Suspected Foodborne Bacterial Intoxications Associated with a Restaurant

March

St. Louis County

On March 6, 2013, the Minnesota Department of Health (MDH) foodborne illness hotline received a complaint of gastrointestinal illness among a group of co-workers after eating a catered lunch from a restaurant in Duluth on March 5. The group reported no other recent meals in common. Public health sanitarians from the MDH Duluth District Office were contacted and an investigation was initiated immediately.

Public health sanitarians from the Duluth District Office visited the restaurant on March 6 to evaluate food preparation and handling procedures and collect credit card receipts for catering orders placed March 4-5. A case was defined as a person who developed vomiting or diarrhea (≥3 loose stools in a 24-hour period) after eating food catered by the restaurant. Stool samples collected from consenting cases were submitted to the MDH Public Health Laboratory for viral and bacterial toxin testing.

Eighteen co-workers were interviewed; 17 (94%) met the case definition. All seventeen cases reported eating lunch from the restaurant on March 5. The median incubation period for the cases was 11 hours (range, 4.5 to 19 hours). The median duration of illness was 16.5 hours (range, 7 to 39 hours). Fifteen (88%) cases reported diarrhea, six (35%) reported cramps, and one (6%) reported vomiting. None reported fever or bloody stools. Stool specimen were submitted by two ill patrons. Both specimens were negative for norovirus, *Clostridium perfringens* toxin, and *Bacillus cereus* diarrheal toxin. The restaurant manager reported that no other catering orders were placed March 4-5 other than the one from complainant group. No other reports of illness were received by the restaurant.

All 17 co-workers ate burritos. Four cases ate the "Empire Builder" burrito, six ate the "Happy Worker", four ate the "Fat Capitalist", one ate the "Imperial Chicken", one ate a specially made "steak burrito", and one case could not remember which burrito he ate. Although the ingredients for the burritos varied depending on the type, all contained rice and beans. The majority of cases also reported consuming chips (n=13) and salsa (n=15).

The sanitarians conducted an environmental assessment at the restaurant on March 6. The sanitarians identified several issues: the warming unit at the restaurant was not holding beans or rice at proper hot holding temperatures; there was no record of temperatures of the beans or rice after cooking; and, there was no record of temperatures of the beans or rice held in the warming unit. Restaurant employees were educated on food temperature requirements, employee illness reporting, and employee handwashing.

This was a foodborne outbreak of suspected bacterial intoxications associated with consumption of burritos from a restaurant in Duluth. The etiology wasn't confirmed, but the distribution of symptoms and incubations were characteristic of bacterial intoxications caused by *Clostridium perfringens* or the diarrheal form of *Bacillus cereus*. A specific food vehicle was not confirmed, but the most plausible explanation for the outbreak was that malfunctioning of the warming unit and improper reheating of leftover beans and rice led to amplification of bacteria in either or both of these food items.