Norovirus Gastroenteritis Associated with a Restaurant

September Hennepin County

On September 20, 2012, the Minnesota Department of Health (MDH) foodborne illness hotline received a complaint of gastrointestinal illness among a group of 23 co-workers who ate food provided by a restaurant in Brooklyn Park at a work meeting on September 18. No other foods were provided at the meeting, and no other foods were shared at the office in the 2 days before or after the meeting. City of Brooklyn Park Environmental Health (CBPEH) was contacted, and an investigation was initiated immediately.

CBPEH sanitarians visited the restaurant on September 20 to evaluate food preparation and handling procedures, and to interview food workers. Credit card receipts were not collected as they did not contain patron signatures. A case was defined as a meeting attendee who developed vomiting or diarrhea (≥3 loose stools in a 24-hour period) after eating at the meeting. Stool samples collected from consenting individuals were submitted to the MDH Public Health Laboratory for bacterial and viral testing.

Twenty-two meeting attendees were interviewed, and 13 (59%) met the case definition. One meeting attendee reported illness that did not met the case definition and was excluded from analysis. The median incubation period for cases was 33 hours (range, 15 to 56 hours). The median duration of illness for the five cases who had recovered at the time of interview was 36 hours (range, 17 to 52 hours). Twelve (92%) cases reported diarrhea, 11 (85%) vomiting, 9 (69%) cramps, 4 (31%) fever, and none bloody stools. Stool samples submitted by three ill meeting attendees tested positive for norovirus GII.

By univariate analysis, consuming shredded cheese (13 of 13 cases vs. 5 of 8 controls; risk ratio, undefined; 95% confidence interval, undefined; $p = 0.04$) was significantly associated with illness.

CBPEH sanitarians interviewed 23 restaurant employees, and three reported recent gastrointestinal illness. These employees reported becoming ill on September 9, 16, and 20, respectively. The employee who became ill on September 20 reported that her son became ill on September 13 and that she was the employee that was primarily responsible for preparing the food served at the meeting. The restaurant reported that block cheese was shredded each morning but was not able to identify which employee shredded the cheese on September 18. The sanitarians observed good hand hygiene and use of gloves when handling ready-to-eat foods. The sanitarians discussed the importance of handwashing for the prevention of norovirus transmission, and all employees with vomiting and/or diarrhea were excluded from work until 72 hours after the resolution of symptoms. Restaurant management implemented their *Norwalk Prevention Protocol,* which included switching sanitizing solutions to 4% bleach, employee symptom surveys before each shift, sanitizing of the restaurant, and increased handwashing monitoring. Stool collection kits delivered to two ill employees were not returned.

This was a foodborne outbreak of norovirus gastroenteritis associated with a restaurant in Brooklyn Park. Shredded cheese was associated with illness. The source of contamination was likely an infected food worker.