Norovirus Gastroenteritis Associated with Wedding Reception

November Hennepin County

On November 15, 2017, the Minnesota Department of Health (MDH) Foodborne Diseases Unit received an e-mail from the executive chef of an event center reporting a complaint they had received; approximately 30 people reportedly developed gastrointestinal illness after attending a wedding there on November 11. MDH contacted Hennepin County Human Services and Public Health (HCPH) Epidemiology, and the Minneapolis Health Department (MHD), and an investigation was initiated.

MDH and HCPH worked with the chef and the bride to gather attendee contact information. HCPH Epidemiology staff interviewed wedding attendees from the November 11 event. A case was defined as a wedding attendee who developed vomiting and/or diarrhea (≥3 loose stools in a 24-hour period) following the event. Four attendee stool samples were submitted to the MDH Public Health Laboratory (PHL) for bacterial and viral testing.

MHD sanitarians visited the event center on November 21 to initiate employee illness screening, evaluate food preparation and handling procedures, and interview food workers about illness history and work duties. Upon further investigation of the menu, it was discovered that the cake served at the wedding was supplied by an outside vendor which holds a cottage license. MHD was able to contact the vendor to determine ingredients and if they had any employee illness or illness complaints from clients around the same time as the wedding.

Twenty-six attendees were interviewed. Sixteen attendees (62%) met the case definition. Three attendees reported mild symptoms that did not meet the case definition and were excluded from further analyses. Seven cases (44%) were female. The median case age (of those for whom age was obtained) was 52 years (range, 25 to 77 years). Fifteen cases (94%) reported diarrhea and cramps, 11 (69%) reported vomiting, and 5 (31%) reported fever. None reported bloody stools. The median incubation period was 33 hours (range, 26 to 48 hours). The median duration of illness of 65 hours (range, 18 to 178 hours) for the 15 cases who had recovered by the time of interview.

Four cases submitted stool specimens the MDH PHL for testing; two specimens tested positive for norovirus GII. One isolate was able to be sequenced and was GII.Pe-GII.4 Sydney.

All cases reported eating a variety of food items. Pre-wedding ceremony hors d'oeuvres included deli meats, cheese, crackers, baguettes, cut fruit, snack mix, and olives. Several post-wedding ceremony happy hour appetizers were available, including roasted vegetables, garlic hummus, crackers and baguettes, brie puff pastries, cut fruit and a variety of sliced and block cheeses. The buffet-style meal consisted of a fall salad pre-dressed with an orange lemon citrus vinaigrette, assorted breads with honey butter, coq au vin, boeuf Bourguignon, scalloped potatoes, summer squash medley, and ratatouille. Butternut squash ravioli was available for vegetarians upon request. Dessert consisted of house-made donuts (pumpkin, lemon-blueberry) and the cake provided the outside vendor. Beverages

included water, beer, cider, wine, cocktails, sodas, coffee, and milk. In the univariate analysis, no food item was significantly associated with illness. Consumption of scalloped potatoes (14 of 16 cases vs. 4 of 7 controls; odds ratio [OR], 5.3; 95% confidence interval [CI], 0.6 to 43.1; p = 0.12), and consumption of the squash medley (13 of 16 cases vs. 3 of 7 controls; OR, 5.8; 95% CI, 0.8 to 40.8; p = 0.08) had elevated odds ratios, but were not significantly associated with illness.

According to the bride, 42 of 95 wedding attendees did report some sort of illness following the wedding. The bride noted that of the four attendees that she knows did not consume any food, none developed symptoms. Other pre-wedding events, such as a groom's lunch and bridal family happy hour gathering at separate restaurants the day before the wedding, were ruled out due to illness reported in persons who only attended the wedding on November 11. Several interviewees mentioned that prior to the wedding ceremony, there was an infant with diarrhea who was washed and changed in the bride & bridesmaid bathroom at the mansion.

MHD sanitarians visited the event center on November 21 to conduct an environmental assessment and interview food workers. Illness histories and job duty information were obtained from 12 of 13 food workers. No employees reported any recent illness prior to the November 11 wedding; however, an employee reported that a fellow kitchen employee was sent home 2 weeks prior to the wedding after vomiting twice in one of the bathrooms at the facility. The reporting employee believed it was due to an overconsumption of caffeine pills. One employee reported illness within 24 hours following the event. This employee reported eating leftovers from the event; however, it was not known when the food was consumed.

MHD sanitarians did not note any concerning kitchen protocols. The venue appeared to have a proper illness policy in place, and practiced proper handwashing and glove use. MHD informed the operator to wash, rinse, and sanitize all food contact surfaces with 1000 ppm of bleach. Sanitarians also suggested sanitizing the bathroom sink, door handles, and area surrounding the sink with 1000 ppm bleach, as it was stated by an employee that the bathrooms at the venue are not cleaned on a regular basis.

No ill food workers or additional patron complaints were identified during follow-up at cake vendor.

This was a foodborne outbreak of norovirus gastroenteritis associated with an event center in Minneapolis, Minnesota. The vehicle and source were not identified.