

Cryptosporidiosis Associated with a Local Humane Society Event

March

Goodhue County

On April 16, 2012, the Minnesota Department of Health (MDH) received a report through routine surveillance of cryptosporidiosis in an attendee of a petting zoo event held at the Goodhue County Humane Society on March 31. At the Humane Society's first ever "Spring Fling" event, attendees were encouraged to interact and have their pictures taken with neonatal livestock species (calf, lamb, and goat), bunnies, chicks, and dogs and cats of all ages available for adoption. An investigation was initiated on April 16.

It was estimated that over 100 individuals attended the event, though no formal attendance list existed. The executive director of the Humane Society was contacted and questioned about animals present, the day's activities, and any illness in attendees, employees, and volunteers who worked at the event. A partial list of attendees was prepared by the Humane Society director and provided to MDH; to ascertain additional cases, past patrons and donors were contacted. Individuals responsible for supplying the animals present for the event were also contacted, questioned about their illness history, and asked to submit stool specimens from their animals. Approximately 93 individuals were identified in association with this event, including 6 Humane Society employees.

A case was defined as an individual who attended the Humane Society event on March 31 and who developed either a laboratory-confirmed *Cryptosporidium* infection or diarrhea (≥ 3 loose stools in a 24-hour period) or vomiting lasting 3 or more days, with illness onset 2 to 14 days following the event. All cases were offered the opportunity to submit a stool sample to the MDH Public Health Laboratory (PHL) for bacterial and parasitic testing.

Illness histories and exposure information were obtained from 88 event attendees. Thirty-one cases were identified, including five with stool specimens that tested positive for *Cryptosporidium*. Of the 31 cases, all reported diarrhea, 28 (90%) reported abdominal cramps, 16 (52%) reported vomiting, 14 (45%) reported fever (maximum temperature range, 99-103° F), and 2 (6%) reported bloody stools. The median incubation period was 5.5 days (range, 1 to 12 days), and the median illness duration was 7 days (range, 3 to 15 days). Thirteen cases sought medical care; none were hospitalized. Four positive specimens were received by the MDH PHL, including one specimen that was submitted through routine surveillance by clinical laboratories; *Cryptosporidium parvum* subtype BGP5 was identified in all four specimens.

No activities were significantly associated with illness.

At the time of the investigation, the goat, lamb, and calf had been returned to their original owners and/or sold. A calf was reported by multiple attendees as having obvious signs of diarrhea; this calf had been sold to a farm in Washburn County, Wisconsin. The Wisconsin Division of Public Health (WDPH) was notified, and the owner of the calf was contacted by MDH staff regarding the outbreak investigation. Stool kits were sent to the owners of the calf as well as four other owners known to have provided animals for the event. Stool samples from a goat, two dogs, and a cat were returned for testing; all were negative for *Cryptosporidium*. The sample from the calf with diarrhea was never returned, even after

multiple conversations with the owner. MDH worked with the executive director of the Humane Society to identify methods to disinfect the environment and to minimize risk of additional human and animal cases.

This was an outbreak of cryptosporidiosis caused by *Cryptosporidium parvum*. The likely source was a calf with diarrhea that was on display at a petting zoo.
