

## Sapovirus Gastroenteritis Associated with a Restaurant

April

Kandiyohi County

On April 12, 2012, the Minnesota Department of Health (MDH) foodborne illness hotline received a complaint of gastrointestinal illness among a group of 13 individuals from 5 households who ate at a restaurant in Willmar on April 8. Kandiyohi County Environmental Health Services (KCEHS) was contacted, and an investigation was initiated immediately.

A KCEHS sanitarian visited the restaurant on April 13 to evaluate food preparation and handling procedures, interview food workers, and collect credit card receipts for additional patrons from April 8. MDH staff interviewed patrons identified from credit card receipts about food consumption and illness history. A case was defined as a restaurant patron who developed vomiting and/or diarrhea ( $\geq 3$  loose stools in a 24-hour period) or with laboratory-confirmed sapovirus infection after eating at the restaurant. Stool samples collected from consenting restaurant patrons were submitted to the MDH Public Health Laboratory for bacterial and viral testing.

Sixty-five restaurant patrons were interviewed; 22 (34%) met the case definition. Six additional patrons reported illness that did not meet the case definition and were excluded from analysis. The median incubation period for the cases was 52.5 hours (range, 20.5 to 77 hours). The median duration of illness was 3 days (range, 1 to 5 days). Twenty-one (95%) cases reported diarrhea, 16 (73%) cramps, 13 (59%) fever, 5 (23%) vomiting, and one (5%) bloody stools. Stool samples were submitted by five cases; three were positive for sapovirus.

By univariate analysis, consuming baked ham (16 of 21 cases vs. 11 of 34 controls; odds ratio [OR], 6.7; 95% confidence interval [CI], 1.9 to 23.0;  $p = 0.002$ ) and Swedish meatballs (15 of 21 cases vs. 11 of 34 controls; OR, 5.2; 95% CI, 1.6 to 17.2;  $p = 0.006$ ) were significantly associated with illness. Both baked ham (adjusted OR [aOR], 6.8; 95% CI, 1.7 to 26.5;  $p = 0.006$ ) and Swedish meatballs (aOR, 4.62; 95% CI, 1.2 to 17.7;  $p = 0.03$ ) remained independently associated with illness in a multivariable logistic regression model. Cases were more likely than controls to have reported a meal time at or before 11:00 a.m. (17 of 21 cases vs. 10 of 31 controls; OR, 8.9; 95% CI, 2.1 to 44.3;  $p = 0.006$ ). Among patrons who reported a meal time at or prior to 11:00 a.m., only consuming baked ham was significantly associated with illness (13 of 17 cases vs. 3 of 13 controls; OR, 10.8; 95% CI, 2.0 to 59.8;  $p = 0.009$ ). All of the foods served, including the baked ham and Swedish meatballs, were served buffet style.

A KCEHS sanitarian interviewed all 36 restaurant employees, and two reported recent gastrointestinal illness. A hostess reported becoming ill with diarrhea on April 9, and a server developed diarrhea on April 10. No employees reported illness prior to or on the implicated meal date of April 8. The server had worked on April 8 and reported consuming both Swedish meatballs and ham. However, the hostess had not worked since April 6 and did not consume food from the April 8 buffet. All employees with vomiting and/or diarrhea were excluded from work until 72 hours after the resolution of symptoms. A stool specimen collected from the ill hostess was negative for sapovirus and all other viral and bacterial pathogens.

This was a foodborne outbreak of sapovirus gastroenteritis associated with a restaurant in Willmar. Baked ham and Swedish meatballs were statistically associated with illness. The source of the contamination was not identified. However, the most plausible source of the contamination was either an unidentified infected food worker or an infected patron who contaminated the baked ham and Swedish meatballs and/or utensils used to serve those food items.