

Norovirus Gastroenteritis Associated with a Restaurant

June

Stearns County

On June 28, 2017, the Minnesota Department of Health (MDH) foodborne illness hotline received a complaint of illness from the organizer of a lunch event at a restaurant in Sauk Centre on June 22. The caller reported that five of six staff that were at the event and two attendees became ill with vomiting

and/or diarrhea after the event. No other shared meals or events were reported. Stearns County Environmental Health was notified and an investigation was initiated immediately.

Stearns County Environmental Health staff visited the facility on June 29 to conduct an environmental health assessment, check the employee illness log, interview employees, and gather additional patron contact information.

MDH staff interviewed attendees of the lunch event identified from contact information provided by the event organizer and restaurant patrons identified through credit card receipts from June 22. A case was defined as a restaurant patron who developed vomiting and/or diarrhea (≥ 3 stools in a 24-hour period) within 3 days of their meal date.

Stool samples from consenting patrons and staff were submitted to the MDH Public Health Laboratory (PHL) for bacterial and viral testing.

A total of 23 patrons were interviewed. Eighteen (78%) cases were identified including 16 (84%) of 19 attendees of the lunch event on June 22, and 2 (67%) of 3 patrons that ate in the restaurant on June 22. One restaurant patron from June 22 reported illness that did not meet the case definition and was excluded from further analyses. Fifteen (83%) cases reported vomiting, 14 (78%) abdominal cramps, 13 (72%) diarrhea, and 7 (41%) of 17 fever. The median incubation period for cases was 29.75 hours (range, 8 to 50 hours). The median duration of illness was 69 hours (range, 5.5 to 130 hours) for the 14 cases that had recovered by the time of interview. Three cases visited a health care provider, but none were hospitalized.

Three patron stool samples (two from event attendees, and one from a restaurant patron) were received at the MDH PHL; all three were positive for norovirus GII.

The meal served at the lunch event included ham and cheese sandwiches, salad with dressings on the side, cookies, water, and coffee. The toppings available for the sandwiches were lettuce, tomato, mayonnaise, and mustard. Two of the three event attendees who were not ill did not eat anything at the event. Both restaurant patron cases reported eating at noon; one had a ham sandwich and soup, and the other had a quesadilla. The small number of controls precluded a meaningful statistical analysis.

All 26 employees of the restaurant were interviewed; 13 (50%) reported gastrointestinal illness from June 14 through June 25. Two employees were ill before June 22. One employee had vomiting and diarrhea June 14-15. The other employee had onset of vomiting at the facility on June 19. The remaining nine ill employees were ill on or after June 23. In addition to the employee who reported vomiting at the facility, two employees worked while ill with gastrointestinal symptoms on June 23 and June 24.

Two employees submitted stool samples for testing; one was positive for norovirus, and one collected 14 days after onset of symptoms was negative for norovirus. Two of the patron isolates were able to be sequenced. The predominant strains detected in the patron samples differed by one base-pair by nucleic acid sequencing. One of the patron isolates had two region C subtypes; one was identical to the other patron isolate and the food worker isolate. The genotype was GII.P16-GII.2.

During the environmental health assessment and employee interview process it was noted that many employees were using bare hands to garnish drinks, prepare salads, and plate food for service. The facility had sanitized with a quaternary ammonia solution at the time of the outbreak notification. Management was advised to repeat the sanitizing process with a strong bleach solution concentrated to be effective against norovirus. The sanitarian discussed with management the importance of excluding ill employees, handwashing, and prevention of bare-hand contact with ready-to-eat foods.

This was a foodborne outbreak of norovirus gastroenteritis associated with a restaurant in Sauk Centre. A specific vehicle was not identified. However, laboratory results and findings from the environmental health assessment suggest that an infected food worker was the likely source of contamination of one or more ready-to-eat items.