Norovirus Gastroenteritis Associated with a Restaurant

May Fillmore County

On May 16, 2011, the Minnesota Department of Health (MDH) foodborne illness hotline received a complaint of gastrointestinal illness among a group of 13 patrons who ate at a restaurant in Fountain. The group consisted of high school seniors who spent the day canoeing before eating at the restaurant. Reportedly, 10 persons became ill with vomiting and/or diarrhea after eating at the restaurant on May 11. On May 17, a second complaint of gastrointestinal illness among a group of four people from two households who also ate at the restaurant on May 11 was received. An investigation was initiated.

MDH epidemiology staff interviewed persons in both complaint groups about illness history and foods eaten at the restaurant.

MDH Environmental Health (EH) specialists visited the restaurant to evaluate food preparation and handling procedures and to inquire about employee illness. Restaurant employees were interviewed about recent history of gastrointestinal illness, job duties and foods eaten at the restaurant.

The restaurant owner was asked to screen employees for gastrointestinal illness when they presented to work during the investigation.

MDH EH specialists requested credit card receipts for patrons who ate at the restaurant on May 11, but the restaurant did not have any.

A case was defined as a person who ate at the restaurant and subsequently developed vomiting and/or diarrhea (≥3 loose stools in a 24-hour period). Stool samples collected from consenting restaurant

patrons and employees were submitted to the MDH Public Health Laboratory for bacterial and viral testing.

Nineteen restaurant patrons were interviewed. Three patrons reported mild gastrointestinal illness that did not meet the case definition; they were excluded from further analysis. Nine of the remaining 16 (56%) met the case definition. Eight (89%) cases reported vomiting, eight (89%) reported abdominal cramps, six (67%) reported diarrhea, two (22%) reported bloody stools, and none reported fever. None of the cases visited a medical provider. The median incubation period was 33 hours (range, 14 to 34 hours). The median duration of illness was 44 hours (range, 33 to 87 hours).

Cases reported eating a variety of foods: hamburgers, chicken strips, sandwiches (pork or Cuban), pickles, onion rings, French fries, ice cream, and beverages. Statistical analysis did not implicate a single food item as being associated with illness.

During the environmental health assessment, one employee was observed as having extensive bare-hand contact with ready-to-eat (RTE) foods (including hamburger buns), items at the bar leaving, and the ice scoop in the ice. The restaurant had been ordered to “limit bare-hand contact with RTE foods, like lettuce” on inspections conducted prior to the outbreak.

Illness histories and job duty information were obtained from all seven restaurant employees. One employee, the employee observed having bare-hand contact with RTE foods, reported having a recent history of gastrointestinal illness, as well as illness in three members of her household. On initial interview, she reported that her illness onset occurred before the meal date of the cases, but on a more formal interview, she reported illness onset as May 13.

MDH sanitarians stressed the importance of proper handling of food and beverages, use of gloves or utensils when handling RTE foods, good handwashing, and exclusion of ill food workers.

MDH collected stool specimens from one case and the restaurant employee that reported illness, and both tested positive for norovirus GII.4 New Orleans, but the viral sequences were different.

This was an outbreak of norovirus gastroenteritis associated with a restaurant in Fountain, Minnesota. A specific food vehicle was not identified. An ill employee that had extensive bare-hand contact with RTE foods was identified, but the illness onset was unclear, and the viral sequence from that employee was different than that of the patrons; therefore, it is unclear if that person was the initial source of the outbreak. However, bare-hand contact with ready-to-eat foods could have played a role in contamination of food.