

ing the third week of June. Mosquito surveillance has guided vector-control activities, including larviciding of potential breeding sites and ultra-low volume applications of insecticide against adult mosquitoes.

Additional information about WNV activity is available at <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm> and http://cindi.usgs.gov/hazard/event/west_nile/west_nile.html.

Outbreak of *Salmonella* Serotype Javiana Infections — Orlando, Florida, June 2002

On July 16, 2002, the Minnesota Department of Health identified two cases of *Salmonella* serotype Javiana infections among persons who had attended the 2002 U.S. Transplant Games held at theme park A in Orlando, Florida, during June 25–29. Isolates from both patients were indistinguishable by pulsed field gel electrophoresis (PFGE). The U.S. Transplant Games is a 4-day athletic competition among recipients of solid organ transplants (i.e., heart, liver, kidney, lung, and pancreas) and bone marrow transplants. Approximately 6,000 persons from the United States and five other countries, including 1,500 transplant-recipient athletes, participated in the games. This report summarizes the results of an ongoing epidemiologic and laboratory investigation that has identified 141 ill persons in 32 states who attended the games.

For case ascertainment and investigation purposes, a web-based survey was distributed electronically on July 20 to 1,100 attendees with known e-mail addresses, including athletes, donors, family members, and transplant professionals. Anonymous e-mail addresses for these persons were obtained from the organizers of the games. A case was defined as fever or diarrhea with onset during June 25–July 7 in a person who visited Orlando. A total of 369 (34%) persons responded by August 1; of these, 296 (80%) responded by July 22. Ninety-four (25%) persons reported that at least one household member had an illness that met the case definition, representing 141 ill persons.

For each of the 369 households, detailed information was collected for one person who was selected on the basis of birth date. Among these persons, 82 (22%) reported illness. The median age of ill respondents was 47 years (range: 4–71 years); 48 (59%) were transplant recipients, and 43 (52%) were receiving immunosuppressive therapy. Dates of illness onset ranged from June 26 to July 7. Predominant symptoms included diarrhea (93%), abdominal pain (79%), and fever (51%). Three (4%) respondents were hospitalized.

All survey respondents were asked about places they stayed, events they attended, and foods they ate while in Orlando. Fifty-one (66%) ill persons stayed at resorts located in theme park A during their time in Orlando, and 75 (91%) reported eating food items at establishments located in theme park A. On July 31, a second web-based survey containing questions about potentially suspect food items available in theme park A was distributed electronically to the 369 persons who responded to the first survey. Ill persons were asked about specific foods eaten during the 3 days before illness onset, and well persons were asked about the middle 3 days of the games (June 26–28). By August 2, a total of 222 (60%) persons had responded to the second survey; 41 had been ill. Univariate analysis demonstrated that ill persons were significantly more likely to report eating foods containing diced Roma tomatoes than were well persons (44% of ill versus 14% of well persons; adjusted odds ratio=4.3; 95% confidence interval=2.1–9.1). Preliminary microbiologic evaluation indicates fecal coliform contamination of the diced tomatoes.

To identify other potential cases of *S. Javiana*, the PFGE pattern for the outbreak strain was posted on PulseNet, the National Molecular Subtyping Network for Foodborne Disease Surveillance. A total of 18 additional infections caused by *S. Javiana* with an indistinguishable PFGE pattern were identified in nine states (Illinois, Massachusetts, Michigan, Minnesota, New Hampshire, North Carolina, Pennsylvania, Tennessee, and Virginia). Of 16 patients who were interviewed, one was a games participant, and 12 others had visited theme park A during the last week of June but did not attend the games. Dates of illness onset ranged from June 24 to July 8. State and local health departments are investigating additional cases to establish epidemiologic links to the outbreak.

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Editorial Note: Salmonellosis causes an estimated 1.4 million illnesses each year in the United States (1). *S. Javiana* is the fifth most common *Salmonella* serotype in the United States and accounted for 3.4% of *Salmonella* isolates reported to CDC during 2001 (CDC, unpublished data, 2002). The majority of persons infected with *Salmonella* have diarrhea, fever, and abdominal cramps 12–72 hours after exposure. The illness usually lasts 4–7 days, and the majority of persons recover without treatment.

Persons with impaired immune systems are at increased risk for having a more severe illness, atypical symptoms, and complications of infection. Among organ transplant recipients,

salmonellosis is associated strongly with antirejection therapy (2), and febrile illness with bacteremia is a more common presentation (3). Organ transplant patients are at increased risk for focal manifestations of illness including meningitis, urinary tract infections, abscesses of soft tissues, septic arthritis, osteomyelitis, and vascular infections, including infections of vascular grafts (4–6). Recurrence of nontyphoidal salmonellosis is common among this population and might occur in up to 35% of renal transplant recipients (2,3).

Physicians caring for recipients of solid organ and bone marrow transplants should be aware of possible exposure to *S. Javiana* at the 2002 U.S. Transplant Games and should consider obtaining cultures (i.e., stool, blood, and urine) from ill patients with this exposure. The optimal therapy for *Salmonella* infection in transplant recipients is not known (4). However, because of the increased susceptibility to infection and the potential for complications, physicians might consider empiric antimicrobial therapy in transplant recipients with suspected salmonellosis from whom appropriate cultures have been obtained. The strain of *S. Javiana* responsible for this outbreak is susceptible to several commonly used antimicrobials, including trimethoprim-sulfamethoxazole, ciprofloxacin, and ceftriaxone. Physicians should report culture-confirmed cases of salmonellosis to their local health department.

The use of a web-based survey in this investigation allowed a substantial number of persons who were dispersed geographically to be asked about potential exposures in a relatively short period of time. Twelve culture-confirmed cases of *S. Javiana* among visitors to theme park A who did not attend the games were identified through PulseNet, indicating that the number of ill persons in this outbreak is probably much larger than what has been identified in the surveyed Transplant Games population. The combination of molecular subtyping, web-based technology, and routine public health surveillance facilitated the outbreak investigation.

The findings in this report are subject to at least two limitations. First, a web-based investigation limited responses to only those attendees with known e-mail addresses and Internet access. Second, although responses were received from both well and ill persons, households with ill persons might have been more likely to respond to a web-based survey. Therefore, it is difficult to calculate an accurate attack rate among attendees of the games.

Preliminary findings of the epidemiologic investigation have implicated fresh, pre-packaged diced Roma tomatoes supplied to theme park A as the probable vehicle for this outbreak. Efforts are under way to identify the source of these tomatoes and possible routes of contamination. Tomatoes are not a

commonly recognized vehicle for *Salmonella*, and no evidence exists for widespread contamination of tomatoes available for purchase. However, tomatoes have been implicated in at least one previous outbreak of *S. Javiana* infections (7), and cut surfaces of tomatoes and other fresh fruits and vegetables can support the growth of *Salmonella* and other enteric pathogens (8,9). Produce is recognized increasingly as a source of *Salmonella* infections in the United States, and consumers should wash tomatoes and other produce items thoroughly before eating. The Food and Drug Administration guidelines for safe produce-handling practices are available at <http://www.cfsan.fda.gov/~lrd/tpproduc.html>.

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Childhood Lead Poisoning Associated with Tamarind Candy and Folk Remedies — California, 1999–2000

Lead poisoning affects children adversely worldwide. In the United States, elevated blood lead levels (BLLs) ($\geq 10 \mu\text{g}/\text{dL}$)