

Norovirus Gastroenteritis Associated with a Restaurant

February

Washington County

On February 26, 2020, the Minnesota Department of Health (MDH) foodborne and waterborne illness hotline received two complaints of gastrointestinal illness in patrons of a restaurant in Woodbury. Both complainant parties had eaten at the restaurant on February 22 and become ill with vomiting and diarrhea approximately 30 hours later. An additional complaint naming this restaurant had been received by MDH earlier in the month – this complainant ate at the restaurant on February 1 and subsequently became ill and tested positive for

norovirus at their clinic. Washington County Environmental Health was contacted, and an investigation was initiated.

Washington County sanitarians visited the restaurant on February 26 to evaluate food handling practices, interview employees about recent illness, and collect patron contact information for February 22 diners.

A case was defined as a patron who developed vomiting or diarrhea (≥ 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 Lab (PHL).

Thirty-five patrons from February 22 were interviewed. Seven (20%) cases were identified, and six additional patrons reported illness that did not meet the case definition and were excluded from further analyses. The median incubation period from the restaurant meal to illness onset for cases was 32.5 hours (range, 9.5 to 37.5 hours). For the four cases who had recovered by the time of the interview, the median duration was 45.5 hours (range, 24 to 83 hours). All seven cases reported diarrhea, six (86%) abdominal cramps, five (71%) vomiting, and one (14%) blood in stool. One patron submitted stool samples for testing at the MDH PHL, and it was positive for norovirus genotype II.1[P16].

A case-control study of foods revealed that consumption of loaded mashed potatoes (4 of 5 cases vs. 0 of 22 controls; odds ratio [OR], undefined; $p < 0.001$), salad (4 of 5 cases vs. 3 of 21 controls; OR, 24.0; 95% confidence interval [CI], 2 to 295.1; $p = 0.01$), and cheesecake (3 of 5 cases vs. 1 of 22 controls; OR, 31.5; 95% CI, 2.1 to 463.1) were significantly associated with illness. In a multivariate model including all three of these items, none were independently associated with illness.

Washington County sanitarians interviewed all 62 employees. Seven employees reported gastrointestinal illness symptoms since February 10. Illness onset dates ranged from February 10 to February 26. Among the employees with onset dates before the implicated meal date of February 22: one was ill on February 10 and took the day off; one called in sick on February 20 and returned to work February 23; one vomited early in the morning on February 21 and worked that evening and the following day; and, one reported onset after finishing their shift on February 22. One episode of vomiting by a staff person in the kitchen was reported on February 23. This individual returned to work on February 25 and had a stool sample test positive for norovirus GII.1 [P16] that was 1 base pair different at Region B from the patron specimen.

Sanitarians noted that the facility was using the employee illness log. The employee illness log showed recent staff illness and that staff were sent home on February 23 and February 25 with vomiting. The biological clean up kit was missing items, and the manager could not describe how it should be used despite the reported use of the kit on February 24 after a customer vomited on site. The sanitarian also noted bare-hand contact with ready-to-eat foods and a general lack of active managerial control. Management was instructed to clean and sanitize, eliminate bare-hand contact with ready-to-eat foods, and exclude ill employees for at least 72 hours after recovery of gastrointestinal illness.

This was a foodborne outbreak of norovirus gastroenteritis associated with eating food from a restaurant in Woodbury. Multiple foods were associated with illness. Several staff members reported experiencing recent gastrointestinal illness before and after the implicated meal date, indicating transmission of illness among staff spanning the implicated meal date. The cause of the outbreak was bare-hand contact with ready-to-eat foods by ill or recently ill staff.