

Cryptosporidiosis Associated with a Youth Camp

July

Crow Wing County

On August 1, 2012, the Minnesota Department of Health (MDH) foodborne and waterborne illness complaint hotline received a complaint from a parent whose child had become ill with vomiting and diarrhea after returning home from a youth camp in Brainerd, Minnesota the week of July 22-27. On August 8, MDH received a call from a physician reporting diarrheal illness in a second child who also had attended that camp the same week. Sanitarians from MDH Food, Pools, and Lodging Services (FPLS) were contacted on August 8, and an outbreak investigation was initiated.

Contact information for campers was provided to MDH by the camp administration. MDH staff interviewed campers about their illness and exposure histories. Cases of cryptosporidiosis that were identified through routine surveillance were interviewed to determine if they had attended the camp. A case was defined as a camper 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 camp attendance. Stool kits were sent to three campers for bacterial, parasitic, and viral testing at the MDH Public Health Laboratory (PHL).

MDH sanitarians visited the camp to conduct a field assessment of the facility and to interview staff regarding recent illness and job duties.

Illness histories and exposure information were obtained from 51 campers. Sixteen (31%) cases were identified. Four campers reported illness but did not meet the case definition, and thus were excluded from further analysis. Three campers submitted a stool sample to the MDH PHL; *Cryptosporidium hominis* subtype HGP4 was identified in all three specimens.

Of the 16 cases, 15 (94%) reported diarrhea, 13 (81%) reported cramps, 7 (44%) reported fever, 5 (42%) of 12 reported weight loss, and 4 (29%) of 14 reported vomiting. The median incubation period could not be calculated, as cases reported swimming the entire week of camp. The median duration of illness was 7 days (range, 4 to 16 days) for the 11 cases who had recovered by the time of interview. One case reported visiting a health care provider for their illness.

All campers reported swimming in the lake daily while at camp. Swallowing water while swimming was significantly associated with illness (6 of 13 cases vs. 4 of 26 controls; odds ratio, 4.7; 95% confidence interval, 1.0 to 21.7; $p = 0.03$). No specific cabin, drinking water exposure, or other camp activity was associated with illness.

This was an outbreak of cryptosporidiosis associated with swimming in a lake at a youth camp. The original source of contamination was not identified. However, as the species of *Cryptosporidium* identified in the stool of infected campers is only transmitted by humans, the role of any non-human source can be ruled out.