

Suspected Bacterial Intoxications Associated with Catered Meals

March

Isanti County

On April 7, 2010, the Minnesota Department of Health (MDH) foodborne illness hotline received a call from the insurance company for a catering company in Cambridge reporting that several people had

become ill with vomiting and/or diarrhea following two meals the restaurant had catered for an event in Dalbo on March 31. Approximately 35-40 people were served at the meals, which were served at 12:00 p.m. and 6:00 p.m. The menu consisted of prime rib, yellow asparagus, garlic mashed potatoes, salad, dinner rolls, and brownies. Sanitarians from MDH Environmental Health Services (EHS) were notified, and an investigation was initiated.

Epidemiologists from MDH interviewed meal attendees to obtain information on food/beverage consumption and illness history. A case was defined as a meal attendee who subsequently developed diarrhea (≥ 3 loose stools in a 24-hour period). Due to the length of time that had elapsed between the cases' illnesses and the report of the outbreak, no stool samples were collected for testing. Sanitarians from MDH EHS visited the restaurant to discuss food preparation procedures.

Illness histories and exposure information were obtained from 27 meal attendees. Nineteen (70%) cases were identified, including 10 from the 12:00 p.m. meal and 9 from the 6:00 p.m. meal. All 19 cases reported diarrhea, 16 (84%) reported cramps, and 2 (11%) reported fever. The median incubation period was 12.25 hours (range, 0.5 to 18 hours). The median duration of illness was 32 hours (range, 8 to 137 hours) for the 13 cases who had recovered at the time of interview.

Consumption of garlic mashed potatoes was borderline significantly associated with illness (18 of 19 cases vs. 4 of 7 controls; odds ratio, 13.5; 95% confidence interval, 0.83 to 456; $p = 0.05$). No other food/beverage item or meal time was significantly associated with illness.

All of the food preparation for the meals was done by the catering company. In order to make the loaded mashed potatoes, potatoes were boiled the morning of the event. Some potatoes were cooled in the refrigerator for the evening meal, while the rest were mixed in a large stand mixer. Bacon bits, sour cream, heavy cream, and butter were added to the potatoes before being placed in the restaurant's steam table for holding. The tray containing the potatoes was subsequently placed into another portable steam table. The second steam table was unplugged and placed in the back of a private vehicle for an approximately 18 minute drive to the meal site. For serving, the steam table was plugged in at the meal site upon arrival. Temperatures were not taken at any time to ensure that hot holding requirements were met.

A routine inspection by an MDH EHS sanitarian was conducted on the implicated meal date. The inspection found a hot-holding violation with the mashed potatoes.

This was a foodborne outbreak associated with two catered meals served at a business. Illnesses were consistent with a bacterial intoxication. However, due to the time that had elapsed before the outbreak was reported, the etiology could not be confirmed. While loaded mashed potatoes were suspected, a specific ingredient could not be determined. The outbreak most likely resulted from improper hot-holding procedures.