messages about proper preparation of bamboo shoots for home canning. On March 20, health officials collected 21 leftover cans and approximately 550 plastic bags of bamboo shoots from three producers in Baan Luang district. In addition, provincial health officials are strengthening surveillance activities for botulism; a notice was sent to all hospitals and district health centers to urge clinicians and public health professionals to report any persons with signs or symptoms consistent with botulism. Local health authorities will continue to monitor persons who ate the shared meal until all signs of associated illness have resolved.

The current outbreak tested the rapid response capabilities of several countries. Surveillance and Rapid Response Teams in Thailand, who are trained to detect and respond to public health emergencies, were rapidly deployed. A quick assessment identified a large foodborne outbreak, with no malicious intent suspected (3). In addition, the World Health Organization and CDC rapidly identified and procured sources of antitoxin. This outbreak response highlights the importance of communication and collaboration between local health authorities and international health agencies.

References

- 1. Sobel J. Botulism. Clin Infect Dis 2005;41:1167-73.
- 2. CDC. Foodborne botulism associated with home-canned bamboo shoots—Thailand, 1998. MMWR 1999;48:437–9.
- Arnon S, Schechter R, Inglesby TV, et al. Botulinum toxin as a biological weapon: medical and public health management. JAMA 2001;285:1059-70.

Preliminary FoodNet Data on the Incidence of Infection with Pathogens Transmitted Commonly Through Food — 10 States, United States, 2005

Foodborne illnesses are a substantial health burden in the United States (1). The Foodborne Diseases Active Surveillance Network (FoodNet) of CDC's Emerging Infections Program collects data from 10 U.S. states* regarding diseases caused by enteric pathogens transmitted commonly through food. FoodNet quantifies and monitors the incidence of these infections by conducting active, population-based surveillance for laboratory-confirmed illness (2). This report describes preliminary surveillance data for 2005 and compares them with

baseline data from the period 1996–1998. Incidence of infections caused by *Campylobacter*, *Listeria*, *Salmonella*, Shiga toxin–producing *Escherichia coli* O157 (STEC O157), *Shigella*, and *Yersinia* has declined, and *Campylobacter* and *Listeria* incidence are approaching levels targeted by national health objectives (3) (Table). However, most of those declines occurred before 2005, and *Vibrio* infections have increased, indicating that further measures are needed to prevent foodborne illness.

In 1996, FoodNet began active, population-based surveillance for laboratory-confirmed cases of infection from *Campylobacter, Listeria, Salmonella*, STEC O157, *Shigella, Vibrio*, and *Yersinia*. In 1997, FoodNet added surveillance for cases of *Cryptosporidium* and *Cyclospora* infection. In 2000, FoodNet began collecting data on STEC non-O157 and comprehensive information on hemolytic uremic syndrome (HUS). FoodNet personnel ascertain cases through contact with all clinical laboratories in their surveillance areas. HUS surveillance is conducted through a network of pediatric nephrologists and infection-control practitioners. In addition, eight states review hospital discharge data to ascertain HUS cases. Because of the time required for review of hospital records, this report contains preliminary 2004 HUS data.

During 1996–2005, the FoodNet surveillance population increased from 14.2 million persons (5% of the U.S. population) in five states to 44.5 million persons (15% of the U.S. population) in 10 states. Preliminary incidence for 2005 was calculated using the number of laboratory-confirmed infections and dividing by 2004 population estimates. Final incidence for 2005 will be reported when 2005 population estimates are available from the U.S. Census Bureau.

2005 Surveillance

In 2005, a total of 16,614 laboratory-confirmed cases of infections in FoodNet surveillance areas were identified, as follows: Salmonella (6,471 cases), Campylobacter (5,655), Shigella (2,078), Cryptosporidium (1,313), STEC O157 (473), Yersinia (159), STEC non-O157 (146), Listeria (135), Vibrio (119), and Cyclospora (65). Overall incidence per 100,000 population was 14.55 for Salmonella, 12.72 for Campylobacter, 4.67 for Shigella, 2.95 for Cryptosporidium, 1.06 for STEC O157, 0.36 for Yersinia, 0.33 for STEC non-O157, 0.30 for Listeria, 0.27 for Vibrio, and 0.15 for Cyclospora. Substantial variation occurred across surveillance sites (Table). In 2004, FoodNet identified 44 cases of HUS in children aged <15 years (rate: 0.49 per 100,000 children); 30 (68%) of these cases occurred in children aged <5 years (rate: 0.94).

^{*} Connecticut, Georgia, Maryland, Minnesota, New Mexico, Oregon, Tennessee, and selected counties in California, Colorado, and New York.

TABLE. Incidence* of cases of bacterial and parasitic infection and postdiarrheal hemolytic uremic syndrome (HUS), by site and pathogen, compared with national health objectives[†] — Foodborne Diseases Active Surveillance Network, United States, 2005[§]

Pathogen	California	Colorado	Connectic	ut Georgia	Maryland	d Minnesota	New Mexico	New York	Oregon	Tennessee	Overall 2005	National health objective [†]
Bacteria												
Campylobacter	27.96	19.37	15.47	6.52	7.23	16.51	18.28	11.70	17.69	6.98	12.72	12.30
Listeria	0.31	0.08	0.57	0.28	0.34	0.29	0.21	0.42	0.31	0.19	0.30	0.25
Salmonella	13.99	13.30	13.36	21.75	14.14	11.33	13.45	11.29	10.46	13.74	14.55	6.80
Shigella	8.70	3.95	1.66	7.48	1.78	1.90	6.94	1.53	2.36	8.49	4.67	N/A [¶]
STEC** O157	0.87	1.02	1.23	0.39	0.47	2.35	0.53	1.71	1.84	0.78	1.06	1.00
STEC non-O157	7 0.16	0.12	0.57	0.09	0.68	0.80	0.53	0.25	0.22	0.03	0.33	N/A
Vibrio	0.69	0.31	0.34	0.24	0.49	0.12	0.05	0.19	0.25	0.08	0.27	N/A
Yersinia	0.87	0.27	0.43	0.29	0.13	0.35	0.11	0.51	0.45	0.31	0.36	N/A
Parasites												
Cryptosporidiun	1.43	0.94	2.34	1.64	0.61	3.22	1.05	16.38	1.34	0.73	2.95	N/A
Cyclospora	0.06	0.00	1.00	0.15	0.05	0.00	0.21	0.02	0.11	0.05	0.15	N/A
HUS ^{††}	0.94	1.02	0.47	0.44	0.80	1.51	0.00	0.83	1.33	2.34	0.94§	0.9
Surveillance												
population (milli	ons) 3.21	2.56	3.50	8.83	5.56	5.10	1.90	4.32	3.59	5.90	44.47	

^{*} Per 100,000 population.

Of the 5,869 (91%) Salmonella isolates serotyped, six serotypes accounted for 61% of infections, as follows: Typhimurium, 1,139 (19%); Enteritidis, 1,080 (18%); Newport, 560 (10%); Heidelberg, 367 (6%); Javiana, 304 (5%); and a monophasic serotype identified as Salmonella I 4,[5],12:i:-, 154 (3%). Among 109 (92%) Vibrio isolates identified to species level, 59 (54%) were V. parahaemolyticus, and 15 (14%) were V. vulnificus. FoodNet also collected data on 145 STEC non-O157 isolates that were tested for O-antigen determination; 117 (81%) had an identifiable O antigen, including O26 (37 [32%]), O103 (36 [31%]), and O111 (23 [20%]); 28 isolates did not react with the typing antisera used.

In 2005, FoodNet sites reported 205 foodborne disease outbreaks to the national Electronic Foodborne Outbreak Reporting System; 121 (59%) were associated with restaurants. Etiology was reported for 159 (78%) outbreaks; the most common etiologies were norovirus (49%) and Salmonella (18%).

Comparison of 2005 Data with 1996–1998

A main-effects, log-linear Poisson regression model (negative binomial) was used to estimate statistically significant changes in the incidence of pathogens. This model accounts for the increase in the number of FoodNet sites and its surveillance population since 1996 and for variation in the incidence of infections among sites (2). The average annual incidence for 1996–1998 (1997–1998 for *Cryptosporidium*), the first 3 years of FoodNet surveillance, was used as the

baseline period. For HUS surveillance, 2000–2001 was used as the baseline. The estimated change in incidence (relative rate) between the baseline period and 2005 was calculated, along with a 95% confidence interval (CI).

The estimated annual incidence of several infections declined significantly from 1996-1998 to 2005 (Figure 1). The estimated incidence of infection with Yersinia decreased 49% (CI = 36%–59%), *Shigella* decreased 43% (CI = 18%–60%), Listeria decreased 32% (CI = 16%-45%), Campylobacter decreased 30% (CI = 25%-35%), STEC O157 decreased 29% (CI = 12%-42%), and Salmonella decreased 9% (CI = 2%-15%). Although Salmonella incidence decreased overall, of the five most common Salmonella serotypes, only the incidence of S. Typhimurium decreased significantly (42% [CI = 34%– 48%]). The estimated incidence of S. Enteritidis increased 25% (CI = 1%-55%), S. Heidelberg increased 25% (CI = 1%-54%) and S. Javiana increased 82% (CI = 14%-191%). The estimated incidence of S. Newport increased compared with the baseline, but the increase was not statistically significant (Figure 2). The estimated incidence of postdiarrheal HUS in children aged <5 years decreased 45% in 2004 compared with 2000–2001; whether this trend is significant could not be determined, partly because the limited time span does not provide enough data to evaluate a Poisson regression model. The estimated incidence of *Vibrio* increased 41% (CI = 3%– 92%) compared with the baseline, whereas the estimated incidence of Cryptosporidium infections did not change significantly.

[†] Healthy People 2010 objectives for incidence of Campylobacter, Salmonella, and Shiga toxin–producing Escherichia coli O157 infections for year 2010 and for incidence of Listeria infections for year 2005.

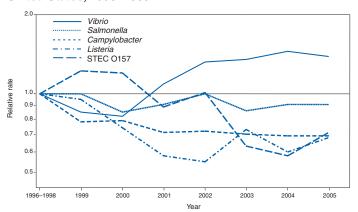
^{§ 2004} data reported for HUS incidence.

[¶] Not applicable because no national health objective exists regarding infection with this pathogen.

^{**} Shiga toxin-producing Escherichia coli.

^{††} Incidence rate of postdiarrheal HUS in children aged <5 years; rate calculation is based on surveillance population aged <5 years.

FIGURE 1. Relative rates compared with 1996–1998 baseline period of laboratory-diagnosed cases of infection with *Campylobacter*, STEC* O157, *Listeria*, *Salmonella*, and *Vibrio*, by year — Foodborne Diseases Active Surveillance Network, United States, 1996–2005

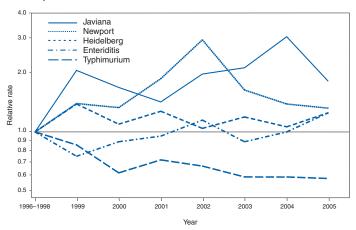


^{*} Shiga toxin-producing Escherichia coli.

Reported by: D Vugia, MD, California Dept of Health Svcs. A Cronquist, MPH, Colorado Dept of Public Health and Environment. J Hadler, MD, Connecticut Dept of Public Health. M Tobin-D'Angelo, MD, Div of Public Health, Georgia Dept of Human Resources. D Blythe, MD, Maryland Dept of Health and Mental Hygiene. K Smith, DVM, Minnesota Dept of Health. K Thornton, MD, Institute for Public Health, Univ of New Mexico Health Sciences Center, Albuquerque. D Morse, MD, New York State Dept of Health. P Cieslak, MD, Oregon State Public Health. T Jones, MD, Tennessee Dept of Health. K Holt, DVM, Food Safety and Inspection Svc, US Dept of Agriculture. J Guzewich, MPH, Center for Food Safety and Applied Nutrition, Food and Drug Admin. O Henao, PhD, E Scallan, PhD, F Angulo, DVM, P Griffin, MD, R Tauxe, MD, Div of Foodborne, Bacterial and Mycotic Diseases, National Center for Zoonotic, Vector-Borne and Enteric Diseases; E Barzilay, MD, EIS Officer, CDC.

Editorial Note: In 2005, compared with the 1996-1998 baseline period, significant declines occurred in the estimated incidence of Campylobacter, Listeria, Salmonella, Shigella, STEC O157, and Yersinia infections. Several important food safety initiatives (1) might have contributed to the declines, indicating progress toward meeting the national health objectives (Table) (3). However, most progress occurred before 2005. Most of the decline in Campylobacter incidence occurred by 2001, with continued small decreases since then. The incidence of Listeria infections in 2005 is higher than its lowest point in 2002. Of the five most common Salmonella serotypes, only Typhimurium has declined, with most of the decline occurring by 2001. Most of the decline in STEC O157 incidence occurred during 2003 and 2004. The observed sustained increase in Vibrio incidence indicates that additional efforts are needed to prevent Vibrio infections. Oysters are the most important source of human Vibrio infections, and most

FIGURE 2. Relative rates compared with 1996–1998 baseline period of laboratory-diagnosed cases of infection with the five most commonly isolated *Salmonella* serotypes, by year — Foodborne Diseases Active Surveillance Network, United States, 1996–2005



human infections can be prevented by not eating raw or undercooked oysters. Measures that reduce *Vibrio* contamination of oysters also prevent illness.

Food animals are the most important source of human Salmonella infections. Transmission of Salmonella to humans can occur via various food vehicles, including eggs, meat, poultry, and produce, and via direct contact with animals and their environments. Testing by the U.S. Department of Agriculture, Food Safety and Inspection Service (FSIS) at slaughter and processing plants has demonstrated declines in Salmonella contamination of ground beef since 1998 (4). However FSIS recently announced a sustained increase in chickenbroiler carcasses testing positive for Salmonella during 2002-2005 and subsequently launched an initiative to reduce Salmonella in raw meat and poultry products (4,5). Although sources of infection with the most common Salmonella serotypes have been identified (e.g., food animals), further investigation is needed to identify sources for emerging Salmonella serotypes, such as Javiana and I 4,[5],12:i:-, a monophasic serotype that resembles S. Typhimurium except that it has no phase 2 flagellar antigen and has previously been misclassified as Group B Salmonella or S. Typhimurium (6).

Large outbreaks with multiple laboratory-confirmed cases can distort underlying trends in incidence. For example, the incidence of *Cryptosporidium* infections increased substantially from 2004 to 2005 because of a large outbreak associated with visits to a recreational water park in New York (P Smith, MD, New York State Department of Health, personal communication, 2006).

The findings in this report are subject to at least four limitations. First, FoodNet relies on laboratory diagnoses, but

many foodborne illnesses are not diagnosed by clinical laboratories. Second, protocols for isolation of certain enteric pathogens (e.g., STEC non-O157) in clinical laboratories vary and are not uniform within and among FoodNet sites (7); others (e.g., norovirus) cannot readily be identified by clinical laboratories. Third, reported illnesses might have been acquired through nonfoodborne sources, and reported incidence rates do not reflect foodborne transmission exclusively. Finally, although the FoodNet surveillance population is similar to the U.S. population (2), the findings might not be generalizable to the entire U.S. population.

Much remains to be done to reach the national health objectives for foodborne illnesses. Enhanced measures are needed to understand and control pathogens in animals and plants, to reduce or prevent contamination during processing, and to educate consumers about risks and prevention measures. Such measures can be particularly focused when the source of human infections (i.e., animal reservoir species and transmission route) are known. The declines in the incidence of STEC O157 infections observed in recent years suggest that coordinated efforts by regulators and industry have been effective in reducing contamination and illness related to ground beef (8,9).

Consumers can reduce their risk for foodborne illness by following safe food-handling recommendations and by avoiding consumption of unpasteurized milk and unpasteurized milk products, raw or undercooked oysters, raw or undercooked eggs, raw or undercooked ground beef, and undercooked poultry (additional information on food safety for consumers is available at http://www.fightbac.org). Other effective prevention measures, such as pasteurization of in-shell eggs, irradiation of ground meat, and pressure treatment of oysters, can also decrease the risk for foodborne illness.

References

- 1. Allos BM, Moore MR, Griffin PM, Tauxe RV. Surveillance for sporadic foodborne disease in the 21st century: the FoodNet perspective. Clin Infect Dis 2004;38(Suppl 3):S115–20.
- 2. Hardnett FP, Hoekstra RM, Kennedy M, Charles L, Angulo FJ; Emerging Infections Program FoodNet Working Group. Epidemiologic issues in study design and data analysis related to FoodNet activities. Clin Infect Dis 2004;38(Suppl 3):S121–6.
- US Department of Health and Human Services. Healthy people 2010 (conference ed, in 2 vols). Washington, DC: US Department of Health and Human Services; 2000.
- 4. US Department of Agriculture, Food Safety and Inspection Service. Progress report on Salmonella testing of raw meat and poultry products, 1998–2005. Washington, DC: US Department of Agriculture; 2006. Available at http://www.fsis.usda.gov/science/progress_report_salmonella_testing/index.asp.
- US Department of Agriculture, Food Safety and Inspection Service. Salmonella verification sample result reporting: agency policy and use in public health protection. Fed Regist 2006;71:9772–7. Available at http://www.fsis.usda.gov/OPPDE/rdad/FRPubs/04-026N.pdf.

- Agasan A, Kornblum J, Williams G, et al. Profile of Salmonella enterica subsp. enterica (subspecies I) serotype 4,5,12:i:- strains causing foodborne infections in New York City. J Clin Microbiol 2002;40:1924

 –9.
- 7. Voetsch AC, Angulo FJ, Rabatsky-Ehr T, et al. Laboratory practices for stool-specimen culture for bacterial pathogens, including *Escherichia coli* O157:H7, in the FoodNet sites, 1995–2000. Clin Infect Dis 2004;38(Suppl 3):S190–7.
- Naugle AL, Holt KG, Levine P, Eckel R. Food Safety and Inspection Service regulatory testing program for *Escherichia coli* O157:H7 in raw ground beef. J Food Prot 2005;68:462–8.
- 9. Naugle AL, Holt KG, Levine P, Eckel R. Sustained decrease in the rate of *Escherichia coli* O157:H7-positive raw ground beef samples tested by the Food Safety and Inspection Service. J Food Prot 2006;69:480–1.

Multisite Outbreak of Norovirus Associated with a Franchise Restaurant — Kent County, Michigan, May 2005

The majority of cases of foodborne gastroenteritis in the United States are caused by noroviruses (1). This report summarizes an investigation by the Kent County Health Department (KCHD) in Michigan into three norovirus outbreaks and a cluster of community cases that were associated with a national submarine sandwich franchise restaurant during May 3–9, 2005. The investigation identified a potential source, a food handler who had returned to work within a few hours of having symptoms of gastrointestinal illness while he was still excreting norovirus in his stools. To prevent norovirus outbreaks, food service workers should be educated regarding norovirus transmission and control. In 2005, new guidelines for state health departments regarding norovirus containment were published by the Food and Drug Administration (FDA) (2); guidelines for local health departments in Michigan were issued by the state's Department of Community Health and Department of Agriculture (3). The new guidelines for Michigan recommend that food service workers with suspected norovirus not return to work until they are asymptomatic for 48-72 hours.

Norovirus Cases

Outbreak 1. On May 5, the KCHD was notified of a gastroenteritis outbreak among employees who had attended a school staff luncheon on May 3. Staff members were served a party-sized submarine sandwich catered by a national franchise restaurant. A case was defined as illness in a person who ate the suspect meal during May 3–8 and became ill 8–56 hours later with vomiting or diarrhea and two of the following: fever (documented), abdominal cramps, or nausea. A total of 23 (80%) of 29 school staff members reported illness.

Among the 23, predominant symptoms were diarrhea (87%) and vomiting (74%). Of the six stool specimens collected, all tested positive for norovirus by polymerase chain reaction (PCR). A retrospective cohort study was conducted, and exposures to 26 food items were analyzed. Twenty-two of 23 ill persons reported eating lettuce; however, no specific food item was significantly associated with illness.

Outbreak 2. On May 6, KCHD was notified of a gastroenteritis outbreak at a publishing company staff luncheon that had occurred on May 5. Party-sized submarine sandwiches were served by the same restaurant that catered the luncheon in outbreak 1. Among 95 persons who could be interviewed and who ate the suspect meal, 55 (58%) had become ill. Predominant symptoms were diarrhea (94%) and vomiting (83%). Because the entire cohort of exposed persons could not be interviewed, a case-control study was conducted, and exposures to 16 food items were analyzed. Results indicated that eating lettuce was significantly associated with illness (odds ratio [OR] = 11.24; 95% confidence interval [CI] = 1.30-95.2). Fifty-three of 54 ill persons who responded to the question reported eating lettuce. Two other food items were significantly associated with illness: jalapeno peppers (OR = 3.45; CI = 1.04-11.40) and onions (OR = 3.09;CI = 1.27-7.80). Fifteen of 52 ill persons for whom data were available reported eating jalapenos, and 21 of 50 reported eating onions. Of two stool specimens that were tested during this outbreak, one was positive by PCR for norovirus. The owner of the restaurant was contacted, and a log of other catered events was requested.

Outbreak 3. On May 6, KCHD learned of another outbreak through inquiries to groups identified in the same restaurant's catered event log. A social service organization that held a luncheon on May 4 reported that employees became sick after eating a party-sized submarine sandwich. Of 18 persons who attended the luncheon, nine (50%) became ill and met the case definition. Predominant symptoms were vomiting and diarrhea (both 78%). A cohort study was conducted, but no specific food item was significantly associated with illness. Norovirus was detected by PCR in both of the two stool specimens tested.

Community cases. Reports from the community identified an additional 28 persons with illness onset dates of May 4–9, including 25 (90%) who reported being ill after eating sandwiches from the same franchise restaurant that catered the events in the three outbreaks. Major symptoms included diarrhea (92%) and vomiting (80%). A case-control study was conducted, but no specific food item was associated with illness. All three stool specimens tested were positive by PCR for norovirus.

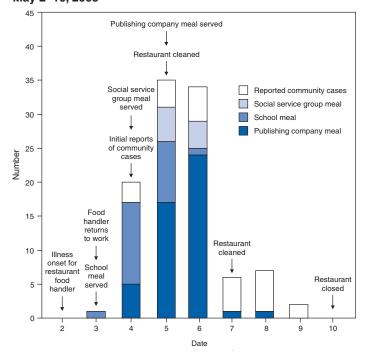
Epidemiologic and Laboratory Investigation

The three outbreaks and community cases all appeared to have been linked to sandwiches prepared by the same restaurant (Figure). Sequence analysis was performed on 21 stool specimens from the three outbreaks. Results demonstrated 100% sequence homology for the 21 specimens.

Investigators learned that a food handler employed by the restaurant had vomiting and diarrhea on May 2. The food handler believed he had acquired illness from his child, who had vomited on May 1. The child's illness was traced to an ill cousin who had been exposed to norovirus at a child care center. The food handler's vomiting ended by the early morning of May 3, and he returned to work at the restaurant later that morning. A stool specimen from the food handler was collected on May 10 and tested positive by PCR for norovirus on May 16. Sequence analysis was performed on strains from the food handler and eight customers who had illness consistent with the case definition. All nine matched the strains identified in the previous outbreaks.

An environmental health inspection on May 6 revealed that the restaurant had been thoroughly cleaned on May 5 in advance of a visit by corporate supervisors on May 6. During the inspection, investigators learned that the food prepara-

FIGURE. Number* of cases of norovirus infection associated with meals served by a national franchise restaurant, by setting and date of illness onset — Kent County, Michigan, May 2–10, 2005



^{*} N = 170.

tion sink was being used for hand washing; a copy of the Michigan guidelines for disinfection of norovirus (3) was provided to the restaurant owner. The restaurant again was cleaned on May 7. On May 10, after the health department received new complaints of illness from the public, the health department recommended that the restaurant be closed temporarily, and the restaurant owner complied.

On May 16, a meeting was held with members of the health department staff and the food handler who had tested positive for norovirus. Because of the association with eating lettuce in outbreak 2, questions were asked about lettuce-handling procedures. Investigators learned that lettuce was sliced each morning by the food handler who had been ill. In addition, heads of lettuce were washed in the same sink in which employees washed their hands; the sink was not sanitized before and after the lettuce was washed. On May 17, a professional cleaning company was hired to clean the restaurant, and it was reopened the next day. No further cases of illness were reported as of May 18.

Reported by: J Kettlehut Payne, MPH, M Hall, MD, M Lutzke, MPH, C Armstrong, J King, Kent County Health Dept, Grand Rapids, Michigan.

Editorial Note: The outbreak investigation described in this report underscores the challenges associated with preventing norovirus transmission. Small restaurants might have difficulty operating when an employee is absent and might not be able to afford paying leave for illness. However, employees who become ill and continue to work can place the public's health at risk.

The results of these investigations suggest that the illness of one food handler might have been linked to the illnesses of at least 100 persons in multiple settings. Illnesses at a publishing company, school, social service group, and among members of the public resulted in closure of a warehouse, employee absences, pay for substitute teachers, loss of wages, and loss of revenue to the restaurant during a week-long closure.

These outbreaks demonstrate a general lack of education regarding norovirus. Restaurant owners in Michigan are required to review the state food code; however, no free training was offered to them to interpret this lengthy legal document. To facilitate education, online training programs for food handlers and managers are being developed by Kent County public health sanitarians.

Previously, no work exclusion requirements in the Michigan food code specifically targeted norovirus. An employee was required to report *Salmonella*, *Shigella*, *Escherichia coli* 0157:H7, and hepatitis A infections or illnesses such as diarrhea, vomiting, fever, jaundice, or sore throat with fever. Employees were required to provide written medical

documentation that they were free from the four specified infectious agents via stool testing (3); no such requirement existed for norovirus. However, the 2005 FDA Food Code included norovirus containment recommendations for states requiring food service employees to be excluded from work if symptomatic with vomiting or diarrhea and, if they have been ill with suspected norovirus, not to return to work until they have been asymptomatic for 24 hours (2). In one study, viral shedding began approximately 15 hours after exposure to norovirus and peaked 25–72 hours after exposure (4). However, in this outbreak, one specimen tested positive for norovirus 14 days after exposure. The new Michigan guidelines, issued in 2005, recommend that employees who have been ill with suspected norovirus not return to work for 48–72 hours after symptoms have ended.

Specific education on norovirus containment for food handlers should be provided, even when not documented in a state food code. The Michigan guidelines offer recommendations for cleaning and disinfection that are based on recent studies and go beyond previous guidelines (5), indicating the concentration of bleach required for cleaning various porous and nonporous surfaces. The Michigan guidelines also supply a list of other effective and ineffective disinfectants. The restaurant described in this report was not cleaned appropriately until after it had been closed for nearly 1 week. Whether containment of norovirus resulted from the final restaurant cleaning or whether the virus was no longer viable could not be determined and offers an opportunity for future study.

Acknowledgments

This report is based, in part, on data provided by D Kraker, A Kramer, S Green, D Smith, Kent County Health Dept; and JP Massey, PhD, Michigan Dept of Community Health.

References

- 1. CDC. Preliminary FoodNet data on the incidence of infection with pathogens transmitted commonly through food—10 sites, United States, 2004. MMWR 2005;54:352–6.
- 2. Food and Drug Administration. 2005 food code. College Park, MD: US Department of Health and Human Services, Food and Drug Administration; 2005. Available at http://www.cfsan.fda.gov/~dms/fc05-toc.html.
- 3. Michigan Department of Community Health, Michigan Department of Agriculture. Local health department guidelines for environmental cleaning and disinfection of norovirus. Lansing, MI: Michigan Department of Community Health, Michigan Department of Agriculture; 2005. Available at http://www.michigan.gov/documents/Guidelines_for_Environmental_Cleaning_125846_7.pdf.
- Graham DY, Jiang X, Tanaka T, Opekun AR, Madore HP, Estes MK. Norwalk virus infection of volunteers: new insights based on improved assays. J Infect Dis 1994;170:34

 –43.
- 5. Food and Drug Administration. 1999 food code. Washington, DC: US Department of Health and Human Services, Food and Drug Administration; 1999. Available at http://www.cfsan.fda.gov/~dms/fc99-toc.html.

Survey of Lymphocytic Choriomeningitis Virus Diagnosis and Testing — Connecticut, 2005

Lymphocytic choriomeningitis virus (LCMV) is a rodentborne virus that can be transmitted to humans through exposure to rodent urine, feces, saliva, or blood. LCMV infection is often asymptomatic or mild but can cause aseptic meningitis, encephalitis, life-threatening infections in immunosuppressed persons, and severe congenital defects (1,2). In May 2005, LCMV was implicated in the deaths of three organtransplant recipients who had received organs from a common donor who had likely been infected from a pet rodent (3). In August 2005, the Connecticut Department of Public Health conducted surveys of hospital laboratories and infectious disease (ID) physicians in Connecticut to determine recent incidence of confirmed LCMV infection, the level of awareness of LCMV, and the frequency of LCMV testing. This report summarizes the results of those surveys, which indicate that awareness of LCMV is high among ID physicians; however, testing for LCMV is infrequent, and ID physicians might not be aware of the need to consider LCMV among the most susceptible populations even when a history of rodent contact is not initially evident. In part because of these findings, LCMV infection is now a physician- and laboratory-reportable disease in Connecticut. More systematic efforts are needed to determine the frequency of LCMV infection and to monitor for pet rodent infection.

All acute care hospital laboratories in Connecticut were surveyed by telephone and asked 1) whether LCMV testing is available on site, 2) whether specimens are sent to another laboratory for testing, 3) which tests are offered to detect the virus, 4) the number of test requests made during the preceding 5 years, and 5) the results of testing. A second survey of a group of sentinel ID physicians in the state was performed via e-mail. This group consists of mostly hospital-based ID physicians who regularly receive information via e-mail from the Connecticut Department of Public Health through the Connecticut Health Alert Network. They were asked how often in the preceding 5 years they had considered a diagnosis of LCMV and tested for the virus. They were also asked if they would consider LCMV in the differential diagnosis of ill patients described in specific epidemiologic and clinical scenarios. Physicians were sent a second e-mail message if they did not return the survey within a few weeks of the initial request.

Of the 30 acute care hospital laboratories in Connecticut, none perform LCMV testing on site; 29 (97%) reported referring samples to either the state public health laboratory or another referral laboratory. During the preceding 5 years, two laboratories received requests. Only the state laboratory and one other referral laboratory performed LCMV testing for Connecticut hospitals. Testing was performed on approximately 29 serum or cerebrospinal fluid (CSF) samples using a complement fixation test at the state public health laboratory and one CSF sample using an immunoflorescent antibody assay at another referral laboratory; none were positive.

Among the 35 ID physicians contacted, 28 (80%) responded to the e-mail questionnaire. Among the respondents, 17 (61%) reported considering a diagnosis of LCMV during the preceding 5 years; of these, nine (53%) ordered a test. None confirmed a diagnosis of LCMV. Among the 24 physicians who answered questions based on the scenarios, most would consider LCMV in the differential diagnosis among patients exposed to wild mice (92%), healthy pet rodents (96%), or sick pet rodents (96%). However, only six (25%) would consider LCMV in an immunocompromised patient with an unexplained febrile illness and no known exposure history.

Reported by: JL Hadler, MD, R Nelson, DVM, P Mshar, MPH, Connecticut Dept of Public Health. LE Sosa, MD, EIS Officer, CDC.

Editorial Note: Outbreaks of LCMV in humans were first reported in the 1960s. Initial reports documented disease mostly in laboratory personnel working with mice and hamsters (4). The largest outbreak of LCMV occurred in 1973-1974 and resulted in 181 human cases in 12 states; this outbreak was associated with pet hamsters supplied by a single distributor (4). The likely source of LCMV in a transplantassociated outbreak in May 2005 was also determined to be a pet hamster (3). Although the wild house mouse (Mus musculus) is the natural reservoir for the virus, hamsters and other pet rodents can acquire the virus through exposure to infected mice and become an important source of human exposure. Given the association of recent outbreaks with pet rodents, control and monitoring of LCMV among rodent populations in breeding and retail facilities is needed. Until this can be achieved by the pet industry, other measures (e.g., human surveillance) need to be instituted to monitor for pet rodent infection and to minimize transmission of LCMV to humans.

The current incidence of clinically significant LCMV infection among humans is unknown. Two separate studies have demonstrated the prevalence of LCMV-specific antibodies in urban human populations exposed to wild rodents to range

from 1% to 5% (5,6). During a 1974 outbreak in New York associated with pet hamsters, enhanced case finding identified 60 persons with serologically confirmed LCMV, 12 (20%) of whom had severe central nervous system disease (e.g., meningitis or meningoencephalitis) (2). Given these reports, morbidity associated with LCMV infections might be substantially higher than generally believed, and even severe LCMV infection is likely underdiagnosed, as evidenced by the infrequent testing for LCMV detailed in these surveys. Based in part on the findings in this report, beginning in 2006, LCMV infection became health-care provider and laboratory reportable in Connecticut, with supportive diagnostic testing offered at no charge by the state laboratory. The objectives of this reporting are to 1) ensure that patients with suspect cases, especially those with pet rodent exposure, get optimum testing for LCMV infection, 2) determine the epidemiology of and trends in LCMV infection, and 3) raise physician awareness. Optimum serologic testing includes paired acute and convalescent serum specimens, the latter obtained approximately 21 days after symptom onset.

The findings in this report suggest that hospital-based ID physicians in Connecticut are aware of the association of LCMV with exposure to mice and other rodents but not likely to consider LCMV-related illness in the most susceptible populations without a clear rodent exposure history. Although disease is rarely reported, infection can be particularly severe in immunocompromised persons (e.g., organ recipients) and can cause developmental defects in fetuses (1,3). Physicians in specialties likely to evaluate patients with illness associated with LCMV infection should know how the infection might manifest in immunocompromised persons; clinical disease in these patients might not include symptoms of meningitis or encephalitis but might be more generalized (3). These physicians should also be knowledgeable about risk factors for infection so they can counsel susceptible patients. CDC previously published guidance on minimizing risk for LCMV infection and recently issued an update on LCMV infection in pregnancy and newborns intended for physicians (7,8).

The findings in this report are subject to at least four limitations. First, although all of the acute care hospital laboratories in Connecticut participated, the questions were posed to multiple persons in each laboratory. Thus, the person with the most knowledge regarding LCMV might not have been contacted at each location. Second, these surveys focused on inpatient diagnoses and might have missed outpatient if

physicians sent specimens directly to a referral laboratory. Third, only ID physicians were surveyed, which might have neglected diagnoses made by other groups of physicians. Finally, this survey is not representative of the knowledge and awareness of all ID physicians in Connecticut or physicians in other specialties who might evaluate patients with LCMV-related illness.

Monitoring for LCMV infection should continue to minimize the potential for outbreaks and to determine the effectiveness of personal and industry-level prevention measures. In the absence of regular testing for LCMV in the pet industry, surveillance for human infection, as has begun in Connecticut, is an alternative method of monitoring for LCMV disease both in humans and pet rodent populations. If human surveillance is conducted, it should occur in a setting of physician education and active encouragement for testing, especially for persons with a clinically compatible illness (e.g., encephalitis and aseptic meningitis) and epidemiologic risk factors.

Acknowledgments

The findings in this report are based, in part, on contributions by L Lobianco, MPH, A Morrison, MPH, D Mylnarski, MPH, A Nepaul, MS, K Purviance, MPH, T Rabatsky-Ehr, MPH, Connecticut Dept of Public Health.

References

- 1. Barton LL, Mets MB, Beauchamp CL. Lymphocytic choriomeningitis virus: emerging fetal teratogen. Am J Obstet Gynecol 2002;187: 1715–6.
- Deibel R, Woodall JP, Decher WJ, Schryver GD. Lymphocytic choriomeningitis virus in man: serologic evidence of association with pet hamsters. JAMA 1975;232:501–4.
- CDC. Lymphocytic choriomeningitis virus infection in organ transplant recipients—Massachusetts, Rhode Island, 2005. MMWR 2005;54:537–9.
- Gregg MB. Recent outbreaks of lymphocytic choriomeningitis in the United States of America. Bull World Health Organ 1975;52:549–53.
- Childs JE, Glass GE, Ksiazek TG, et al. Human-rodent contact and infection with lymphocytic choriomeningitis and Seoul viruses in an inner-city population. Am J Trop Med Hyg 1991;44:117–21.
- Riera L, Castillo E, del Carmen Saavedra MC, et al. Serological study of the lymphochoriomeningitis virus (LCMV) in an inner city in Argentina. J Med Virol 2005;76:285–9.
- CDC. Interim guidance for minimizing risk for human lymphocytic choriomeningitis virus infection associated with rodents. MMWR 2005;54:747–9.
- CDC. Lymphocytic choriomeningitis virus (LCMV) and pregnancy: facts and prevention. Atlanta, GA: US Department of Health and Human Services, CDC; December 2005. Available at http:// www.cdc.gov/ncbddd/bd/lcmv.htm.

Fusarium Keratitis — Multiple States, 2006

On April 10, this report was posted as an MMWR Dispatch on the MMWR website (http://www.cdc.gov/mmwr).

On March 8, 2006, CDC received a report from an ophthalmologist in New Jersey regarding three patients with contact lens—associated *Fusarium* keratitis during the preceding 3 months. Initial contact with several corneal disease specialty centers in the United States revealed that other centers also have seen recent increases in *Fusarium* keratitis. This report summarizes the public health response to date in the United States and provides important prevention messages for contact lens users.

Microbial keratitis is a severe infection of the cornea. Risk factors for infection include trauma (generally with plant material), chronic ocular surface diseases, immunodeficiencies, and rarely, contact lens use (1-3). An estimated 30 million persons in the United States wear soft contact lenses; the annual incidence of microbial keratitis is estimated to be 4-21 per 10,000 soft contact lens users, depending on whether users wear lenses overnight (4). Fungal keratitis is a condition more prevalent in warm climates; in the southernmost United States, up to 35% of microbial keratitis cases are fungal keratitis, compared with 1% in New York (5,6). The proportion of fungal keratitis attributable to Fusarium spp. also varies by region, from 25% to 62% (1,2,5). First-line treatment includes topical and oral antifungal medications; patients who do not respond to medical treatment usually require surgical intervention, including corneal transplantation (3). Fusarium keratitis is not transmitted from person to person.

As of April 9, 2006, a total of 109 patients with suspected *Fusarium* keratitis were under investigation in multiple states. Case finding was conducted through postings on the *Epidemic Information Exchange (Epi-X)* and ophthalmology listservs and through queries of clinical microbiology laboratories. CDC is coordinating an investigation with public health authorities in California, Connecticut, Florida, Georgia, Iowa, Maryland, Massachusetts, Michigan, Missouri, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Tennessee, Texas, and Vermont. The majority of patients have yet to be interviewed; however, of 30 patients for whom complete data were available, the median age was 48 years (range: 13–83 years), and 21 (70%) were female; infection onset occurred during June 15, 2005–March 18, 2006.

Twenty-eight patients (93%) wore soft contact lenses, and two (7%) reported no contact lens use. Among contact lens users, 26 (93%) remembered which solution they used during the month before infection onset or had retained the actual bottle. Of these, 26 (100%) reported using a Bausch &

Lomb (Rochester, New York) ReNu® brand contact lens solution or a generic-brand solution manufactured by Bausch & Lomb. Patients reported using various ReNu product types from multiple product lots. Five (18%) patients reported using other solutions in addition to the ReNu solution, including solutions made by Advanced Medical Optics, Inc. (Santa Ana, California) and Alcon (Fort Worth, Texas). Nine (32%) patients reported wearing contact lenses overnight, a known risk factor for microbial keratitis. Eight (29%) required corneal transplantation. Laboratory testing to evaluate product contamination, including typing of *Fusarium* spp. isolates, is ongoing.

Clusters of *Fusarium* keratitis were reported among contact lens users in Asia beginning in February 2006. At that time, Bausch & Lomb voluntarily suspended sales of its ReNu multipurpose solutions in Singapore and Hong Kong, pending investigation, after multiple reports of *Fusarium* keratitis among contact lens users there (7).

An ongoing investigation by CDC, state and local health departments, and the Food and Drug Administration is under way to determine whether this cluster represents an increase of *Fusarium* keratitis infections and to determine the association, if any, of these cases with any product. Epidemiologic and laboratory studies will help define specific activities, hygiene practices, or products that place persons at increased risk for *Fusarium* keratitis.

Measures to reduce the risk for microbial keratitis can be instituted immediately by contact lens users and include the safe handling, storage, and cleaning of contact lenses. Specifically, contact lens users should wash their hands with soap and water and dry them before handling lenses, wear lenses according to the schedule prescribed by eye-care practitioners and solution manufacturers, and follow guidelines for cleaning and storing lenses provided by eye-care practitioners and solution manufacturers. Contact lens users with questions about which solutions are best for them should consult their eye-care professionals and carefully weigh risks and benefits.

Clinicians evaluating contact lens users with signs or symptoms of keratitis, such as unusual redness, eye pain, tearing, discharge, or sensitivity to light, should consider fungal keratitis and refer the patient to an ophthalmologist, if appropriate. Clinicians should consider obtaining clinical specimens (e.g., corneal scrapings) for culture before initiating treatment. Clinicians or microbiology laboratories should report cases of *Fusarium* keratitis to state and local health departments or directly to CDC at telephone, 800-893-0485. *Fusarium* isolates should be submitted to state laboratories according to instructions provided by local and state public health laboratories.

Reported by: MA Barry, MD, J Pendarvis, MPH, Boston Public Health Commission. J Rosenberg, MD, S Chen, MPH, California Dept of Health Svcs. P Mshar MPH, Connecticut Dept of Public Health. F Leguen, MD, Miami-Dade County Health Dept. C Robertson, MD, C Genese, MBA, C Tan, MD, E Bresnitz, MD, New Jersey Dept of Health and Senior Svcs. G Johnson, M Anand, MPH, P Smith, MD, New York State Dept of Health. MA Kainer, MPH, Tennessee Dept of Health. J Saviola, OD, M Eydelman, MD, D Schultz, MD, Food and Drug Admin. K O'Donnell, PhD, US Dept of Agriculture. BJ Park, MD, A Srinivasan, MD, K Wannemuehler, MS, M Arduino, PhD, J Noble-Wang, PhD, L Jacobson, M Brandt, PhD, S Fridkin, MD, National Center for Infectious Diseases; D Chang, MD, LA Burwell, MD, LR Carpenter, DVM, FMT Lewis, MD, JK Schaffzin, MD, PhD, L Sosa, MD, EIS officers, CDC.

References

- 1. Rosa RH Jr, Miller D, Alfonso EC. The changing spectrum of fungal keratitis in south Florida. Ophthalmology 1994;101:1005–13.
- 2. Tanure MA, Cohen EJ, Sudesh S, Rapuano CJ, Laibson PR. Spectrum of fungal keratitis at Wills Eye Hospital, Philadelphia, Pennsylvania. Cornea 2000;19:307–12.
- 3. Thomas PA. Fungal infections of the cornea. Eye 2003;17:852-62.
- Poggio EC, Glynn RJ, Schein OD, et al. The incidence of ulcerative keratitis among users of daily-wear and extended-wear soft contact lenses. N Engl J Med 1989;321:779–83.
- 5. Liesegang TJ, Forster PK. Spectrum of microbial keratitis in south Florida. Am J Ophthalmol 1980;90:38–47.
- Asbell P, Stenson S. Ulcerative keratitis. Survey of 30 years' laboratory experience. Arch Ophthalmol 1982;100:77–80.
- 7. Singapore Ministry of Health. Increasing incidence of contact lens related fungal corneal infections (update 3). February 21, 2006. Available at http://www.moh.gov.sg/corp/about/newsroom/pressreleases/details.do?id=36077601.

Exposure to Mumps During Air Travel — United States, April 2006

On April 11, this report was posted as an MMWR Dispatch on the MMWR website (http://www.cdc.gov/mmwr).

The state of Iowa has been experiencing a large mumps outbreak that began in December 2005 (1). As of April 10, 2006, a total of 515 possible mumps cases have been reported to the Iowa Department of Public Health (IDPH) during 2006 (2). This outbreak has spread across Iowa, and mumps activity, possibly linked to the Iowa outbreak, is under investigation in six neighboring states, including Illinois (n = four), Kansas (n = 33), Minnesota (n = one), Missouri (n = four), Nebraska (n = 43), and Wisconsin (n = four) (CDC, unpublished data, April 10, 2006). The reasons for this outbreak are under investigation.

Mumps is an acute viral infection characterized by a non-specific prodrome, including myalgia, anorexia, malaise, headache, and fever, followed by acute onset of unilateral or bilateral tender swelling of parotid or other salivary glands (2). An

estimated 60%–70% of mumps infections produce typical acute parotitis (3). Approximately 20% of infections are asymptomatic, and nearly 50% are associated with nonspecific or primarily respiratory symptoms. Complications include orchitis, oophoritis, or mastitis (inflammation of the testicles, ovaries, or breasts, respectively), meningitis/encephalitis, spontaneous abortion, and deafness. Transmission occurs by direct contact with respiratory droplets or saliva. The incubation period is 14–18 days (range: 14–25 days) from exposure to onset of symptoms. The infectious period is from 3 days before symptom onset until 9 days after onset of symptoms.

IDPH has identified two persons who had mumps diagnosed and were potentially infectious during travel on nine different commercial flights involving two airlines during March 26–April 2, 2006. The commercial airline flights identified with a potentially infectious traveler are listed below by date, carrier, and flight number:

Northwest Airline (NWA) flights:

- March 26 NWA (Mesaba) #3025 from Waterloo, Iowa to Minneapolis, Minnesota
- March 26 NWA #760 from Minneapolis, Minnesota, to Detroit, Michigan
- March 27 NWA #0260 from Detroit, Michigan, to Washington, DC–Reagan National
- March 29 NWA #1705 from Washington, DC–Reagan National to Minneapolis, Minnesota
- March 29 NWA (Mesaba) #3026 from Minneapolis, Minnesota, to Waterloo, Iowa

American Airline (AA) flights:

- April 2 AA #1216 from Tucson, Arizona, to Dallas, Texas (DFW)
- April 2 AA #3617 from DFW to Lafayette, Arkansas (Northwest Arkansas Regional [NAR])
- April 2 AA #5399 from NAR to St. Louis, Missouri
- April 2 AA #5498 from St. Louis, Missouri, to Cedar Rapids, Iowa

Persons on these flights who have symptoms consistent with mumps within 21 days of travel should be evaluated for mumps by a health-care provider. Health-care providers should remain vigilant for mumps among persons with parotitis or other salivary gland inflammation. Cases of suspected mumps should be reported immediately to public health officials.

A multistate investigation has been initiated by CDC and the state health departments in affected states to notify potentially exposed passengers (i.e., those seated in close proximity to the index cases). This investigation is using a new software application, eManifest, developed by the CDC Division of Global Migration and Quarantine (DGMQ) to securely

import, sort, and assign passenger-locating information to jurisdictions to facilitate timely identification of exposed persons. These data are securely transmitted to state and territorial health departments via the *Epidemic Information Exchange* (*Epi-X*) Forum (available at http://www.cdc.gov/mmwr/epix/epix.html) for notification of potentially exposed passengers.

Incidence of mumps in the United States began to decrease after vaccine introduction in 1967 and recommendations for routine vaccination of children in 1977. Since the 1990s, a further decrease in the reported incidence of mumps has occurred, which is thought to be attributable to the implementation of the second dose of measles, mumps, and rubella vaccine (3). The risk for transmission of respiratory infectious diseases during air travel might depend on several factors, including 1) immunity of passengers; 2) infectiousness of the organism; 3) degree of shedding of the pathogen by infected passengers; 4) hygienic practices of infectious passengers; 5) proximity of others to infectious passengers; 6) hygienic practices of the other passengers/crew; 7) flight duration; and 8) cabin environment of the aircraft (4). Transmission of other respiratory pathogens during air travel has been reported (5–9). Exposure and transmission of mumps during commercial air travel has not been described previously.

Reported by: P Quinlisk, MD, Iowa Dept of Public Health. S Redd, G Dayan, MD, National Center for Immunization and Respiratory Diseases; N Gallagher, Geographic Medicine and Health Promotion Br, P Lutz, K Marienau, MD, F Averhoff, MD, Quarantine and Border Health Svcs Br, Div of Global Migration and Quarantine, National Center for Infectious Diseases, CDC.

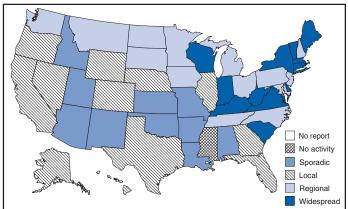
References

- 1. CDC. Mumps epidemic, Iowa, 2006. MMWR 2006;55:366-8.
- 2. Iowa Department of Public Health, Center for Acute Disease Epidemiology. Iowa mumps update. Des Moines, Iowa: Iowa Department of Public Health; 2006. Available at http://www.idph.state.ia.us/adper/common/pdf/mumps/mumps_update_041106.pdf.
- Plotkin SA, Orenstein WA, eds. Vaccines. 4th ed. Philadelphia, PA: WB Saunders; 2003:441–69.
- 4. Mangili A, Glendreau M. Transmission of infectious diseases during commercial air travel. Lancet 2005;365:989–96.
- 5. World Health Organization. Tuberculosis and air travel: guidelines for prevention and control. 2nd ed. Geneva, Switzerland: World Health Organization; 2006:5–7. Available at: http://www.who.int/docstore/gtb/publications/aircraft/PDF/98_256.pdf
- CDC. Postexposure prophylaxis, isolation, and quarantine to control an import-associated measles outbreak—Iowa, 2004. MMWR 2004; 53:969–71.
- 7. Moser MR, Bend TR, Margolis HS, et al. An outbreak of influenza aboard a commercial airline. Am J Epidemiol 1979;110:1–6.
- 8. Klonz KC, Hynes NA, Gunn RA, et al. An outbreak of influenza A/Taiwan/1/86 infections at a naval base and its association with airplane travel. Am J Epidemiol 1989;129:341–8.
- 9. Marsden AG. Influenza outbreak related to air travel. Med J Austral 2003;179:172–3.

Update: Influenza Activity — United States, March 26–April 1, 2006

During March 26–April 1, 2006,* the number of states reporting widespread influenza activity† decreased to 13. Fourteen states reported regional activity, 12 reported local activity, 10 reported sporadic activity, and one reported no activity (Figure 1).§

FIGURE 1. Estimated influenza activity levels reported by state epidemiologists, by state and level of activity* — United States, March 26–April 1, 2006



^{*} Levels of activity are 1) widespread: outbreaks of influenza or increases in influenza-like illness (ILI) cases and recent laboratory-confirmed influenza in at least half the regions of a state; 2) regional: outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least two but less than half the regions of a state; 3) local: outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of a state; 4) sporadic: small numbers of laboratory-confirmed influenza cases or a single influenza outbreak reported but no increase in cases of ILI; and 5) no activity.

^{*} Provisional data reported as of April 7. Additional information about influenza activity is updated each Friday and is available from CDC at http://www.cdc.gov/flu.

[†] Levels of activity are 1) widespread: outbreaks of influenza or increases in influenza-like illness (ILI) cases and recent laboratory-confirmed influenza in at least half the regions of a state; 2) regional: outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least two but less than half the regions of a state; 3) local: outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of a state; 4) sporadic: small numbers of laboratory-confirmed influenza cases or a single influenza outbreak reported but no increase in cases of ILI; and 5) no activity.

[§] Widespread: Connecticut, Delaware, Indiana, Kentucky, Maine, Massachusetts, New York, Rhode Island, South Carolina, Vermont, Virginia, West Virginia, and Wisconsin; regional: Iowa, Maryland, Michigan, Minnesota, Montana, New Hampshire, New Jersey, North Carolina, North Dakota, Ohio, Pennsylvania, South Dakota, Tennessee, and Washington; local: Alaska, California, Colorado, Florida, Georgia, Hawaii, Illinois, Nebraska, Nevada, Oregon, Texas, and Wyoming; sporadic: Alabama, Arizona, Arkansas, Idaho, Kansas, Louisiana, Missouri, New Mexico, Oklahoma, and Utah; no activity: Mississippi; no report: none.

The percentage of specimens testing positive for influenza decreased in the United States. During the preceding 3 weeks (weeks 11–13), the percentage of specimens testing positive for influenza ranged from 26.6% and 25.7% in the East South Central and South Atlantic regions, respectively, to 12.7% in the Pacific region. During this period, 62.8% of isolates from the Mountain region have been influenza B. Other regions reporting more than 30.0% of recent isolates as influenza B include the East North Central, West North Central, West South Central, and Pacific regions. The percentage of outpatient visits for influenza-like illness (ILI) during the week ending April 1 remains above the national baseline.** The percentage of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold for the week ending April 1.

Laboratory Surveillance

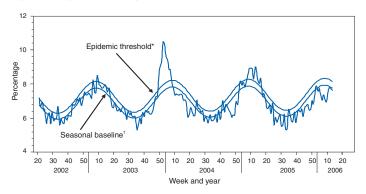
During March 26–April 1, World Health Organization (WHO) collaborating laboratories and National Respiratory and Enteric Virus Surveillance System (NREVSS) laboratories in the United States reported testing 2,790 specimens for influenza viruses, of which 464 (16.6%) were positive. Of these, 47 were influenza A (H3N2) viruses, three were influenza A (H1N1) viruses, 198 were influenza A viruses that were not subtyped, and 216 were influenza B viruses.

Since October 2, 2005, WHO and NREVSS laboratories have tested 114,891 specimens for influenza viruses, of which 14,377 (12.5%) were positive. Of these, 12,500 (86.9%) were influenza A viruses, and 1,877 (13.1%) were influenza B viruses. Of the 12,500 influenza A viruses, 5,096 (40.8%) have been subtyped; 4,837 (94.9%) were influenza A (H3N2) viruses, and 259 (5.1%) were influenza A (H1N1) viruses.

P&I Mortality and ILI Surveillance

During the week ending April 1, P&I accounted for 7.6% of all deaths reported through the 122 Cities Mortality Reporting System. This percentage is below the epidemic threshold †† of 8.1% (Figure 2).

FIGURE 2. Percentage of deaths attributed to pneumonia and influenza (P&I) reported by the 122 Cities Mortality Reporting System, by week and year — United States, 2002–2006



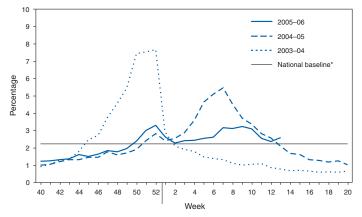
* The epidemic threshold is 1.645 standard deviations above the seasonal , baseline.

The percentage of patient visits for ILI was 2.6%, which is above the national baseline of 2.2% (Figure 3). The percentage of patient visits for ILI ranged from 1.4% in the East South Central region to 3.3% in the West South Central region.

Pediatric Deaths and Hospitalizations

During October 2, 2005–April 1, 2006, CDC received reports of 21 influenza-associated deaths in U.S. residents aged <18 years. Eighteen of the deaths occurred during the current

FIGURE 3. Percentage of visits for influenza-like illness (ILI) reported by the Sentinel Provider Surveillance Network, by week — United States, 2003–04, 2004–05, and 2005–06 influenza seasons



^{*}The national baseline was calculated as the mean percentage of visits for ILI during noninfluenza weeks for the preceding three seasons, plus two standard deviations. Noninfluenza weeks are those in which <10% of laboratory specimens are positive for influenza. Wide variability in regional data precludes calculating region-specific baselines; therefore, applying the national baseline to regional data is inappropriate.

[¶] Temperature of ≥100.0°F (≥37.8°C) and cough and/or sore throat in the absence of a known cause other than influenza.

^{**} The national baseline was calculated as the mean percentage of visits for ILI during noninfluenza weeks for the preceding three seasons, plus two standard deviations. Noninfluenza weeks are those in which <10% of laboratory specimens are positive for influenza. Wide variability in regional data precludes calculating region-specific baselines; therefore, applying the national baseline to regional data is inappropriate.

^{††} The expected seasonal baseline proportion of P&I deaths reported by the 122 Cities Mortality Reporting System is projected using a robust regression procedure in which a periodic regression model is applied to the observed percentage of deaths from P&I that occurred during the preceding 5 years. The epidemic threshold is 1.645 standard deviations above the seasonal baseline.

[†] The seasonal baseline is projected using a robust regression procedure that applies a periodic regression model to the observed percentage of deaths from P&I during the preceding 5 years.

influenza season, and three occurred during the 2004–05 influenza season.

During October 1, 2005–March 18, 2006, the preliminary laboratory-confirmed influenza-associated hospitalization rate reported by the Emerging Infections Program^{§§} for children aged 0–17 years was 0.79 per 10,000. For children aged 0–4 years and 5–17 years, the rate was 1.88 per 10,000 and 0.22 per 10,000, respectively. During October 30, 2005–March 18, 2006, the preliminary laboratory-confirmed influenza-associated hospitalization rate for children aged 0–4 years in the New Vaccine Surveillance Network^{¶¶} was 3.0 per 10,000.

Human Avian Influenza A (H5N1)

No human avian influenza A (H5N1) virus infection has ever been identified in the United States. From December 2003 through April 11, 2006, a total of 193 laboratory-confirmed human avian influenza A (H5N1) infections were reported to WHO from Azerbaijan, Cambodia, China, Egypt, Indonesia, Iraq, Thailand, Turkey, and Vietnam.*** Of these, 109 (56%) were fatal (Table). This represents an increase of one case in Azerbaijan and one case and one death in Cambodia. The majority of infections appear to have been acquired from direct contact with infected poultry. No evidence of sustained human-to-human transmission of H5N1 has been detected, although rare instances of human-to-human transmission likely have occurred (1).

Reference

 Ungchusak K, Auewarakul P, Dowell SF, et al. Probable person-toperson transmission of avian influenza A (H5N1). N Engl J Med 2005;352:333–40.

TABLE. Number of laboratory-confirmed human cases and deaths from avian influenza A (H5N1) infection reported to the World Health Organization, by country — worldwide, 2003–2006*

					Year o	of onset				
	2	2003	2	004	2	005	2	006	7	Total
Country	No. of cases	Deaths	No. of cases	Deaths	No. of cases	Deaths	No. of cases	Deaths	No. of cases	Deaths
Azerbaijan	0	0	0	0	0	0	8	5	8	5
Cambodia	0	0	0	0	4	4	2	2	6	6
China	0	0	0	0	8	5	8	6	16	11
Egypt	0	0	0	0	0	0	4	2	4	2
Indonesia	0	0	0	0	17	11	13	12	30	23
Iraq	0	0	0	0	0	0	2	2	2	2
Thailand	0	0	17	12	5	2	0	0	22	14
Turkey	0	0	0	0	0	0	12	4	12	4
Vietnam	3	3	29	20	61	19	0	0	93	42
Total	3	3	46	32	95	41	49	33	193	109

^{*} As of April 11, 2006.

^{§§} The Emerging Infections Program Influenza Project conducts surveillance in 60 counties associated with 12 metropolitan areas: San Francisco, California; Denver, Colorado; New Haven, Connecticut; Atlanta, Georgia; Baltimore, Maryland; Minneapolis/St. Paul, Minnesota; Albuquerque, New Mexico; Las Cruces, New Mexico; Albany, New York; Rochester, New York; Portland, Oregon; and Nashville, Tennessee.

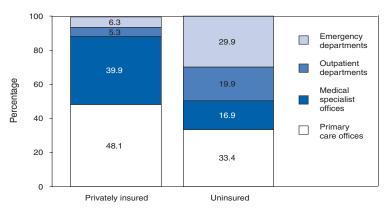
The New Vaccine Surveillance Network conducts surveillance in Monroe County, New York; Hamilton County, Ohio; and Davidson County, Tennessee.

^{***} Available at http://www.who.int/csr/disease/avian_influenza/en.

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Health-Care Visits for Asthma, by Medical Setting and Health-Insurance Status — United States, 2003



Health-insurance status

The type of medical setting in which persons receive health care for asthma differs for those with private health insurance and those without health insurance. Approximately 30% of medical visits for asthma by persons without health insurance occurred in emergency departments, compared with only 6% of visits by those with private insurance. Asthma is a condition considered to be sensitive to effective primary care and, if controlled, would result in fewer visits to the emergency department.

SOURCE: National Ambulatory Medical Care Survey and National Hospital Ambulatory Medical Care Survey 2003 public use files. Available at http://www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm.

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending April 8, 2006 (14th Week)*

	C	C	5-year	Total o	cases rep	orted fo	r previou	s vears	
Disease	Current week	Cum 2006	weekly average [†]	2005	2004	2003	2002	2001	States reporting cases during current week (No.
Anthrax		1				_	2	23	
Botulism:									
foodborne	_	_	0	18	16	20	28	39	
infant	_	19	1	90	87	76	69	97	
other (wound & unspecified)	_	11	0	24	30	33	21	19	
Brucellosis	_	19	2	121	114	104	125	136	
Chancroid	2	11	1	27	30	54	67	38	NY (1), SC (1)
Cholera	_	_	0	6	5	2	2	3	
Cyclosporiasis§	_	11	2	737	171	75	156	147	
Diphtheria	_	_	_	_	_	1	1	2	
Domestic arboviral diseases ^{§1} :									
California serogroup	_	_	0	78	112	108	164	128	
eastern equine	_	_	_	21	6	14	10	9	
Powassan	_	_	_	1	1	_	1	N	
St. Louis	_	_	0	10	12	41	28	79	
western equine	_	_	_	_	_	_	_	_	
Ehrlichiosis§:									
human granulocytic	1	10	2	733	537	362	511	261	NY (1)
human monocytic	1	42	1	459	338	321	216	142	NC (1)
human (other & unspecified)	_	2	0	122	59	44	23	6	
Haemophilus influenzae,**									
invasive disease (age <5 yrs):									
serotype b	_	2	0	8	19	32	34	_	
nonserotype b	_	22	3	118	135	117	144	_	
unknown serotype	3	57	4	218	177	227	153	_	NY (1), AZ (1), UT (1)
Hansen disease [§]	2	12	2	86	105	95	96	79	FL (1), TX (1)
Hantavirus pulmonary syndrome§	_	5	0	22	24	26	19	8	
Hemolytic uremic syndrome, postdiarrheal§	_	13	2	206	200	178	216	202	
Hepatitis C viral, acute	4	194	35	795	713	1,102	1,835	3,976	NY (2), FL (1), TX (1)
HIV infection, pediatric (age <13 yrs)§††	_	52	4	380	436	504	420	543	
Influenza-associated pediatric mortality ^{§,§§,¶¶}	3	17	1	50	_	N	N	N	NM (1), NYC (1), WY (1)
Listeriosis	9	125	9	871	753	696	665	613	NY (3), OH (1), DC (1), FL (2), TX (1), CA (1)
Measles	_	4*	** 2	64	37	56	44	116	
Meningococcal disease,††† invasive:	_								NO (8)
A, C, Y, & W-135	2	67	6	301	_	_	_	_	NC (2)
serogroup B	_	43	3	179	_	_	_	_	
other serogroup	_	7	1	25		_		_	NN (4) DA (4) INI (4) MAI (6) IA (4) MG (4) MG (6)
Mumps	34	407	5	298	258	231	270	266	NY (1), PA (1), IN (1), MN (2), IA (4), MO (1), KS (24)
Plague	_	1	_	7	3	1	2	2	
Poliomyelitis, paralytic	_	_	_	1	_	_			
Psittacosis [§]	_	1	0	23	12	12	18	25	
Q fever§	_	29	1	127	70 7	71	61	26	
Rabies, human	_	_	0	2		2 7	3	1	
Rubella	_	1	0 0	10	10		18	23	
Rubella, congenital syndrome SARS-CoV ^{§,§§}	_	_	0	1	_	1 8	1 N	3 N	
Smallpox§	_	_	U	_	_	0	IN	IN	
	1	36	4	104	132	161	110	 77	OH (1)
Streptococcal toxic-shock syndrome [§] Streptococcus pneumoniae, [§]	1	36	4	104	132	101	118	//	OH (1)
	10	292	16	1 100	1 160	845	513	498	NV (9) OH (1) IN (5) MI (2) MN (2)
invasive disease (age <5 yrs)	19		16	1,123	1,162 353	413	412	498 441	NY (8), OH (1), IN (5), MI (2), MN (3)
Syphilis, congenital (age <1 yr) Tetanus	_	49 3	8 0	341 20	353	413 20	412 25	37	
			2	90	95	133	∠5 109	127	
Toxic-shock syndrome (other than streptococca Trichinellosis	u)° —	32 2	0	90 21		133	109	22	
Tularemia§	_	3	0	137	5 134	129	90	129	
	3	52	5	306	322	356	321	368	MI (1) CA (2)
Typhoid fever		52	5		322	356 N	321 N		MI (1), CA (2)
Vancomycin-resistant Stanhylococcus aureus	us -	_	_	2	1	N N	N N	N N	
Vancomycin-resistant Staphylococcus aureus§ Yellow fever	_	_	_	_			1		
I CHOW IEVEL	_	_	_	_	_	_		_	

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

^{*} Incidence data for reporting years 2004, 2005, and 2006 are provisional, whereas data for 2001, 2002, and 2003 are finalized.

[†] Calculated by summing the incidence counts for the current week, the two weeks preceding the current week, and the two weeks following the current week, for a total of 5 preceding years. Additional information is available at http://www.cdc.gov/epo/dphsi/phs/files/5yearweeklyaverage.pdf. Not notifiable in all states.

¹ Includes both neuroinvasive and non-neuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNET Surveillance).

Data for H. influenzae (all ages, all serotypes) are available in Table II.

th Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention. Implementation of HIV reporting influences the number of cases reported. Data for HIV/AIDS are available in Table IV quarterly.

Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases.

Of the 22 cases reported since October 2, 2005 (week 40), only 20 occurred during the current 2005–06 season.

No measles cases were reported for the current week.

^{†††} Data for meningococcal disease (all serogroups and unknown serogroups) are available in Table II.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending April 8, 2006, and April 9, 2005 (14th Week)*

IABLE II. Provisio			Chlamyd					ioidomy		, ,			otosporid		
	Current		vious veeks	Cum	Cum	Current	Previo		Cum	Cum	Current	Previ 52 we		Cum	Cum
Reporting area	week	Med	Max	2006	2005	week	Med	Max	Cum 2006	2005	week	Med	Max	Cum 2006	2005
United States	11,670	18,459	25,273	226,078	254,670	89	109	1,203	2,316	1,163	42	70	852	603	491
New England Connecticut Maine Massachusetts New Hampshire Rhode Island Vermont [§]	648 64 61 418 — 79 26	630 161 41 277 34 65 18	1,536 1,199 74 441 64 99 43	7,641 1,293 557 4,126 415 907 343	7,123 946 617 3,832 520 923 285	N N — — — N	0 0 0 0 0	0 0 0 0 0 0	N N — — N	N N — — N	1 - 1 - -	4 0 0 2 0 0 0	34 14 3 15 3 6 5	35 4 8 16 5 —	26 4 4 7 4 1 6
Mid. Atlantic New Jersey New York (Upstate) New York City Pennsylvania	1,387 — 593 314 480	2,179 355 498 620 716	3,712 526 1,728 1,136 1,084	21,954 3,016 5,546 3,363 10,029	30,178 4,789 5,433 10,082 9,874	N N N N	0 0 0 0	0 0 0 0	N N N N	N N N N N N N N N N N N N N N N N N N	7 -5 - 2	10 0 3 2 4	598 8 562 15 21	84 — 26 7 51	74 6 17 23 28
E.N. Central Illinois Indiana Michigan Ohio Wisconsin	1,937 610 177 1,024 — 126	3,219 964 390 585 815 399	4,140 1,784 553 1,959 1,445 531	43,888 10,869 5,330 13,925 8,521 5,243	41,875 10,835 5,490 6,778 13,256 5,516	1 N 1 N	0 0 0 0 0	3 0 0 3 1 0	10 N 6 4 N	2 N 2 — N	2 — 1 1	14 1 1 2 5 4	162 16 13 7 109 38	123 8 9 25 57 24	99 15 5 13 29 37
W.N. Central Iowa Kansas Minnesota Missouri Nebraska [§] North Dakota South Dakota	524 115 172 — 202 — — 35	1,116 143 151 226 434 97 31 52	1,449 225 269 294 525 175 50 118	14,500 2,211 2,268 2,301 5,374 1,290 362 694	15,938 1,856 2,055 3,444 6,066 1,404 366 747	N N — — N N	0 0 0 0 0 0	1 0 0 0 1 1 0	N N — N N N	3 N N 3 N N N N	16 — 11 5 —	8 1 0 2 2 0 0	51 11 5 10 37 2 1	88 5 14 41 21 3 — 4	65 14 7 16 26 — 2
S. Atlantic Delaware District of Columbia Florida Georgia Maryland [§] North Carolina South Carolina [§] Virginia [§] West Virginia	2,688 60 35 579 21 344 655 541 387 66	3,245 70 63 867 571 358 557 312 425 49	4,942 92 102 1,037 2,062 525 1,743 1,418 841 353	43,168 1,008 547 12,024 3,899 4,833 9,444 4,554 5,673 1,186	48,298 868 1,061 11,899 7,789 4,627 9,095 5,922 6,439 598	N	0 0 0 0 0 0 0	1 0 0 0 0 1 0 0	2 N N 2 N N	N N N N N N	8 3 3 2 	14 0 0 6 3 0 1 0	53 2 3 28 12 4 10 4 8 3	176 — 5 65 58 7 25 4 11 1	93 — 1 32 26 4 12 5 9 4
E.S. Central Alabama [§] Kentucky Mississippi Tennessee [§]	697 214 — 483	1,376 352 153 379 466	2,188 1,048 323 801 624	18,230 4,925 2,557 3,902 6,846	18,444 2,817 3,410 5,995 6,222	N N — N	0 0 0 0	0 0 0 0	N N — N	N N — N	1 1 — —	3 0 1 0	21 3 20 1 4	14 7 3 — 4	8 4 1 1 2
W.S. Central Arkansas Louisiana Oklahoma Texas [§]	1,437 — 104 203 1,130	1,979 168 221 226 1,329	3,374 340 760 2,160 1,699	24,506 1,967 1,521 2,730 18,288	31,328 2,370 4,946 2,809 21,203	 N N	0 0 0 0	1 0 1 0 0	 N N N	N N N	4 4	3 0 0 0	30 1 21 10 20	44 2 4 11 27	18 3 6 9
Mountain Arizona Colorado Idaho§ Montana Nevada§ New Mexico§ Utah Wyoming	634 345 132 — 35 — 122 —	1,088 311 273 45 42 134 159 86 23	1,705 536 482 235 181 448 337 138 43	11,589 4,417 1,741 450 435 1,102 2,533 639 272	16,734 5,977 4,062 502 627 1,991 2,090 1,183 302	68 68 N N N —	80 78 0 0 0 1 0 0	229 225 0 0 0 4 2 3 2	1,853 1,829 N N N 14 — 8 2	693 662 N N N 24 5	3 1 1 1 	2 0 1 0 0 0 0	9 1 3 2 3 1 3 3	21 2 5 2 5 1 — 6	34 3 10 3 — 5 7 4 2
Pacific Alaska California Hawaii Oregon [§] Washington	1,718 41 1,142 — 121 414	3,179 77 2,470 106 174 356	4,915 121 4,149 135 315 604	40,602 901 31,123 1,378 2,196 5,004	44,752 1,023 34,614 1,436 2,410 5,269	20 — 20 N N N	27 0 27 0 0 0	1,114 0 1,114 0 0	451 	465 	_ _ _ _	6 0 3 0 1 0	50 2 14 1 20 36	18 — — — 18 —	74 — 58 — 11 5
American Samoa C.N.M.I. Guam Puerto Rico U.S. Virgin Islands	U U —	0 0 0 77 4	0 0 0 141 8	U U 1,185	U 64 1,114 108	U U N	0 0 0 0	0 0 0 0	U - N -	U U N	U U N	0 0 0 0	0 0 0 0	U U N	U U N

Cum: Cumulative year-to-date counts.

Med: Median. Max: Maximum.

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-complete the complete that the complete the complete that is a complete that the complete that

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending April 8, 2006, and April 9, 2005 (14th Week)*

			Giardiasi	s			G	onorrhe	a		Hae		<i>s influen</i> es, all ser	<i>zae</i> , invas otypes	sive
			rious	_			Previ					Previ			
Reporting area	Current week	Med Med	eeks Max	Cum 2006	Cum 2005	Current week	52 we Med	eks Max	Cum 2006	Cum 2005	Current week	Med	Max Max	Cum 2006	Cum 2005
United States	187	318	786	3,350	4,188	3,562	6,313	8,261	78,824	85,101	27	36	101	541	711
New England	5	29 2	90	235	363	86	105	285	1,248	1,320	_	3 0	12	34	47
Connecticut Maine	_	3	65 11	46 16	86 41	15 6	40 2	238 6	342 38	326 39	_	0	8 1	8 4	15 2
Massachusetts New Hampshire	3 2	11 0	34 7	116 8	164 13	53 2	48 4	78 9	664 61	765 34	_	2	5 3	17 2	20
Rhode Island	_	0	25	13	21	10	7	25	128	145	_	0	5	1	6
Vermont [†] Mid. Atlantic	37	3 64	9 255	36 500	38 794	325	1 621	4 1,022	15 6,405	11 8,710	_ 6	0 7	1 30	2 95	4 119
New Jersey	_	7	18	3	139	_	105	150	1,012	1,511	_	1	4	1	19
New York (Upstate) New York City	26 —	22 16	228 33	219 103	225 233	137 64	123 161	455 402	1,515 843	1,669 2,597	5 —	2 1	27 4	34 10	34 22
Pennsylvania	11	16	29	175	197	124	217	390	3,035	2,933	1	3	8	50	44
E.N. Central	23	55 13	102 32	474 24	664 177	575 196	1,358 393	1,901 761	19,116 4,193	15,915 4,072	5	6 1	14 5	71 14	117 34
Indiana	N	0	0	N	N	59	161	229	2,327	2,120	2	1	6	14	19
Michigan Ohio	6 17	14 16	29 34	163 206	182 148	282	260 380	824 681	6,862 3,949	2,252 5,972	3	0 2	3 6	13 24	8 44
Wisconsin	_	12	33	81	157	38	120	171	1,785	1,499	_	1	3	6	12
W.N. Central lowa	5 —	34 5	142 14	319 54	493 61	145 19	362 31	461 54	4,460 439	4,994 405	_	1 0	9 0	26 —	31 1
Kansas Minnesota	1	4 13	9 113	39 77	43 226	41	48 63	124 89	645 557	686 944	_	0	2 9	3 10	1 13
Missouri	2	10	32	108	111	84	181	240	2,400	2,516	_	0	7	11	12
Nebraska† North Dakota	1 1	1 0	6 3	20 3	29 1	_	22 2	55 6	307 20	329 22	_	0	1 2	2	3 1
South Dakota		2	7	18	22	1	6	15	92	92	_	Ö	0	_	_
S. Atlantic Delaware	48	50 1	111 3	693 6	636 14	1,038 27	1,451 19	2,285 44	18,100 401	20,816 198	7	9 0	25 0	143	184
District of Columbia	1	1	5	16	12	28	40	67	400	556	_	0	0	_	_
Florida Georgia	11 36	19 10	40 70	241 258	222 163	266 13	399 262	513 913	5,468 1,724	5,148 3,448	1 4	3 1	12 6	47 31	46 48
Maryland† North Carolina	N	4 0	11 0	46 N	44 N	118 269	134 274	242 766	1,912 4,376	1,815 4,612	_ 1	1 0	5 11	17 15	29 24
South Carolina [†]	_	1	9	21	29	222	131	783	1,974	2,561		1	3	11	6
Virginia† West Virginia	_	11 0	50 6	103 2	144 8	78 17	149 14	289 34	1,583 262	2,303 175	_ 1	1 0	8 4	15 7	18 13
E.S. Central	5	8	19	95	99	268	541	868	7,104	6,956	1	2	8	36	33
Alabama [†] Kentucky	5 N	3 0	13 0	47 N	49 N	— 71	183 53	491 107	2,249 895	1,789 1,049	_	0	4 3	10	6 1
Mississippi		0	0	_	_	_	129	225	1,472	1,813	_	0	0	_	_
Tennessee [†] W.S. Central	1	4 6	11 23	48 55	50 59	197 570	173 791	284 1,304	2,488 9,741	2,305 12,291	1	2 2	5 6	26 28	26 42
Arkansas	<u>.</u>	2	5	18	20	_	86	187	1,136	1,201	_	0	2	2	_
Louisiana Oklahoma	1	1 3	6 16	15 22	8 31	61 91	129 81	461 763	1,006 924	2,628 1,252	_ 1	0 1	3 4	4 22	22 20
Texas [†]	N	0	0	N	N	418	494	630	6,675	7,210	_	0	1	_	_
Mountain Arizona	17 2	27 2	58 12	309 38	311 51	126 84	226 69	519 166	2,648 1,026	3,488 1,260	6 4	4 1	10 9	77 33	87 36
Colorado	7 1	9 2	33	118	106	32	61	90	516	821	_	0	5	22	20
Idaho† Montana	1	1	12 7	20 18	32 9	1	1 2	10 13	25 23	21 41	_	0	1 0	1 —	_
Nevada† New Mexico†	_	2 1	6 6	9 7	21 14	9	53 29	195 64	433 440	760 380	_	0	1 3	 10	10 11
Utah	6	7	20	94	74	_	14	22	144	189	2	0	4	10	7
Wyoming Pacific	— 46	1 60	2 189	5 670	4 769	429	2 792	6 941	41 10,002	16 10,611	_ 1	0 3	2 20	1 31	1 51
Alaska	1	2	6	6	16	11	10	23	118	136	1	0	19	3	2
California Hawaii	35 —	42 1	95 6	501 13	613 21	288	646 19	807 36	8,203 251	8,862 262	_	1 0	7 2	3 3	13 2
Oregon [†] Washington	1 9	8 6	21 88	97 53	78 41	17 113	28 72	58 142	297 1,133	436 915	_	2	8 4	21 1	34
American Samoa	U	0	0	U	U U	U	0	0	1,133 U	915 U	U	0	0	U	U
C.N.M.I.	ŭ	0	0	ŭ	Ü	ŭ	0	0	Ü	U	Ŭ	0	0	ŭ	Ü
Guam Puerto Rico	_	0 3	0 14	3	38	_	0 6	0 16	92	1 116	_	0	0 1	_	_
U.S. Virgin Islands	_	0	0	_	_	_	0	4	_	35	_	0	0	_	_

Cum: Cumulative year-to-date counts.

Med: Median.

Max: Maximum.

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to* Incidence data for reporting years 2005 and 2006 are provisional.

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending April 8, 2006, and April 9, 2005 (14th Week)*

(14th Week)*				Нер	atitis (vira	, acute), by	type								
			Α					В					egionello	sis	
	Current	Prev 52 w		Cum	Cum	Current	Previo		Cum	Cum	Current	Previ		Cum	Cum
Reporting area	week	Med	Max	2006	2005	week	Med	Max	2006	2005	week	Med	Max	2006	2005
United States	44	79	216	918	1,103	36	95	496	1,010	1,439	18	41	114	293	283
New England	_	7	23	58	138	_	4	11	39	72	_	2	11	13	15
Connecticut Maine	_	1 0	3 2	9	19 —	_	0	5 2	_	15 4	_	0	8 1	4 1	3 1
Massachusetts	_	5	14	28	98	_	3	10	32	48	_	1	5	6	8
New Hampshire Rhode Island	_	1 0	12 4	12 1	16 5	_	0 0	3 2	4 1	4	_	0 0	1 10	1	2 1
Vermont [†]	_	0	2	5	_	_	0	1	_	1	_	0	3	1	_
Mid. Atlantic New Jersey	4	12 3	23 11	42 10	197 39	4	10 2	34 7	85 24	188 43	2	11 1	53 12	78 5	80 11
New York (Upstate)	1	1	22	12	25	3	1	23	15	25	2	4	30	33	20
New York City Pennsylvania		4 1	12 6	5 15	99 34	_ 1	2	7 9	5 41	45 75	_	2 5	20 17	4 36	8 41
E.N. Central	3	6	17	70	115	3	9	25	78	151	7	7	26	50	68
Illinois	_	1	9	11	41	_	2	7	_	43		1	5	7	11
Indiana Michigan	1 1	1 2	10 11	4 33	5 30	2	0	15 7	7 40	5 52	_	0 2	6 6	2 13	4 18
Ohio	1	1	4	21	23	1	2	8	29	44	7	3	19	28	28
Wisconsin	_	0	5	1	16	_	0	6	2	7	_	0	2	_	7
W.N. Central lowa	2	2 0	31 2	33 3	36 7	_	5 0	13 2	26 1	59 3	_	1 0	12 1	7	9
Kansas	_	0	5	15	4	_	0	3	2	7	_	0	1	_	1
Minnesota Missouri	_	0	31 2	1 9	3 20	_	0 3	6 8	1 22	 38	_	0	10 3	 5	1
Nebraska [†]	_	0	3	3	2	_	0	2	_	10	_	0	2	2	_
North Dakota South Dakota	_	0 0	0 1	_	_	_	0	0 1	_	_ 1	_	0	1 6	_	1
S. Atlantic	7	13	33	155	153	13	22	61	268	417	7	9	21	83	59
Delaware	_	0	1	4	2	_	0	4	6	11	_	0	4	1	1
District of Columbia Florida	3	0 5	2 18	1 57	2 60	9	0 9	4 21	4 114	146	2	0 2	2 8	3 38	1 21
Georgia	_	1	6	11	26	4	2	7	24	70	_	0	3	3	4
Maryland [†] North Carolina	4	2 0	7 20	23 38	12 24	_	2	8 23	39 49	49 42		2	9	18 11	17 7
South Carolina†	_	1	3	6	5	_	2	9	13	39	_	0	2	1	1
Virginia† West Virginia	_	1 0	11 2	14 1	22 —	_	2	18 14	8 11	53 7	_	1 0	8 3	7 1	4
E.S. Central	_	4	16	31	47	1	6	20	71	113	_	1	6	7	7
Alabama [†] Kentucky	_	0	6 4	2 13	6 3	_	1 1	7 5	22 18	22 25	_	0	2 4	1	5 1
Mississippi	_	0	2	1	10	_	1	4	4	24	_	0	1	_	_
Tennessee [†]	_	2	13	15	28	1	2	12	27	42	_	1	4	6	1
W.S. Central Arkansas	_	9 0	52 7	60 15	84 2	_	14 1	283 3	264 4	126 19	_	1 0	26 1	8	2 1
Louisiana	_	1	5	2	18	_	1	6	6	23	_	0	2	4	
Oklahoma Texas [†]	_	0 6	2 49	4 39	1 63	_	0 11	5 281	1 253	13 71	_	0	3 26	1 3	1
Mountain	_	6	21	88	107	2	8	39	67	139	1	1	8	15	23
Arizona	_	3	20	58	58	2	5	34	41	92	_	0	3	7	5
Colorado Idaho†	_	1 0	4 3	15 3	8 10	_	1 0	5 2	9 4	10 3	_	0	3 2	1	4
Montana	_	0	1	1	6	_	0	7	_	_	_	0	1	_	1
Nevada [†] New Mexico [†]	_	0	2	3 5	6 6	_	1 0	4 3	9 1	10 8	_	0	2 1	3	5 2
Utah	_	0	3	3	12	_	0	5	3	15	1	0	2	4	3
Wyoming	_	0	0	_	1	_	0	1	_	1	_	0	1	_	2
Pacific Alaska	28 —	15 0	150 1	381	226 3	13	10 0	56 2	112 1	174 1	1	1 0	9 1	32	20
California Hawaii	27	14	149	356	191	12	6	39	88	126	1	1	9	32	20
Oregon [†]	_	0 1	2 5	5 11	6 11	1	2	1 6	1 14	1 33	N	0 0	1 0	N	N
Washington	1	1	11	9	15	_	0	13	8	13	_	0	0	_	_
American Samoa C.N.M.I.	U	0	1 0	U U	_ U	U U	0	0	U U	_ U	U	0	0	U U	U
Guam	_	0	0	_	_	_	0	0	_	_	<u>U</u>	0	0	_	_
Puerto Rico U.S. Virgin Islands	_	0	6 0	3	17	_	1 0	6 0	3	5	_	0	0	_	_
o.o. virgin islanus	_	U	U	_	_	_	U	U	_	_	_	U	U	_	_

Cum: Cumulative year-to-date counts.

Med: Median.

Max: Maximum.

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to* Incidence data for reporting years 2005 and 2006 are provisional.

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending April 8, 2006, and April 9, 2005 (14th Week)*

(14th Week)*										
			Lyme dise	ase				Malaria		
	Current		vious weeks	Cum	Cum	Current		ious eeks	Cum	Cum
Reporting area	week	Med	Max	2006	2005	week	Med	Max	2006	2005
United States	147	299	1,337	1,227	1,757	11	24	64	229	297
New England	3	50	232	64	149	_	1	12	8	11
Connecticut	3	9	154	41	6	_	0	10	1	_
Maine Massachusetts	_	2 18	26 164	7 1	10 115	_	0	1 4	1 5	_ 8
New Hampshire	_	3	17	14	16	_	0	1	_	2
Rhode Island Vermont†	_	0 0	12 5	_ 1	1 1	_	0 0	2 2	_ 1	1
lid. Atlantic	135	170	915	833	1,136	_	5	15	29	74
New Jersey	-	25	309	109	377	_	0	7	_	18
lew York (Upstate)	132	66	859	472	190	_	1	10	7	14
New York City Pennsylvania	3	0 61	0 464	252	 569	_	3 1	8 2	14 8	35 7
I.N. Central	_	13	157	32	75	2	2	6	31	24
Ilinois	_	0	6	_	1	_	0	2	7	7
ndiana Michigan	_	0 1	4 7	<u> </u>	2 1	_	0 0	3 2	5 4	3 7
Michigan Dhio	_	1	5	5	14		0	3	11	3
Visconsin	_	10	148	21	57	_	Ö	3	4	4
W.N. Central	5	12	99	31	41	_	0	5	5	9
owa Kansas	_	1 0	8 3	1	5 2	_	0 0	1 1	1	2 1
linnesota	5	8	96	28	34	_	0	3	2	1
Missouri	_	0	2	1	_	_	0	3 2	1	5
lebraska [†] Iorth Dakota	_	0	0	1	_	_	0	0	_	_
outh Dakota	_	0	1	_	_	_	0	1	1	_
6. Atlantic	_	34	125	195	313	_	6	15	79	63
elaware District of Columbia	_	9 0	37 2	71 5	112 1	_	0	1 2	1	1 1
orida	_	1	8	11	9	_	1	6	10	13
eorgia	_	0	1	_	1	_	1	6	22	9
aryland [†] orth Carolina	_	16 0	87 5	97 8	150 14	_	1 0	9 8	21 9	20 8
outh Carolina†	_	0	3	2	4	_	0	2	3	3
irginia [†] /est Virginia	_	3 0	21 42	1	22 —	_	0	9 2	12 1	7 1
.S. Central	_	0	4	_	5	1	1	2	6	7
abama†	_	0	1	_	_	i	Ö	1	3	2
entucky	_	0	1	_	1	_	0	2	1	2
ississippi ennessee†	_	0	0 4	_	<u> </u>	_	0	0 2		3
.S. Central	_	1	7	1	18	1	1	21	9	31
rkansas	_	0	2	_	_	_	0	2	_	2
ouisiana klahoma	_	0	1 0	_	2	_	0 0	1 6	_ 1	1 2
exas [†]	_	1	7	1	16	1	1	20	8	26
lountain	_	0	4	2	2	_	1	6	13	16
rizona	_	0	4 1	2	_	_	0	4	1	2
olorado aho†	_	0	1	_	_	_	0	3 0	4	8 —
ontana	_	0	0	_	_	_	0	1	1	_
evada [†] ew Mexico [†]	_	0	2 1	_	_	_	0	2 1	_	_ 1
tah	_	0	1	_	1	_	0	2	7	4
yoming	_	0	1	_	1	_	0	1	_	1
acific	4	4	19	69	18	7	4	12	49	62
laska alifornia	4	0 2	1 19	<u> </u>	1 15	4	0 3	1 10	3 35	2 52
awaii	N	0	0	N	N	_	0	4	_	4
Oregon† Vashington	_	0	3 3	_	2	 3	0	2 5	4 7	2 2
merican Samoa	U	0	0	U	U	U	0	0	, U	U
merican Samoa .N.M.I.	U	0	0	Ü	U	U	0	0	U	U
Guam		0	0		_	_	0	0	_	_
uerto Rico J.S. Virgin Islands	N	0 0	0 0	N —	N —	_	0 0	1 0	_	_
J		-	-				-	-		

Cum: Cumulative year-to-date counts.

Med: Median.

Max: Maximum.

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to* Incidence data for reporting years 2005 and 2006 are provisional.

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending April 8, 2006, and April 9, 2005 (14th Week)*

(14th Week)*				Monii	ngoooool	disease, inv	vanius.								
			All serog		ngococcai	disease, inv		ogroup u	nknown				Pertus	ssis	
	_	Prev				_	Previo		_				ious	_	
Reporting area	Current week	Med Med	eeks Max	Cum 2006	Cum 2005	Current week	52 wee	eks Max	Cum 2006	Cum 2005	Current week	52 w	<u>eeks</u> Max	Cum 2006	Cum 2005
United States	13	23	83	365	451	11	14	59	248	254	142	429	1,843	3,037	5,362
New England	1	1	5	16	29	1	1	3	16	10	1	27	55	303	345
Connecticut Maine	_	0 0	2 1	3 2	8 1	_	0 0	2 1	3 2	2 1	_	0 1	3 5	 12	23 14
Massachusetts	1	0	3	9	13	1	0	3	9	3	_	22	44	257	262
New Hampshire Rhode Island	_	0 0	2 1	_	3 2	_	0 0	2 0	2	3	1 —	2 0	15 12	12	5
Vermont [†]	_	0	1	_	2	_	0	1	_	1	_	1	6	22	41
Mid. Atlantic New Jersey	3	2	15 2	35 —	58 14	3	2	13 2	30	41 14	29 —	22 3	133 9	370 25	440 58
New York (Upstate)	2	0	7	11	16	2	0	5	9	4	18	9	122	140	153
New York City Pennsylvania	_ 1	0 1	5 4	3 21	8 20	1	0 1	5 4	3 18	8 15	 11	2 8	6 21	16 189	26 203
E.N. Central	1	2	9	38	45	1	1	6	26	37	16	59	125	400	1,434
Illinois Indiana	_	0 0	4 5	8 7	9 5	_	0	4 2	8 2	9 2	<u> </u>	13 4	31 75	10 49	261 85
Michigan Ohio	_ 1	1	3	8 15	11 12	_ 1	0	3 4	4 12	6 12	4	5 17	23 30	110 203	89 535
Wisconsin		0	1	—	8		0	1	_	8	_	19	41	28	464
W.N. Central	_	1	4	17	26	_	0	3	8	10	7	59	205	361	744
Iowa Kansas	_	0 0	2 1	_	9 3	_	0 0	2 1	2	1 3	5	11 11	55 29	75 128	247 91
Minnesota Missouri	_	0	2	2 9	5 6	_	0	1 2	1 3	1 3	_	0 10	148 43	 114	95 131
Nebraska [†]	_	0	1	4	2	_	0	1	2	2	2	3	14	35	72
North Dakota South Dakota	_	0 0	1 1	_		_	0 0	1 0	_	_	_	0 2	28 7	4 5	46 62
S. Atlantic	3	4	14	66	70	1	2	8	26	30	6	23	90	263	375
Delaware District of Columbia	_	0 0	1 0	2		_	0	1 0	2	2	_	0	1 3	1 3	11
Florida Georgia	1	1 0	7 2	26 3	28 8	1	0	6 2	10 3	10 8	6	4 1	14 3	70 5	43 12
Maryland [†]	_	Ö	2	6	7	_	0	2	3	_	_	4	8	56	71
North Carolina South Carolina [†]	2	0 0	11 2	13 6	6 10	_	0 0	3 1	3 2	7	_	0 5	21 22	52 30	21 145
Virginia† West Virginia	_	1 0	4 1	9 1	7 2	_	0	3 1	3	2 1	_	4 0	72 5	42 4	53 19
E.S. Central	_	1	4	13	21	_	1	4	10	15	2	8	25	66	147
Alabama [†] Kentucky	_	0	1 2	3 3	 8	_	0	1 2	3	_ 8	1	1 2	9 10	19 6	27 49
Mississippi	_	0	1	1	4	_	0	1	1	4	_	1	4	9	20
Tennessee [†]	_	0	2	6	9	_	0	2 8	3	3	1	3 45	17	32	51
W.S. Central Arkansas	_	2 0	21 3	38 3	41 7	_	1 0	2	16 3	10 1		4	209 19	187 18	211 41
Louisiana Oklahoma	_	0 0	4 3	21 6	14 5	_	0	3 3	11	2 1	_	0	3 1	4 3	12
Texas [†]	_	1	15	8	15	_	0	3	2	6	2	39	204	162	158
Mountain Arizona	2 2	2	7 5	30 16	30 11	2 2	1 0	5 5	22 16	5 2	79 27	74 16	144 86	916 164	1,124 97
Colorado	_	0	2	11	10	_	0	1	4	_	14	24	41	369	504
Idaho† Montana	_	0 0	2 0	1	<u>1</u>	_	0 0	2	1	1	2 2	3 7	13 29	17 33	95 229
Nevada† New Mexico†	_	0	2 1	_	3 3	_	0	1 1	_	_	_	0 2	5 9	8 8	14 71
Utah	_	0	2	2	2	_	0	1	1	_	34	15	38	304	107
Wyoming	_	0 6	0	110	121	_	0 4	0 22	- 04	_	_	1	4	13	7 540
Pacific Alaska	3	0	30 1	112 —	131 1	3	0	1	94	96 1	_	70 2	1,192 15	171 24	542 11
California Hawaii	2	2 0	11 1	63 3	61 7	2	2	11 1	63 3	61 2	_	40 3	1,000 10	1 22	148 40
Oregon [†]	_	2 0	8 25	29	44	<u> </u>	1 0	6	21 7	24	_	5	33	46 78	247
Washington American Samoa	1 U	0	25 1	17 —	18	1 U	0	11 1	/ U	8 U	U U	11 0	189 0	78 U	96 U
C.N.M.I.	U	0	0	_	=	U	0	0	Ü	U	Ü	0	0	Ü	U
Guam Puerto Rico	_	0 0	0 1	2	4	_	0 0	0 1	_	4	_	0 0	0 2	_	1
U.S. Virgin Islands	_	0	0	_	_	_	0	0	_	_	_	0	0	_	_

Cum: Cumulative year-to-date counts.

Med: Median.

Max: Maximum.

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to* Incidence data for reporting years 2005 and 2006 are provisional.

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending April 8, 2006, and April 9, 2005 (14th Week)*

		Ra	abies, ani	mal		Roo	cky Mour	ntain spo	tted fever			Sa	almonello	sis	
			ious	•			Previo		0			Prev			
Reporting area	Current week	Med	eeks Max	Cum 2006	Cum 2005	Current week	52 wee	Max	Cum 2006	Cum 2005	Current week	52 w	eeks Max	Cum 2006	Cum 2005
United States	61	103	190	1,008	1,547	2	35	99	282	151	241	866	2,095	6,252	6,571
New England	13	12	33	132	198	_	0	1	_	1	11	40	80	323	358
Connecticut Maine	6 2	3 1	13 4	32 18	28 13	N	0 0	0 0	N	N	_	8 3	73 8	73 11	83 25
Massachusetts New Hampshire	4 1	4 0	22 3	64 5	137 2	_	0	1 1	_	_	10 1	20 2	41 12	206 19	191 23
Rhode Island		0	4	1	3	_	0	0	_	1	_	0	17	11	15
Vermont [†] Mid. Atlantic	_ 5	1 19	7 40	12 192	15 191	_	0	0 8	— 5	10	 28	1 93	10 271	3 601	21 810
New Jersey	N	0	0	N	N	_	0	2	_	1	_	16	41	45	158
New York (Upstate) New York City	5	12 0	24 3	99	84 8	_	0 0	2 2		_ 1	19 2	21 24	230 43	164 137	182 235
Pennsylvania	_	7	22	93	99	_	1	6	3	8	7	31	61	255	235
E.N. Central Illinois	_	2 1	69 4	4	11 3	_	0	6 3	2 1	3 1	29 —	97 30	206 124	769 115	851 269
Indiana Michigan	_	0	3 4		1 3	_	0	1 1	_	_ 1	12 2	11 17	71 35	113 151	62 176
Ohio	_	0	66	1	4	_	0	3	1	1	15	23	52	269	172
Wisconsin W.N. Central	N 6	0 6	3 23	N 52	N 75	_	0 2	1 17	 5	 5	— 17	15 43	45 92	121 412	172 443
Iowa	_	1	10	13	15	_	0	2	_	_	_	7	18	58	79
Kansas Minnesota	3 2	1 1	5 5	17 4	23 12	_	0 0	2 1	_	_	4	7 10	17 31	65 97	46 121
Missouri Nebraska†	1	1 0	7 0	4	7	_	2	15 2	5	4	10 2	15 2	40 10	135 32	119 38
North Dakota South Dakota	_	0 1	4	2	4	_	0	0	_	<u> </u>	1	0 2	5	2	9
S. Atlantic	34	34	6 54	12 394	14 674	1	0 17	2 95	261	106	65	257	11 506	23 1,727	1,687
Delaware District of Columbia	_	0	0	_	_		0	2	2	1	4	2	9 7	13 19	14 11
Florida	_	0	16	47	201	_	0	3	6	6	46	99	230	758	650
Georgia Maryland†	27 —	4 6	15 16	43 59	77 82	_	1 2	9 7	15 13	4 6	14	34 14	73 39	276 110	229 134
North Carolina South Carolina†	7	8 4	19 11	84	117 42	1	4 1	87 6	219 4	80 6	_ 1	30 21	114 146	333 69	313 140
Virginia [†]	_	10	26	142	150	_	1	10	2	2	_	20	66	134	175
West Virginia E.S. Central	1	0 2	13 9	19 39	5 32	_	0 5	2 24	4	1 6	3	3 56	13 134	15 328	21 368
Alabama [†]	i	1	5	16	19	_	0	9	1	1	_	13	39	127	107
Kentucky Mississippi	_	0	3 1	4	2	_	0	1 3	_	_	_	7 13	26 66	65 39	43 54
Tennessee [†]	_	1	4	19	11	_	3	18	3	5	3	14	40	97	164
W.S. Central Arkansas	1	13 0	42 3	145 3	283 10	<u>1</u>	2 0	34 32	4 3	1	16 —	85 16	880 67	710 222	490 64
Louisiana Oklahoma	_ 1	0 1	0 7	 13	 29	_	0	2 23	_	1	_	15 6	42 26	62 53	118 56
Texas [†]		12	39	129	244	1	Ö	8	1	_	16	45	847	373	252
Mountain Arizona	_	4 2	19 11	19 19	51 44	_	0	4 4	1 1	19 13	25 2	50 13	112 28	452 137	414 132
Colorado Idaho†	_	0	2 12	_		_	0	1 2			14	11	45	141	102 23
Montana	_	0	3	_	_	_	0	1	_	1	3	2	17 16	16 26	19
Nevada [†] New Mexico [†]	_	0	2 1	_	_ 1	_	0	0 1	_	_ 1	_	3 4	8 13	23 33	44 41
Utah Wyoming	_	0	5 2	_	<u> </u>	_	0	1 1	_	3 1	6	5 1	31 12	62 14	45 8
Pacific	1	4	15	31	32	_	0	2	_	_	47	99	416	930	1,150
Alaska California	_ 1	0 3	3 15	5 26	1 31	_	0	0 1	_	_	3 39	1 76	5 286	24 705	13 900
Hawaii	_	0	0	_	_	_	0	0	_	_	_	5	15	47	77
Oregon [†] Washington	U	0 0	1 0	U	U	N	0 0	1 0	N	N	1 4	8 8	25 121	80 74	81 79
American Samoa	U	0	0	U	U	U	0	0	U	U	U	0	2	U	1
C.N.M.I. Guam	<u>U</u>	0 0	0 0	<u>U</u>	<u>U</u>	<u>U</u>	0 0	0 0	<u>U</u>	<u>U</u>	<u>U</u>	0 0	0 0	U —	U 1
Puerto Rico U.S. Virgin Islands	2	2	4 0	28	23	N	0	0	N	N	1	7 0	23 0	15	91
	_	U	U	_	_		U	U	_	_		U	U	_	_

Cum: Cumulative year-to-date counts.

Med: Median.

Max: Maximum.

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to* Incidence data for reporting years 2005 and 2006 are provisional.

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending April 8, 2006, and April 9, 2005 (14th Week)*

	Shig	a toxin-pı	roducing	E. coli (S1	ΓEC) [†]		Sh	igellosis	;		Streptod	occal d	isease, iı	nvasive, g	roup A
		Prev		0			Previo					Previ			
Reporting area	Current week	Med Med	Max	Cum 2006	Cum 2005	Current week	52 wee	Max	Cum 2006	Cum 2005	Current week	52 we Med	eks Max	Cum 2006	Cum 2005
United States	5	49	244	213	357	90	293	608	2,096	2,779	86	80	198	1,513	1,445
New England	_	4	13	14	32	1	5	17	60	54	2	3	8	51	57
Connecticut Maine	_	0 0	4 5	_	12 3	_	1 0	7 3	7	12 2	U —	0 0	0 2	U 3	U 2
Massachusetts New Hampshire	_	2	7 2	12 2	13 2	_ 1	4 0	11 4	45 4	31 4	_ 2	2 0	7 3	33 10	39 3
Rhode Island Vermont [§]	_	0 0	2 2	_ 1	1 1		0	6 4	3 1	2		0	3 2	3 2	6 7
Mid. Atlantic	_	6	100	1	37	<u> </u>	19	70	144	305	 21	13	43	243	316
New Jersey New York (Upstate)		1 2	7 97	 13	13 14	3	5	18 58	35 59	80 77	 19	2	8 33	9 108	53 109
New York City	_	0	2	1	1	_	6	22	25	131	_	3	9	15	61
Pennsylvania	_	2	8	_	9	2	2	48	25	17	2	6	13	111	93
E.N. Central Illinois	4	9 1	34 7	60 —	80 19	<u>8</u>	17 6	79 25	188 32	219 56	18 —	14 3	39 9	292 56	316 91
Indiana Michigan	_	1 1	7 8	9 16	7 13	2	1 4	56 10	33 54	27 84	 5	2 4	12 10	43 78	33 78
Ohio Wisconsin	4	2	14 15	22 13	25 16	6	3	11	49 20	15 37	13	4	19	99 16	75 39
W.N. Central	_	7	39	40	47	3	39	64	200	182	_ 2	5	57	121	90
lowa Kansas	_	1	10 4	11	9	1	1	7 20	8 21	35 7	N 2	0	0 5	N 30	N 13
Minnesota	_	3	23	28	8	_	2	6	20	12	_	0	52	52	31
Missouri Nebraska [§]	_ 1	2 1	7 4	16 4	12 8	1	22 1	45 9	117 18	98 20	_	1 0	5 4	22 12	30 7
North Dakota South Dakota	_	0	2 5	<u> </u>	1 2	_	0 1	2 17	2 14	2 8	_	0	3 2	3 2	2 7
S. Atlantic	_	7	41	32	72	43	47	116	590	417	26	19	39	370	273
Delaware District of Columbia	_	0	2 1	_	_	_	0	2 2		4 4	_	0	2 2	1 4	_
Florida	_	1 0	31 6	14	40 8	12 25	21 12	66 37	243 205	174 114	2	5 4	12 9	88 84	76 60
Georgia Maryland [§]	_	1	5	_	7	_	2	8	33	17	_	3	12	78	63
North Carolina South Carolina§	_	1 0	11 2	13 2	9 1	6	2 2	22 9	62 33	50 34	21 —	1 0	13 6	55 24	35 16
Virginia [§] West Virginia	_	2	9 2	_	7	_	2	9	11	20	_	2	11 5	29 7	18
E.S. Central	_	2	12	11	15	3	17	50	128	358	2	4	10	, 76	62
Alabama [§] Kentucky	_	0 1	3 9	 8	3 4	1	3 6	20 31	32 52	71 26	N 1	0 1	0 6	N 20	N 16
Mississippi	_	0	2	_	_	_	2	7	20	28	_	0	0	_	_
Tennessee [§] W.S. Central	_	1 2	4 37	19 2	8 15	1	3 65	46 244	24 226	233 616	1	3 6	9 49	56 83	46 83
Arkansas	_	0	2	1	3	_	1	9	24	14	_	0	2	3	6
Louisiana Oklahoma	_	0 0	2 3	1	6 1	_	2 9	11 41	28 25	37 133	_ 1	0 2	2 10	5 54	4 46
Texas [§]	3	1	37	11	5	_	50	237	149	432	_	3	42	21	27
Mountain Arizona	_	5 0	16 4	25 10	45 4	7 2	17 9	48 29	172 90	147 63	12 4	12 4	43 28	252 130	219 85
Colorado Idaho§	_	1 1	6 8	11 4	12 7	4	3 0	18 4	32 4	24	4	3 0	10 2	67 3	79 1
Montana Nevada [§]	_	0	2		1 9	1	0	1 6	1 12	1 24	_	0	0 6		
New Mexico [§]	_	0	3	2	2	_	2	9	19	24	_	1	6	22	24
Utah Wyoming	_	1 0	7 3	2	9 1	_	1 0	4 1	13 1	11	4	2	6 1	28 2	29 1
Pacific	1	4	50	28	14	20	39	145	388	481	2	2	8	25	29
Alaska California	_	0	2 5	 19	2 1	1 15	0 32	1 103	3 284	6 432	_	0 0	0 0	_	_
Hawaii Oregon [§]	1	0 2	4 47	3 14	3		1	4 28	10 54	8 23	2 N	2	8	25 N	29 N
Washington	_	1	41	6	5	2	2	41	37	12	N	0	0	N	N
American Samoa	U U	0	0	U U	U U	U U	0	2	U	2 U	U U	0	0	U U	U U
C.N.M.I. Guam	_	0	Ö	_	_	_	0	0	<u>U</u>	1	_	0	0	_	_
Puerto Rico U.S. Virgin Islands	_	0	1 0	=		=	0 0	1 0	1	_	<u>N</u>	0	0	<u>N</u>	<u>N</u>

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: No

Med: Median.

Max: Maximum.

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

* Incidence data for reporting years 2005 and 2006 are provisional.

† Includes *E. coli* O157:H7; Shiga toxin positive, serogroup non-0157; and Shiga toxin positive, not serogrouped. Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending April 8, 2006, and April 9, 2005 (14th Week)*

(14th Week)*	Streptod			e, invasive	e disease										
		Drug re	esistant,	all ages		Sypi	hilis, prim Previo		seconda	ry			ella (chicl	kenpox)	
	Current	52 we		Cum	Cum	Current	52 wee		Cum	Cum	Current	52 w		Cum	Cum
Reporting area	week	Med	Max	2006	2005	week	Med	Max	2006	2005	week	Med	Max	2006	2005
United States	54	49	124	904	944	76	172	311	1,862	2,012	811	643	2,999	13,707	7,496
New England Connecticut	_ U	1 0	14 0	7 U	55 U	4	4 0	17 11	57 12	49 1	7 U	34 0	1,130 0	364 U	915 U
Maine	N	0	0	N	N	_	0	2	3	1	_	6	20	85	102
Massachusetts New Hampshire	_	1 0	6 0	_	46 —	3	2	5 2	34 4	41 3	7	17 6	86 1,110	2 109	795 —
Rhode Island	_	0	9	1	6	_	0	6	3	3	_	0	0	_	_
Vermont [†] Mid. Atlantic	3	0 2	2 14	6 40	3 96	1	0 20	1 34	1 186	— 271	118	4 116	25 182	168 1,763	18 1,433
New Jersey	N	0	0	N	N	_	2	7	38	37	_	0	0	1,703	1,433
New York (Upstate) New York City	1 U	1 0	10 0	10 U	36 U	6 1	2 10	15 21	37 59	18 175	_	0	0	_	_
Pennsylvania	2	2	9	30	60	2	4	8	52	41	118	116	182	1,763	1,433
E.N. Central	18	12 0	37 2	234 7	218	1	19	42	217	136 36	293	148	537	5,609	2,045
Illinois Indiana	3	3	19	53	65	_	9 1	32 5	85 19	15	N	1 0	5 347	4 N	24 N
Michigan Ohio	 15	1 7	4 32	9 165	16 137	_	2 4	8 11	39 61	20 58	61 232	88 33	231 380	1,574 3,758	1,274 562
Wisconsin	Ň	Ó	0	N	N	1	1	3	13	7	_	9	41	273	185
W.N. Central	2	1	15	18	14	2	5	9	43	63	29	15	73	586	64
Iowa Kansas	N N	0 0	0 0	N N	N N	1	0 0	1 2	2 8	3 6	N —	0 0	0 0	N	N
Minnesota Missouri	_	0 1	15 3	 18	— 13	_ 1	1 2	5 8	6 26	15 38	 29	0 12	0 72	 557	2
Nebraska [†]	_	0	1	_	_	_	0	1	1	1	_	0	1	_	_
North Dakota South Dakota	_	0	1 1	_	1	_	0 0	1 1	_	_	_	0 1	25 23	13 16	9 53
S. Atlantic	31	21	42	472	396	30	43	182	475	466	83	53	815	1,379	700
Delaware District of Columbia		0	2	 17	1 11		0 2	2 9	8 29	4 29	1 5	1 0	5 6	27 11	8 5
Florida	17	11	34	263	205	11	15	29	188	193	_	0	0	_	_
Georgia Maryland [†]	9	5 0	19 0	156	148	 8	8 5	141 19	33 79	53 78	_	0	0	_	_
North Carolina South Carolina [†]	N	0 0	0	N	N	6	5 1	17 7	81 18	64 19		0 13	0 43	 293	 163
Virginia [†]	N	0	0	N	N	2	3	12	39	25	31	13	795	483	93
West Virginia	2	2	10	36	31	_	0	1	_	1	43	19	70	565	431
E.S. Central Alabama [†]	N	4 0	14 0	73 N	58 N	6	10 3	20 12	147 76	119 53	_	0 0	0	_	_
Kentucky Mississippi	_	0 0	5 0	9	9	_	1 0	5 5	11 11	6 16	N	0	0	N	N
Tennessee [†]	_	3	13	64	49	6	4	11	49	44	N	0	0	N	N
W.S. Central	_	1	7	31	72	14	24	37	337	326	210	153	1,674	2,935	1,231
Arkansas Louisiana	_	0 1	3 5	6 25	6 66		1 3	6 17	25 20	12 50	_	0 1	39 19	155 80	84
Oklahoma Texas [†]	N N	0	0	N N	N N	1 11	1 17	6 29	21 271	12 252	 210	0 150	0 1,642	2,700	 1,147
Mountain	_	1	27	29	35		8	17	93	118	71	48	130	1,071	1,108
Arizona	N	0	0	N	N	_	3	13	52	37	_	0	0	´ —	´ —
Colorado Idaho†	N N	0 0	0 0	N N	N N	_	1 0	3 3	8 1	18 6	36 —	35 0	74 0	618 —	758 —
Montana Nevada†	_	0	1 27	_ 1	_ 1	_	0 2	1 7	 19	5 32	_	0	0 2	_	_
New Mexico†	_	0	0	_	_	_	1	4	12	17	_	3	24	139	89
Utah Wyoming	_	0 0	6 3	15 13	21 13	_	0 0	1 0	1	3	35 —	8 0	55 3	306 8	222 39
Pacific	_	0	0	_	_	10	34	56	307	464	_	0	0	_	_
Alaska California	N	0	0	_ N	 N		0 29	4 54	4 231	3 408	_	0	0	_	_
Hawaii	_	0	Ō	_	_	_	0	2	7	1	N	0	0	N	N
Oregon [†] Washington	N N	0	0 0	N N	N N	<u> </u>	0 2	6 11	4 61	8 44	N N	0	0	N N	N N
American Samoa	_	0	0	_	_	U	0	0	U	U	U	0	0	U	U
C.N.M.I. Guam	_	0	0	_	_	U	0	0	U	U	U	0	0	U	U 26
Puerto Rico	N	0	0	N	N	_	4	16	37	35	21	6	47	77	192
U.S. Virgin Islands	_	0	0	_	_	_	0	0	_	_	_	0	0	_	_

Cum: Cumulative year-to-date counts.

Med: Median.

Max: Maximum.

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to* Incidence data for reporting years 2005 and 2006 are provisional.

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending April 8, 2006, and April 9, 2005 (14th Week)*

(14th Week)*					West Nile vi	rus disease†						
			Neuroinvas	sive	West Mile VI	ius disease		No	n-neuroinv	asive		
			/ious						/ious			
Reporting area	Current week	52 w	veeks Max	Cum 2006	Cum 2005		rrent eek	<u>52 w</u> Med	reeks Max	Cum 2006	Cum 2005	
United States	_	1	154	1	1		_	1	202	_	3	
New England	_	0	3	_	_		_	0	2	_	_	
Connecticut Maine	_	0 0	2 0	_	_		_	0 0	1 0	_	_	
Massachusetts		0	3	_			_	0	1	_	_	
New Hampshire	_	0	0	_	_		_	0	0	_	_	
Rhode Island Vermont [§]	_	0	1	_	_		_	0	0	_	_	
	_	0	0	_	_		_	0	0	_	_	
Mid. Atlantic New Jersey	_	0 0	9 1	_	_		_	0 0	3 2	_	_	
New York (Upstate)	_	Ö	6	_	_		_	Ö	1	_	_	
New York City	_	0	2	_	_		_	0	2	_	_	
Pennsylvania	_	0	3	_	_		_	0	2	_	_	
E.N. Central Illinois	_	0 0	39	_	_		_	0 0	18	_	_	
IIIInois Indiana	_	0	25 2	_	_		_	0	16 1	_	_	
Michigan	_	0	14	_	_		_	0	3	_	_	
Ohio Wissensin	_	0	9	_	_		_	0	4	_	_	
Wisconsin	_	0	3	_	_		_	0	2	_	_	
W.N. Central Iowa	_	0 0	26 3	_	_		_	0 0	80 5	_	_	
Kansas	_	0	3	_	_		N	0	3	N	N	
Minnesota	_	0	5	_	_		_	0	5	_	_	
Missouri Nebraska§	_	0 0	4 9	_	_		_	0 0	3 24	_	_	
North Dakota	_	0	4	_	_		_	0	15	_	_	
South Dakota	_	Ö	7	_	_		_	Ö	33	_	_	
S. Atlantic	_	0	6	_	_		_	0	4	_	_	
Delaware	_	0	1	_	_		_	0	0	_	_	
District of Columbia Florida	_	0 0	1 2	_	_		_	0 0	1 4		_	
Georgia		0	3	_			_	0	3	_	_	
Maryland§	_	0	2	_	_		_	0	1	_	_	
North Carolina South Carolina§	_	0 0	1 1	_	_		_	0 0	1 0	_	_	
Virginia [§]	_	0	0	_	_		_	0	1	_	_	
West Virginia	_	Ō	Ö	_	_		N	0	0	N	N	
E.S. Central	_	0	10	1	_		_	0	5	_	_	
Alabama§	_	0	1	_	_		_	0	2	_	_	
Kentucky Mississippi	_	0 0	1 9	1	_		_	0 0	0 5		_	
Tennessee§		0	3		_		_	0	1	_		
W.S. Central	_	0	32	_	_		_	0	21	_	2	
Arkansas	_	0	3	_	_		_	0	2	_	_	
Louisiana	_	0	20	_	_		_	0	8	_	2	
Oklahoma Texas§	_	0 0	6 16	_	_		_	0 0	3 13	_	_	
Mountain	_	0	16	_	1		_	0	39	_		
Mountain Arizona		0	8	_	1		_	0	39 8	_	_	
Colorado	_	0	5	_	<u>.</u>		_	0	13	_	_	
ldaho§	_	0	2	_	_		_	0	3	_	_	
Montana Nevada§	_	0 0	3 3	_	_		_	0 0	9 8	_	_	
New Mexico§	_	0	3	_	_		_	Ō	4	_	_	
Utah	_	0	6	_	_		_	0	8	_	_	
Wyoming	_	0	2	_	_		_	0	1	_	_	
Pacific Alaska	_	0 0	50 0	_	_		_	0 0	90 0	_	1	
Alaska California	_	0	50	_	_		_	0	89	_	1	
Hawaii	_	0	0	_	_		_	0	0	_	_	
Oregon [§] Washington	_	0 0	1 0	_	_		_	0 0	2 0	_	_	
o .					_		_			_	_	
American Samoa C.N.M.I.	U U	0 0	0 0	U U	U U		U U	0 0	0 0	U U	U U	
Guam	_	0	0	_	_		_	0	0	_	_	
Puerto Rico	_	0	0	_	_		_	0	0	_	_	
U.S. Virgin Islands	_	0	0	_	_		_	0	0	_	_	

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: No N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

Thordenote date for reporting years 2005 and 2006 are provisional.

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

Scontains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE III. Deaths	in 122 U.					2006 ((14th W	eek)		Alla	augaa k	ogo (v	0010		
	A11	All C	auses, b	y age (ye	ears)		P&I [†]		All causes, by age (years)			P&I [†]			
Reporting Area	All Ages	≥65	45-64	25-44	1-24	<1	Total	Reporting Area	Ages	≥65	45-64	25-44	1-24	<1	Total
New England	612	445	116	35	8	8	61	S. Atlantic	1,384	888	330	105	34	27	70
Boston, MA Bridgeport, CT	157 39	101 27	38 7	10 4	3 1	5	12 5	Atlanta, GA Baltimore, MD	232 167	138 98	63 43	22 16	4 8	5 2	9 14
Cambridge, MA	14	13	1			_	3	Charlotte, NC	122	86	19	10	5	2	11
Fall River, MA	32	20	8	4	_	_	4	Jacksonville, FL	151	98	38	9	6	_	2
Hartford, CT	65	53	6	4	2	_	10	Miami, FL	120	71	33	13	3	_	3
Lowell, MA Lynn, MA	31 12	23 10	5 2	3	_	_	4 2	Norfolk, VA Richmond, VA	57 68	43 35	10 24	1 5	3	3 1	1 6
New Bedford, MA	23	19	4	_	_	_	6	Savannah, GA	48	29	12	4	_	3	2
New Haven, CT	U	U	U	U	U	U	U	St. Petersburg, FL	69	47	16	2	_	4	12
Providence, RI	85	67	13	3	1	1	6	Tampa, FL	211	160	35	13	_	3	6
Somerville, MA Springfield, MA	10 42	8 30	2 8	2	_	_	_	Washington, D.C. Wilmington, DE	121 18	67 16	35 2	10	5 —	4	3 1
Waterbury, CT	28	22	4	1	1	_	_	1	877				11	01	
Worcester, MA	74	52	18	4	_	_	7	E.S. Central Birmingham, AL	171	567 107	212 38	66 19	3	21 4	83 26
Mid. Atlantic	2,132	1,548	423	115	19	26	135	Chattanooga, TN	72	53	17	1	_	1	7
Albany, NY	40	32	6	1	1	_	3	Knoxville, TN	119	81	29	5	1	3	.1
Allentown, PA	31 70	26 49	4 16	1 4	_	_ 1	5 10	Lexington, KY	80 153	55 96	22 41	3 13	_ 1	_	15 7
Buffalo, NY Camden, NJ	24	19	2	2	_	1	3	Memphis, TN Mobile, AL	100	57	22	15	3	3	5
Elizabeth, NJ	15	13	2	_	_	_	2	Montgomery, AL	41	34	5	1	_	1	8
Erie, PA	34	31	2	_	_	1	4	Nashville, TN	141	84	38	9	3	7	14
Jersey City, NJ New York City, NY	40 1,102	27 782	13 224	— 70	10	 15	<u> </u>	W.S. Central	1,410	903	340	101	30	36	57
Newark, NJ	51	27	18	4	2	_	6	Austin, TX	94	59	24	9	1	1	3
Paterson, NJ	19	14	1	2	1	1	_	Baton Rouge, LA Corpus Christi, TX	40 U	28 U	6 U	4 U	1 U	1 U	 U
Philadelphia, PA	284	207	59	15	2	1	8	Dallas, TX	205	115	60	12	6	12	8
Pittsburgh, PA§ Reading, PA	26 26	19 21	5 5	1	_	1	1	El Paso, TX	94	64	19	5	4	2	5
Rochester, NY	134	103	22	6	2	1	12	Fort Worth, TX	99	75	18	3	_	3	5
Schenectady, NY	15	11	4	_	_	_	1	Houston, TX Little Rock, AR	388 70	231 46	102 16	38 5	7 1	10 2	14 3
Scranton, PA	42	31 99	8	3	_	_	4	New Orleans, LA ¹	Ü	Ü	Ü	Ŭ	ΰ	Ū	ŭ
Syracuse, NY Trenton, NJ	124 28	99 14	21 9	4	_ 1	 4	15 —	San Antonio, TX	226	151	52	14	5	4	14
Utica, NY	12	11	1	_	_	_	_	Shreveport, LA Tulsa, OK	72 122	48 86	17 26	5 6	1 4	1	5
Yonkers, NY	15	12	1	2	_	_	1	Mountain	918	599	199	68	30	22	90
E.N. Central	2,067	1,414	452	119	49	31	177	Albuquerque, NM	113	63	34	12	2	2	10
Akron, OH Canton, OH	44 42	29 26	11 13	1 2	3	_ 1	4 2	Boise, ID	48	33	10	3	2	_	4
Chicago, IL	340	209	80	33	12	5	25	Colorado Springs, CO		43	8	2	1	_	2
Cincinnati, OH	40	25	8	3	3	1	4	Denver, CO Las Vegas, NV	103 279	62 183	25 61	7 22	4 11	5 2	7 30
Cleveland, OH	252	196	45	6	1	4	11	Ogden, UT	36	29	2	3	1	1	5
Columbus, OH Dayton, OH	267 121	182 91	56 22	18 4	9 2	2	35 13	Phoenix, AZ	148	87	35	11	8	7	15
Detroit, MI	177	97	53	18	7	1	18	Pueblo, CO	30 107	21 78	5	3	_ 1	1 4	3 14
Evansville, IN	48	35	12	_	_	1	4	Salt Like City, UT Tucson, AZ	U	70 U	19 U	5 U	Ú	U	U
Fort Wayne, IN Gary, IN	62 19	51 8	7 7	2 4	1	1	2	Pacific	1,934	1,348	406	100	43	36	171
Grand Rapids, MI	75	51	16	3	4	1	7	Berkeley, CA	1,334	1,546	2	_	-	2	2
Indianapolis, IN	175	105	51	12	5	2	13	Fresno, CA	123	74	34	9	6	_	7
Lansing, MI	21	14	6	_	_	1	1	Glendale, CA	25	21	4	_	_	_	6
Milwaukee, WI Peoria, IL	102 42	74 35	20 4	6 1	_	2	11 2	Honolulu, HI Long Beach, CA	61 63	46 37	10 19	5 4	1	2	9
Rockford, IL	57	45	6	3	2	1	11	Los Angeles, CA	427	313	82	22	4	6	48
South Bend, IN	46	36	9	_	_	1	2	Pasadena, CA	20	12	6	_	_	2	5
Toledo, OH Youngstown, OH	92 45	69 36	19 7	1 2	_	3	10 2	Portland, OR Sacramento, CA	111 195	78 141	25 40	7 7	3	1 4	8 14
_								San Diego, CA	211	144	40	14	7	5	16
W.N. Central Des Moines, IA	686 —	447	152	41	27 —	18	49 —	San Francisco, CA	184	124	43	9	3	5	26
Duluth, MN	38	30	6	1	_	1	3	San Jose, CA	160	120	30	5	3	2	15
Kansas City, KS	33	17	9	2	4	1	2	Santa Cruz, CA Seattle, WA	28 137	25 75	2 41	1 9	9	3	 5
Kansas City, MO	107	68	29	5	3	2	6	Spokane, WA	60	39	11	4	4	2	7
Lincoln, NE Minneapolis, MN	40 65	31 45	4 12	3 4	2 2	_	5 5	Tacoma, WA	110	84	17	4	3	2	3
Omaha, NE	105	71	23	6	5	_	11	Total	12,020**	8,159	2,630	750	251	225	893
St. Louis, MO	171	92	43	18	8	9	13								
St. Paul, MN Wichita, KS	52 75	42 51	6 20	_	1 2	3	2 2								
vvicinta, NO	13	51	20					I.							

^{-:} No reported cases.

U: Unavailable. —:No reported cases.

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

† Pneumonia and influenza.

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

¶ Because of Hurricane Katrina, weekly reporting of deaths has been temporarily disrupted.

** Total includes unknown ages.

TABLE IV. Provision	onal case	nal cases of selected notifiable diseases, United States, quarter ending April 1, 2006 (13th week) AIDS* Tuberculosis†													
		Pre	vious				Previ					Prev		515.	
Poporting area	Current quarter	4 qu Min	arters Max	Cum 2006	Cum 2005	Current quarter	4 qua	rters Max	Cum 2006	Cum 2005	Current week	4 qua	rters Max	Cum 2006	Cum 2005
Reporting area United States	9,922	9,922	11,012	9,922	10,082	14,655	14,655	17,264	14,655	16,092	1,641	1,641	3,389	1,641	2,759
New England Connecticut Maine† Massachusetts† New Hampshire Rhode Island† Vermont†	274 62 23 121 19 44	274 62 3 121 6 2	452 250 23 182 19 44	274 62 23 121 19 44	402 154 3 206 3 35	387 162 23 128 26 43	387 162 3 128 8 2	735 514 23 189 26 43	387 162 23 128 26 43	1,762 1,109 6 230 380 36	52 10 3 32 2 3	52 10 3 32 0 3	165 34 6 113 2 14	52 10 3 32 2 2	86 20 5 43 3 13
Mid. Atlantic New Jersey New York (Upstate) New York City Pennsylvania	1,245 59 59 935 192	1,245 59 59 935 192	2,605 381 628 1,345 566	1,245 59 59 935 192	1,973 358 195 1,105 315	2,486 202 107 1,370 807	2,486 202 107 1,370 466	4,243 501 726 1,743 1,284	2,486 202 107 1,370 807	3,196 626 254 1,823 493	461 86 45 245 85	461 86 45 223 63	607 135 110 271 102	461 86 45 245 85	443 106 46 230 61
E.N. Central Illinois† Indiana Michigan Ohio Wisconsin	896 242 96 197 273 88	896 242 75 118 176 5	1,198 525 113 386 278 88	896 242 96 197 273 88	893 473 112 135 130 43	1,228 273 132 243 406 174	1,228 273 126 89 379 4	1,477 604 170 488 406 174	1,228 273 132 243 406 174	1,114 473 134 259 185 63	207 91 18 30 52 16	207 91 18 30 51 16	353 159 40 92 83 23	207 91 18 30 52 16	282 140 28 40 57 17
W.N. Central lowa Kansas Minnesota Missouri Nebraska North Dakota South Dakota	218 19 57 70 50 19 —	200 19 16 49 50 13 0 3	237 32 57 70 103 22 4 5	218 19 57 70 50 19 —	227 18 31 69 97 2 5	386 32 82 117 141 6 1	344 20 19 87 118 6 1	421 49 82 117 208 50 3 11	386 32 82 117 141 6 1	338 23 46 104 147 1 3	87 7 29 32 14 1 — 4	87 7 11 32 14 1 0 3	126 13 29 56 29 17 1	87 7 29 32 14 1 —	99 11 18 40 23 2 1
S. Atlantic Delaware† District of Columbia† Florida Georgia Maryland† North Carolina South Carolina Virginia West Virginia	3,742 17 267 1,561 520 493 543 205 112 24	2,874 17 6 1,084 520 229 113 116 112	3,742 48 292 1,561 751 559 543 205 209 24	3,742 17 267 1,561 520 493 543 205 112 24	3,314 51 176 1,543 517 406 292 139 172 18	5,093 22 273 2,095 1,007 485 724 220 245	4,877 22 9 1,731 1,007 233 357 143 245 22	5,599 47 304 2,095 2,352 559 724 269 344 27	5,093 22 273 2,095 1,007 485 724 220 245 22	4,855 53 188 2,285 1,021 398 436 195 256 23	312 — 18 132 11 42 55 2 47 5	312 0 7 132 11 42 55 2 47 4	824 8 18 354 150 79 126 68 131	312 — 18 132 11 42 55 2 47 5	597 8 21 221 159 56 37 38 49
E.S. Central Alabama Kentucky Mississippi Tennessee	450 116 52 87 195	450 99 52 54 181	507 138 69 122 239	450 116 52 87 195	561 163 63 108 227	707 185 150 111 261	677 173 150 101 243	863 209 192 177 289	707 185 150 111 261	709 145 172 109 283	126 52 13 — 61	126 45 13 0 58	175 72 43 0 87	126 52 13 — 61	107 20 25 — 62
W.S. Central Arkansas Louisiana Oklahoma Texas	904 45 82 44 733	904 3 82 44 667	1,341 99 326 94 967	904 45 82 44 733	1,006 71 169 73 693	1,767 90 218 51 1,408	1,767 3 218 51 1,261	2,122 182 342 103 1,587	1,767 90 218 51 1,408	1,863 119 286 99 1,359	202 19 — 45 138	202 19 0 30 138	453 34 0 45 392	202 19 — 45 138	434 21 — 34 379
Mountain Arizona Colorado Idaho Montana† Nevada New Mexico Utah Wyoming	389 141 111 10 — 80 31 15	386 141 79 5 0 60 25 11	401 183 111 10 14 95 43 22 3	389 141 111 10 — 80 31 15	385 157 82 3 81 40 19	619 282 115 22 — 119 43 34 4	606 253 115 4 0 91 35 26	692 338 144 22 14 144 53 49	619 282 115 22 — 119 43 34 4	595 249 134 6 4 112 54 30 6	52 25 14 — — 6 6	52 25 9 0 0 0 4 4	162 76 24 7 6 38 18 10	52 25 14 — — 6 6 1	79 28 21 6 — 18 3 3
Pacific Alaska California† Hawaii† Oregon† Washington†	1,579 9 1,353 25 89 103	1,196 3 963 19 29 103	1,579 11 1,353 34 89 139	1,579 9 1,353 25 89 103	1,068 7 868 26 64 103	1,487 10 1,284 26 88 79	1,125 9 931 19 31 79	1,487 15 1,284 34 88 116	1,487 10 1,284 26 88 79	1,029 11 838 27 64 89	142 16 63 18 — 45	142 9 63 18 0 45	831 16 705 33 24 77	142 16 63 18 — 45	632 13 505 29 29 56
American Samoa C.N.M.I. Guam Puerto Rico U.S. Virgin Islands		0 0 219 0	2 1 283 7	2 1 219 3		 493 2	 0 478 0	— 2 755 14	 493 2	— 1 621 9	U 	0 0 0 0	2 0 0 0 0	U 	U - -

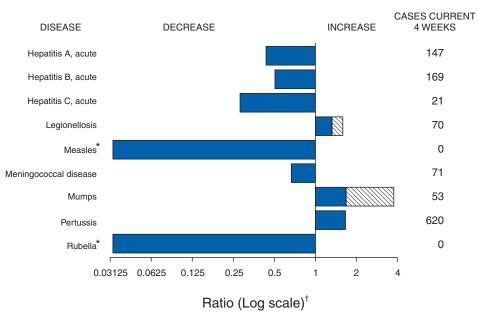
C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Min: Minimum. Max: Maximum.

* AIDS and HIV/AIDS are not mutually exclusive. Persons with AIDS have met the case definition for AIDS regardless of whether they received an HIV diagnosis before the onset of AIDS. HIV/AIDS includes persons with an HIV infection and includes persons with a diagnosis of HIV infection only, a diagnosis of HIV and later developed AIDS, or concurrent diagnoses of HIV and AIDS. Updated quarterly from reports to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention. Last

update was March 31, 2006.

Methods other than confidential, name-based reporting for HIV diagnoses without AIDS are used in these areas.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals April 8, 2006, with historical data



Beyond historical limits

^{*} No measles or rubella cases were reported for the current 4-week period yielding a ratio for week 14 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.

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

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Address inquiries about the *MMWR* Series, including material to be considered for publication, to Editor, *MMWR* Series, Mailstop K-95, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333; telephone 888-232-3228.

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

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

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

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