Suspected Viral Gastroenteritis Associated with a Restaurant

October Hennepin County

On October 12, 2012, the Minnesota Department of Health (MDH) notified the Hennepin County Human Services and Public Health Department (HSPHD) epidemiology unit of a complaint of gastrointestinal illness among several co-workers who had shared a lunch on October 10 catered by a restaurant in Eden Prairie. HSPHD epidemiology notified the HSPHD environmental health unit on October 12, and an investigation was initiated.

A list of co-workers from the catered meal and additional patrons identified from restaurant catering orders for October 10 were provided to HSPHD. HSPHD epidemiologists interviewed the patrons about food consumption and illness history. A case was defined as a restaurant patron who subsequently developed vomiting and/or diarrhea (≥3 loose stools in a 24-hour period) after eating food from the restaurant. No patrons agreed to submit stool samples to the MDH Public Health Laboratory for testing.

HSPHD sanitarians visited the restaurant on October 12 to evaluate food preparation and handling procedures and to interview food workers about illness history and work duties.

Sixteen patrons from the co-worker's group and the restaurant's catering list were interviewed by HSPHD epidemiologists; four individuals (25%), all from the group of co-workers, met the case definition. One additional patron reported illness that did not met the case definition and was excluded from analysis. The median incubation period for the cases was 28 hours (range, 7 to 33 hours). All four cases reported diarrhea, three (75%) fever, two (50%) cramps, two (50%) vomiting, and none bloody stools. The median duration of illness for the three cases who had recovered at the time of interview was 17.5 hours (range, 8 to 20 hours).

All four cases consumed catered foods at a work meeting. Foods consumed included a variety of sandwiches, salads, soups, and bottled beverages. The 12 controls interviewed also reported eating a wide variety of sandwiches, salads, and soups. No food items were associated with illness.

HSPHD sanitarians visited the restaurant on October 12 and noted issues with the restaurant's sanitizer system. The system that automatically measures the quaternary ammonia (quat) sanitizer was not correctly dispensing, and staff were not testing the solutions to ensure the correct quat concentration. Education was provided on how to manually test the quat concentration, and the restaurant remedied the problem with their auto-fill system. The restaurant conducted a full cleaning and disinfection of the facility and agreed to screen all employees daily for gastrointestinal illness before starting their shift.

Illness histories and job duty information were obtained from 22 restaurant employees. One employee reported vomiting and diarrhea beginning the morning of October 9 and resolving later that evening. This employee worked preparing sandwiches on October 10, the implicated meal date, as well as on October 11 and 12. An additional employee reported one episode of vomiting on October 12, but did not work on that date and did not return to work until 72 hours after the resolution of symptoms.

HSPHD sanitarians provided norovirus education to the restaurant to inform employees that they must be excluded from work for 72 hours following the resolution of gastrointestinal symptoms. They further stressed the importance of proper handling of food and beverages, use of gloves when handling ready-to-eat foods, good handwashing, and thorough disinfection.

This was a foodborne outbreak of suspected viral gastroenteritis associated with a restaurant in Eden Prairie. While an etiology was not confirmed, the distribution of incubation periods and symptoms were compatible with norovirus. The vehicle of transmission was not confirmed; however, the most plausible scenario is that ready-to-eat sandwich items were contaminated by the ill food worker who prepared sandwiches.