

Sapovirus Gastroenteritis Associated with a Restaurant

May

Hennepin County

On May 6, 2013, the Minnesota Department of Health (MDH) foodborne illness hotline received a complaint of gastrointestinal illness among persons who had attended a birthday party buffet at a restaurant in Minneapolis, Minnesota on April 28. Minneapolis Environmental Health (MHD) and Hennepin County Public Health-Epidemiology (HSPHD-Epi) were notified, and an investigation was initiated.

MHD environmentalists visited the restaurant on May 6 and May 7 to evaluate food preparation and handling procedures and to interview employees regarding illness history and job duties. They also obtained a copy of the menu and a reservation list for April 28. HSPHD-Epi staff obtained the birthday party guest list from one of the organizers and interviewed attendees about food/beverage consumption and illness history. Stool specimens were obtained from four birthday party attendees and submitted to MDH for bacterial and viral testing. A case was defined as a person who became ill with vomiting and/or diarrhea (≥ 3 loose stools in a 24-hour period) after attending the birthday party.

Sixty-eight restaurant patrons were interviewed, and 33 (49%) patrons met the case definition (all from the birthday party). Eleven additional birthday party attendees reported gastrointestinal symptoms but did not meet the case definition and one person had onset of symptoms prior to the event but did not handle any of the food items; these 12 people were excluded from further analysis.

Twenty-nine cases (88%) reported diarrhea, 20 (61%) reported abdominal cramps, eight (24%) reported vomiting, and six (18%) reported fever. The median incubation period was 54 hours (range, 11 to 95 hours). The median duration of illness was 2.5 days (range, 1 to 6 days) for 30 cases who had recovered from their symptoms at the time of the interview. The four stool specimens were positive for sapovirus GI.

Cases had eaten a variety of foods from the buffet, including sandwich meats, lettuce, tomato, cheeses, rolls, bread, condiments, pasta salad, coleslaw, chips and dessert. By univariate analysis consuming turkey (22 of 32 cases vs. 9 of 23 controls; odds ratio [OR] 3.4, 95% confidence interval [CI], 1.1 to 10.5; $p = 0.03$) and coleslaw (19 of 33 cases vs. 6 of 23 controls; OR, 3.8; 95% CI, 1.2 to 12.3; $p = 0.02$) were associated with illness. After multivariable logistic regression, both turkey (adjusted OR, 4.2; 95% CI, 1.2 to 14.4; $p = 0.02$) and coleslaw (adjusted OR, 5.0; 95% CI, 1.4 to 17.7; $p = 0.01$) remained independently associated with illness.

Illness histories and job duty information were obtained from 55 restaurant employees. One employee had onset of diarrheal illness on May 3 that lasted 24 hours. This employee did not work on March 28, did not prepare or handle any foods for the birthday buffet, and did not submit a stool specimen.

During the establishment visit, MHD noted there was no documentation of employee illness on the illness log. A glove order was issued for all employees when handling ready-to-eat foods until further notice. One chef prepared all the food for the event that morning. The food was served self-serve by the group and did not have any refrigeration or shields.

This was a sapovirus outbreak associated with a birthday party held at a restaurant in Minneapolis. Sapovirus GI was isolated from four patrons. Turkey and coleslaw were implicated as the vehicles. The source of contamination was not identified but could have been an unidentified infected food worker or a birthday party attendee. However, neither could be confirmed.