

Norovirus Gastroenteritis Associated with a Restaurant

April

Hennepin County

On April 17, 2013, the Minnesota Department of Health (MDH) foodborne illness hotline received a complaint of gastrointestinal illness among two individuals from a single household who had eaten at a restaurant in Wayzata on April 15. On April 23, MDH received an additional complaint of illness among two household members who had eaten at the restaurant on April 19. The reported incubation times for both complainant groups were between 33 and 44 hours. When MDH contacted the City of Wayzata, it was discovered that an additional patron complaint from April 19 was reported by the restaurant on April 22. An outbreak investigation was initiated on April 23.

A City of Wayzata sanitarian visited the restaurant on April 24 to evaluate food preparation and handling procedures, check the employee illness log, interview employees, and obtain credit card receipts for patron contact information. MDH staff interviewed the original complainants and patrons identified from credit card receipts to obtain information on food/beverage consumption and illness history.

A case was defined as a restaurant patron who developed vomiting and/or diarrhea (≥ 3 stools in a 24-hour period) after eating at the restaurant. Stool samples were submitted to the MDH Public Health Laboratory (PHL) for bacterial and viral testing.

Sixty-one patrons who ate at the restaurant from April 14 to April 23 were interviewed; of these, 17 (28%) met the case definition. An additional three patrons reported mild illness that did not meet the case definition and were excluded from further analyses. Reported meal dates for cases ranged from April 15 to April 23. The median incubation was 41 hours (range, 29.5 to 68 hours). The median duration of illness was 42 hours (range, 12 to 53 hours) for the three cases who had recovered at the time of interview. Fifteen (88%) cases reported diarrhea, 13 (76%) cramps, 12 (71%) vomiting, and 7 (41%) fever; no cases reported bloody stools. No cases had sought medical attention at the time of interview.

Eleven stool samples were submitted to the MDH PHL by ill patrons; two were positive for norovirus GII.4 Sydney, and the remaining nine specimens were positive for norovirus GI.6A. Nucleic acid sequencing was performed on a random sample of four norovirus GI.6A specimens; the sequences were identical. The norovirus GII.4 Sydney specimens had identical nucleic acid sequences. The two specimens that were positive for norovirus GII.4 Sydney were submitted by the original complainants who dined at the restaurant on April 15. Twenty-two patrons with reported meal dates from April 15 to April 18 were interviewed; the complainants were the only cases identified in that date range. Therefore, these two cases and all other patrons who dined during April 15-18 were excluded from further analyses.

The restaurant serves a full menu including breakfast, lunch, dinner, and a Sunday brunch buffet. Three (20%) cases had breakfast or brunch; the remaining 12 cases reported having lunch or dinner at the restaurant. In the univariate analysis including only lunch and dinner patrons, consumption of Szechuan green beans (8 of 12 cases vs. 0 of 20 controls; odds ratio [OR], undefined; $p < 0.001$), quesadillas (3 of 12 cases vs. 0 of 20 controls; OR, undefined; $p = 0.04$), and fish and chips (3 of 12 cases vs. 0 of 20 controls; OR, undefined; $p = 0.04$) were significantly associated with illness. Multivariate analysis could not be performed because of zero cell-counts for all significant variables.

Eighty (95%) of 84 restaurant employees were interviewed; 19 (24%) reported recent gastrointestinal illness. Reported symptom onsets for employees ranged from April 8 to April 26; two employees reported symptom onset on April 8, two on April 10, one on April 17, two on April 18, one on April 19, and 11 on April 21 or later. Ill employees reported various job duties including cooking, bartending, serving, hosting, and expediting. Twelve (63%) employees reported working while ill or recently ill, including a chef who reported onset of diarrhea on April 19 shortly before beginning his shift at 3:00 p.m. This employee's job duties that evening included preparation of ready-to-eat foods for the salad station and other stations as well as cooking. Two ill food workers submitted stool specimens to MDH PHL for testing; both were negative for bacterial and viral pathogens. However, these specimens were collected 5 and 6 days, respectively, after resolution of gastrointestinal symptoms.

The City of Wayzata sanitarian observed bare-hand contact by employees preparing ingredients and garnishing dishes. The employee illness log was not being maintained properly. When the employee illness log was checked on April 24, only two employees were reported ill with vomiting and diarrhea, on April 21 and April 22, respectively. The restaurant was instructed to sanitize all surfaces in the establishment, discard all ready-to-eat foods prepared by ill or recently ill employees, use an employee illness screening form, and to exclude any staff member reporting vomiting or diarrhea until 72 hours following resolution of symptoms. The general manager held an all staff meeting on April 30 to further educate food workers on the importance of proper handwashing, eliminating bare-hand contact with ready-to-eat foods, cleaning and sanitizing, and exclusion of ill food workers.

This was an outbreak of norovirus gastroenteritis associated with a restaurant in Wayzata. Fish and chips, Szechuan green bean appetizer, and quesadilla appetizer were significantly associated with illness. However, illness was also identified among restaurant patrons who reported consuming breakfast or brunch items. Multiple ill food workers were identified; these workers likely contributed to the contamination of several ready-to-eat foods.