

***Clostridium perfringens* Intoxications Associated with a Restaurant**

February

Hennepin County

On February 7, 2012, the Hennepin County Human Services and Public Health Department (HSPHD) epidemiology unit received a complaint of gastrointestinal illness among two patrons from different households who had eaten the lunch buffet at a restaurant in Brooklyn Center on February 6. HSPHD notified the HSPHD environmental health unit and the Minnesota Department of Health (MDH) and an investigation was initiated.

A list of patrons identified from restaurant credit card receipts was provided to HSPHD. HSPHD epidemiologists interviewed the original complainants 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 at the restaurant. A stool sample collected from one complainant was submitted to the MDH Public Health Laboratory for bacterial, viral, and toxin testing.

HSPHD sanitarians visited the restaurant on February 8 to evaluate food preparation and handling procedures.

The two original complainants were interviewed by HSPHD epidemiologists. While the restaurant provided a list of names from 15 credit card receipts, only two matching telephone numbers were found, and neither patron at those telephone numbers returned multiple phone calls.

Both complainants met the case definition. Both cases reported cramps and diarrhea, one (50%) reported bloody stools, and none reported vomiting or fever. Incubation periods were 11 and 14 hours, respectively, and both cases were still experiencing symptoms at the time of interview (12 and 15 hours after their respective illness onset). A stool specimen collected from one case tested positive for *Clostridium perfringens* enterotoxin.

The cases reported consuming West African foods from the lunch buffet. However, neither case was familiar with this cuisine, so recall of specific food items was minimal. The cases reported eating rice, okra, and various unidentified meats; one recalled eating cassava leaves. Both drank ice water. The lack of non-ill controls prevented a statistical analysis of specific food items.

HSPHD sanitarians noted several critical violations when conducting an inspection of the restaurant. Violations included having an unapproved buffet; having food items from an unlicensed meat processor; improper cooling, cold/hot holding, and heating of buffet food items; and, adequate cooking temperatures not known by cooking staff. Sanitarians noted large containers of rice, meat, and other potentially hazardous foods that were unlikely to be cooled in the required amount of time. Education was provided to improve these processes, and environmental health staff continued to work with the restaurant to remedy these issues and improve the flow of food.

A representative from the Minnesota Department of Agriculture (MDA) accompanied the Hennepin County sanitarian during a follow-up restaurant visit on February 15 to further investigate the unapproved food items from an unlicensed meat processor. The MDA representative also followed-up with the restaurant to deliver a written description of the violation and to follow-up with verification of proper meat sources.

This was a foodborne outbreak of *Clostridium perfringens* intoxications associated with eating food at a restaurant in Brooklyn Center. The vehicle of transmission was not identified. The outbreak most likely resulted from improper cooling procedures and improper hot- and cold-holding temperatures, which created an environment in which *C. perfringens* proliferated and survived in one or more of the buffet food items.