

### **Norovirus Gastroenteritis Associated with a Restaurant**

December

Hennepin County

On December 14, a restaurant contacted their Minnesota Department of Agriculture (MDA) inspector to report a complaint of illness in a private party that had dined at the restaurant on December 11. The inspector told the restaurant management to call the Minnesota Department of Health (MDH) foodborne illness hotline to report the complaint. On December 18, 2017, the MDH foodborne illness hotline received a call from a manager at the restaurant in Minneapolis. The manager reported receiving illness complaints from two separate parties, a party of 20 who ate at the establishment on December 11 and a large party (approximately 100 attendees) who ate at the establishment on December 14. In addition to the two patron complaints, the manager reported that they had eight or

nine kitchen staff and one bartender who were out ill. MDH contacted MDA and epidemiologists at the Hennepin County Human Services and Public Health Department (HCPH), and an investigation was initiated.

MDA sanitarians contacted the facility on December 18 to put initial outbreak interventions in place and asked management to begin screening employees, cleaning and sanitizing the facility, and to gather an employee contact list. On December 19, MDA staff visited the restaurant to evaluate food-handling practices and collect patron contact information for December 11 through December 16. Employee interviews were conducted by MDA, with assistance from MDH, onsite and over the telephone from December 19 through December 28.

HCPH reached out to additional parties who ate at the establishment from December 11 to December 16 to ask about illness. MDH interviewed patrons who called into the foodborne illness hotline.

A case was defined as a patron who developed vomiting or diarrhea ( $\geq 3$  loose stools in a 24-hour period) after their meal. Stool samples were collected from consenting cases and ill employees for viral and bacterial testing at the MDH Public Health Laboratory (PHL).

A total of 19 patrons were interviewed. Of these, 18 (95%) met the case definition. The interviewed patrons were from four separate parties; two of the parties (which included 16 cases) ate at the establishment on December 14, and two of the parties (2 cases, 1 control) ate at the establishment on December 16. The median incubation period from the restaurant meal to illness onset was 33 hours (range, 18 to 44 hours). Sixteen (89%) cases reported diarrhea, 14 (78%) abdominal cramps, 13 (72%) vomiting, and 4 (22%) fever. The median duration of illness was 34.5 hours (range, 7 to 92 hours) for the 16 cases who had recovered by the time of interview. One patron sought medical attention at a clinic. No cases were hospitalized or died.

Stool specimens from three patrons were received at the MDH PHL for testing. All three were positive for norovirus genotype II.P16-GII.2 with identical nucleic acid sequences. The meal date for the norovirus-positive patrons was December 14.

Illness was reported from six separate parties over a span of three meal dates: December 11, 14 and 16. The first party, who had originally contacted the restaurant to report illness in a party of 20, ate at the establishment on December 11. MDH tried to contact the party organizer but was unable to reach him after numerous attempts. Two parties ate at the establishment on December 14. The first party had originally contacted the restaurant to report their illness, and the party organizer directed attendees to contact MDH. MDH interviewed a total of 12 ill attendees from this party (approximately 100 attendees total). The second party that ate at the establishment on December 14 was contacted by HCPH via the additional patron contact information provided by the restaurant. The party reported that approximately 16 of 104 attendees had become ill. Attendees were directed to call HCPH, and a total of four attendees called and were interviewed. Three parties ate at the establishment on December 16. HCPH reached two of these groups via the party contact information provided by the restaurant. The first group reported “a handful” of illnesses out of about 50 attendees; however, no formal interviews were conducted. Two attendees (one case, one control) were interviewed from the second group (unknown number of total attendees). The third group with a December 16 meal date called in to the MDH foodborne illness hotline and reported that one of two party members became ill after eating at the establishment. HCPH spoke to the party organizers of six additional parties held at

the restaurant from December 11 to December 16, and none reported knowing of illness in their group.

The small number of controls precluded meaningful statistical analyses.

All 194 employees were interviewed; at the time of interview 40 (21%) reported recent gastrointestinal illness. An additional four (2%) employees subsequently reported becoming ill after being interviewed. Employees reported onset of symptoms during December 2 through January 2 (see epidemic curve below). At least seven employees reported working while ill or while not fully recovered, three of which reportedly vomited in the employee restroom while at work (on December 14, December 17, and December 22).

Two recently ill employees (both with an illness onset date of December 18) submitted stool specimens to the MDH PHL. One tested positive for norovirus genotype II.P16-GII.2, and had a nucleic acid sequence identical to the patron specimens. The other tested negative for norovirus and routine bacterial pathogens (*Salmonella*, *Shigella*, *Campylobacter*, *E. coli* O157:H7, and *E. coli* virulence factors).

When sanitarians first visited the facility on December 19, they noted that illness logs were only being maintained for kitchen and wait staff; event staff were not included on the logs. In addition, inspectors noted improper handwashing by a dishwasher (handling soiled dishes and then clean dishes without washing in between), bare-hand contact with ready-to-eat foods (avocados used for guacamole), and an employee beverage being stored near the ice bin in the bar area. During subsequent visits (December 21, 22, and 26), inspectors observed hand sinks in the dishwashing area and the cook line fully blocked by portable carts. The sanitarians discussed the importance of recording all employee illness in the illness log, proper handwashing, maintaining access to handsinks, and preventing bare-hand contact with ready-to-eat foods. All ready-to-eat foods that might have been prepared by an ill or recently ill employee were discarded, multiple deep cleaning and sanitizing were conducted, an employee screening log was enacted, and all ill employees were excluded until 72 hours after recovery. In addition, the communal sharing of food items, such as chips, between employees was discontinued to prevent further transmission.

Restaurant managers and employees reported multiple vomiting incidents by patrons; multiple patrons reportedly vomited on December 16 (women's bathroom, main dining room, and parking lot).

On December 22, a patron vomited near the host stand, and the line cook became ill and vomited in the employee restroom. Due to these vomiting incidents and the number of ill employees being identified, the restaurant voluntarily closed at 8:30 p.m. on December 22. The restaurant reopened on December 26. While closed, all surfaces subject to hand contact by staff or patrons were again subjected to deep cleaning and sanitizing; any employees who came in to help with the cleaning were screened for gastrointestinal illness. Employees were excluded from work if they reported illness. The restaurant's management team held trainings for employees on proper handwashing, prevention of bare-hand contact with ready-to-eat foods, and the importance of reporting employee illness. No additional complaints were received after the restaurant re-opened.

This was an outbreak of norovirus gastroenteritis associated with a restaurant in Minneapolis. Transmission was documented over a 6-day period. The initial source of contamination was not

identified. However, the high number of ill food workers, food workers working while ill, bare-hand contact with ready-to-eat foods, and improper hand hygiene contributed to transmission to patrons.