

Norovirus Gastroenteritis Associated with a Restaurant

December

Dakota County

On December 19, 2011, the Minnesota Department of Health (MDH) foodborne illness hotline received a complaint of gastrointestinal illness among a group of 11 patrons who ate dinner at a restaurant in Burnsville, Minnesota on December 14. Seven members of the group reportedly became ill with diarrhea and vomiting 7.5 to 31 hours after eating at the restaurant. The complainants did not have any other common exposures. An investigation was initiated. Subsequently, MDH became aware of additional complaint that had been received by the restaurant.

MDH epidemiologists interviewed patrons from three complainant groups about food consumption and illness history. 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 were submitted to the MDH Public Health Laboratory for bacterial and viral testing.

MDH Environmental Health (EH) specialists contacted the restaurant on December 19 and asked the manager to start screening workers and exclude workers who reported vomiting or diarrhea. List of complaints received by the restaurant were obtained. EH specialists visited the restaurant on December 20 to evaluate food preparation and handling procedures. Restaurant employees were interviewed about recent history of gastrointestinal illness and foods consumed at the restaurant. Employee work schedules and illness log were obtained. Restaurant management staff were asked to continue to screen employees for gastrointestinal illness when they presented to work during the investigation. Additional interventions to prevent further transmission were implemented.

Restaurant reservation lists and credit card receipts were not obtained, because the restaurant claimed to not have them.

The restaurant received four independent complaints of illness in people who ate at the restaurant on December 14 or 15. Contact information was not available for one complaint, one complaint was the group that called the foodborne illness hotline, and two new complaints were identified. Sixteen restaurant patrons who were part of the complaint groups were interviewed. Fourteen (88%) persons met the case definition. The 14 cases ate at the restaurant on December 14 for dinner ($n=9$) and December 15 for lunch ($n=5$). All 14 cases reported vomiting, 12 (86%) reported diarrhea, 8 (57%) reported cramps, 5 (36%) reported fever, and 1 (7%) reported bloody stool. The median incubation period was 28 hours (range, 7.5 to 38 hours). For the seven cases who had recovered by the time of interview, the median duration of illness was 88 hours (range, 38 to 101 hours). Four of the cases called a health care provider and one visited the emergency room; none were hospitalized.

Cases reported eating bruschetta, stuffed mushrooms, the trio platter, apple gorgonzola salad, mixed greens salad, lasagna, ravioli, spaghetti marinara, chicken marsala, garlic mashed potatoes, dolce platter, chocolate cake, cheesecake, and apple. A meaningful statistical analysis was not possible because only two non-ill controls were interviewed.

Foods consumed by a high proportion of cases included salad (14 of 14 cases vs. 2 of 2 controls), chopped antipasto salad (10 of 14 cases vs. 1 of 2 controls), appetizers (13 of 14 cases vs. 2 of 2

controls), baked pasta (12 of 14 cases vs. 1 of 2 controls), pasta (12 of 14 cases vs. 2 of 2 controls), and drinking water (10 of 12 cases vs. 2 of 2 controls).

Sixty-one food workers were interviewed. Four reported a recent history of acute gastrointestinal illness, with onsets of December 13, 14, 17, or 18. Of the four ill employees, three (75%) reported nausea, two (50%) reported diarrhea, two (50%) reported vomiting (50%), and one (25%) reported fever. Illness durations ranged from 1 to 7 days. Three food workers reported working while ill. Among the ill restaurant employees, one employee who worked on salad and pizza prep experienced vomiting and diarrhea while at work on December 14, reported it to the manager, and continued to work because a replacement could not be found. Another employee reported feeling ill while at work to their manager on December 17 and also continued to work. Although restaurant management was aware of illness among employees, they did not report it to MDH. The EH specialists noted that the employee illness log did not have any entries of employee illness in the previous month. Additionally, although the restaurant received complaints of illness from patrons, they did not report the complaints to MDH.

Ill employees were excluded from work until 72 hours after their recovery. Restaurant management was asked to screen employees for illness each shift for 10 days after the start of the investigation.

As a result of the investigation, the restaurant voluntarily closed for cleaning during lunch on December 20. Restaurant staff cleaned and sanitized equipment and food contact surfaces; they also threw away ready-to-eat (RTE) food items. Food preparation was not occurring during the EH evaluation; however, the EH specialists observed handwashing techniques and glove use of restaurant employees, and deemed them to be appropriate. Holding temperatures for food items were also deemed appropriate. EH specialists 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 tested stool specimens from four ill patrons, including at least one from each complaint group, and two restaurant employees. All six samples tested positive for norovirus; five were GII.1 of the same sequence and one from a patron was GII.7. One sample from a patron also tested positive for adenovirus.

This was an outbreak of norovirus gastroenteritis associated with a restaurant in Burnsville. Several ill restaurant employees, including three who worked while ill, were source the likely of the outbreak. No single food item could be implicated as the vehicle of transmission.