

Norovirus Gastroenteritis Associated with an Event Center

December

St. Louis County

On December 6, 2011, the Minnesota Department of Health (MDH) foodborne illness hotline received an illness complaint associated with a wedding reception that was held at an event center in Duluth on December 3. The complainant reported approximately 75 illnesses among 260 reception attendees. MDH Environmental Health Services (EHS) was notified and an investigation was initiated.

On December 6, MDH sanitarians in the Northeast District Office received a call from management at the event center reporting that they had been receiving illness complaints from patrons both that morning and the previous day and that they had been collecting information from the complainants. Management was instructed to fax all complaints to MDH, as required by the Minnesota Food Code.

On December 6, the MDH foodborne illness hotline received an illness complaint from two individuals who had attended a holiday party at the event center on December 3.

A partial list of wedding guests was obtained from the bride and groom. Contact information for the 105 holiday party guests was obtained from the party organizer. A menu with food and beverages served at the wedding reception and holiday party was provided by the ballroom.

Staff from MDH interviewed wedding and holiday party guests to obtain information on food/beverage consumption and illness history. A case was defined as an event center guest who developed vomiting and/or diarrhea (≥ 3 loose stools in a 24-hour period) after attending an event at the ballroom. Stool samples collected from consenting guests and employees were submitted to the MDH Public Health Laboratory for bacterial and viral testing.

MDH sanitarians visited the ballroom to evaluate food preparation and handling procedures and to interview staff regarding recent illness and job duties.

MDH staff interviewed 98 ballroom guests, including 71 wedding guests and 27 holiday party guests. Sixty-two (63%) guests met the case definition, including 50 wedding guests and 12 holiday party guests. Ten additional guests reported illness that did not meet the case definition and were excluded from further analysis.

Fifty-three (87%) of 61 cases reported diarrhea, 48 (79%) of 61 reported cramps, 40 (65%) of 62 reported vomiting, and 33 (60%) of 55 reported fever. The median incubation period was 33 hours (range, 3 to 68 hours). The median duration of illness was 48 hours (range, 10 to 78 hours) for the 17 cases with known recovery date times. Two patron stool samples were received; one from a wedding guest and one from a holiday party guest. Both samples tested positive for norovirus GII. Nucleic acid sequencing was conducted on the samples, and the resulting sequences were identical.

Food for both events featured butler-passed hors d'oeuvres and a buffet dinner. The two events had different menus, but food for both was prepared in the same kitchen. No individual food items served at the events were found to be significantly associated with illness.

At the start of the investigation sanitarians and management established a screening protocol for employee illness. All employees with vomiting and/or diarrhea were excluded from work until 72 hours after the resolution of symptoms. Illness histories and job duty information were obtained from 41 employees. Eight employees reported recently having a gastrointestinal illness, with illness onset dates ranging from November 25 to December 11. One employee reported working December 3 while actively having vomiting and diarrhea. An additional employee reported working December 3 with abdominal cramps; however, his reported onset of diarrhea and vomiting was not until December 5. Employees reporting illness performed a variety of job duties at the ballroom, including food preparation. Five employees tested positive for norovirus GII. Nucleic acid sequencing was conducted on two of the

positive food worker samples, including the food worker who worked while ill on December 3, and the resulting sequences were identical to each other and to the sequence identified in patron samples.

During the December 6 on-site investigation, all food that had been previously prepared was discarded due to the fact that ill employees were involved in the preparation. All surfaces throughout the establishment were sanitized.

This was a foodborne outbreak of norovirus gastroenteritis associated with an event center in Duluth. The same norovirus sequence was identified in samples submitted from ballroom guests from separate events and from ballroom employees. The source of contamination was one or more infected food workers who had contact with ready-to-eat food items.