

Norovirus Gastroenteritis Associated with a Restaurant

February

Winona County

On February 29, 2012, the Minnesota Department of Health (MDH) foodborne illness hotline received a complaint of gastrointestinal illness among a party of four individuals who had eaten at a restaurant in Elba, Minnesota on February 24. The complainant reported that three ill individuals from two different households had become ill. The complainant knew of additional patrons who had eaten at the restaurant on the same date; he did not know if they had become ill but said he would give the additional patrons the MDH hotline number. Winona County Community Services was notified on February 29, and an investigation was initiated.

MDH interviewed the original complainants, and Winona County sanitarians obtained credit card receipts from the establishment for additional patron contact information. A case was defined as a person who ate at the restaurant on February 24 and subsequently developed vomiting and/or diarrhea (≥ 3 loose stools in a 24-hour period).

On February 29, Winona County sanitarians visited the restaurant to evaluate food preparation and handling procedures and to interview employees regarding illness history and job duties. On February 30, MDH staff began interviewing patrons identified from the credit card receipts.

Twenty-nine patrons were interviewed, and eight (28%) met the case definition; cases represented five different households. Two patrons reported illness that did not meet the case definition and were excluded from analyses. The median incubation period for cases was 34.5 hours (range, 28.5 to 40.5 hours). The median duration of illness was 29 hours (range, 26.5 to 32 hours). Seven cases reported diarrhea (88%), five (63%) reported vomiting, five (63%) reported cramps, one (13%) reported fever, and none reported bloody stools. One case visited a medical provider and was hospitalized for a day.

Seven stool specimens (from four patrons and three employees) were submitted to MDH; all tested positive for norovirus GII. The seven stool specimens were negative for *Campylobacter*, *Salmonella*, Shiga toxin-producing *E. coli*, *Shigella*, and *Yersinia*. Four specimens (two from patrons and two from employees) were sequenced, and all specimens had identical nucleic acid sequences.

The patrons reported eating a variety of different menu items. In a univariate analysis, consuming fillet of haddock (3 of 8 cases vs. 0 of 19 controls; odds ratio [OR], undefined; 95% confidence interval [CI], undefined; $p = 0.02$), tossed side salad (4 of 7 cases vs. 0 of 19 controls; OR, undefined; 95% CI, undefined; $p = 0.02$), and garlic toast (6 of 7 cases vs. 5 of 19 controls; OR, 16.8; 95% CI, 1.6 to 176.2; $p = 0.02$) were significantly associated with illness. No other foods were associated with illness; however, consuming baked potato approached significance (5 of 7 cases vs. 5 of 19 controls; OR of 7.0; 95% CI, 1.0 to 48.3; $p = 0.07$).

Illness histories and job duty information were obtained from 15 restaurant employees. Seven employees reported having had gastrointestinal illness previous to or on the implicated meal date, (including three employees who worked while ill on the implicated meal date). One employee became ill after the implicated meal date, with onset of vomiting and diarrhea on February 26.

During the establishment visit, the Winona County sanitarians viewed bare-hand contact with all foods, including ready-to-eat foods, and the manager reported that they had not been excluding ill food workers. The sanitarians stressed the importance of proper handling of food and beverages, use of gloves or utensils when handling ready-to-eat foods, good handwashing, and exclusion of ill food handlers to the restaurant employees.

This was a foodborne outbreak of norovirus gastroenteritis associated with eating at restaurant in Elba, Minnesota. Multiple food items were associated with illness. The source of contamination was one or more infected food workers.