

Clostridium perfringens Intoxications Associated with a Restaurant

April

Dakota County

On April 16, 2012, the Minnesota Department of Health (MDH) foodborne illness hotline received two separate complaints of gastrointestinal illness among groups that had dined at a restaurant in Mendota Heights on April 14; the first complaint involved a party of two and the second a party of five. In addition, a third complaint from a party of two who had eaten at the restaurant on April 15 was reported by the restaurant to MDH. An investigation was initiated immediately.

MDH Environmental Health Services (EHS) sanitarians visited the restaurant on April 16 to evaluate food preparation and handling procedures and collect credit card receipts for additional patrons who had dined there on April 14. MDH staff interviewed patrons identified from credit card receipts about food consumption and illness history. A case was defined as a restaurant patron who developed vomiting and/or diarrhea (≥ 3 loose stools in a 24-hour period) after eating at the restaurant. Stool samples collected from consenting patrons were submitted to the MDH Public Health Laboratory for bacterial and viral testing.

Twelve restaurant patrons were interviewed; eight (67%) met the case definition. The median incubation period for the cases was 15.5 hours (range, 13.5 to 17.5 hours). The median duration of illness was 15 hours (range, 11 to 31 hours). All eight cases reported diarrhea, seven (88%) reported cramps, and none reported vomiting, fever, or bloody stools. Three stool specimens were submitted by ill patrons and all tested positive for *Clostridium perfringens* enterotoxin Type A.

Due to the limited number of non-ill controls, the case control study lacked power to detect significant associations and no food items were significantly associated with illness. However, the consumption of refried beans (7 of 8 cases vs. 2 of 4 controls; odds ratio [OR], 7.0; 95% confidence interval [CI], 0.4 to 123.4; $p = 0.24$) and shredded chicken (6 of 8 cases vs. 2 of 4 controls; OR, 3.0; CI, 0.2 to 37.7; $p = 0.55$) yielded elevated odds ratios in the analysis.

MDH EHS sanitarians conducted an environmental assessment on April 16. Shredded chicken was found cooling at room temperature on the counter and measured at 97° F, and shredded chicken was being hot-held on a steam table and measured at 124° F. All out of temperature chicken was reheated to 165° F. The previous inspection (January 9, 2012) reported that refried beans had not been cooled properly (49° F in the walk-in cooler) and were being hot held on a steam table at 134° F and 65° F. Employees were educated on safe holding and cooling procedures.

This was a foodborne outbreak of *Clostridium perfringens* intoxications associated with a restaurant in Mendota Heights. Time-temperature abused refried beans and/or shredded chicken was the likely vehicle.