

Investigation of a Foodborne Illness Complaint – Lyon County, October 2011



Background

On October 26, 2011 at 1:46 PM, the Kansas Department of Health and Environment (KDHE) was notified by the Kansas Department of Agriculture (KDA) of a foodborne illness report. Four individuals from one family but two different households became ill with gastrointestinal symptoms within twelve hours of eating at a Lyon County fast food restaurant. The Lyon County Health Department (LCHD) was notified of the complaint at 2:30 PM and a request was made for KDA to collect employee surveys when the inspection of the restaurant occurred. LCHD made attempts to contact the complainant on the afternoon of October 26, and completed an interview on October 27.

The four ill individuals represented a father and mother of one household and their adult children who resided in a separate household. All were residents of Saline County.

Methods

A case was defined as any individual experiencing vomiting and/or diarrhea within 12 hours of eating at the fast food restaurant in Lyon County, Kansas on October 16, 2011. The individual reporting the incident to the KDA served as a spokesperson for all ill individuals. The information collected during the interview was faxed to KDHE on October 28, 2011, and entered into the Kansas Outbreak Management System.

The inspection of the fast food restaurant was conducted on October 27, 2011. Because the complaint met the definition of a foodborne outbreak, the employee surveys were distributed to identify ill food handlers and their specific food handling duties. Because of a manager's initial refusal, the food borne illness employee surveys were not received until November 2, 2011.

Results

Four cases were identified. The ages of cases ranged from 23 to 67 years (median age 47.7 years). Two cases were male.

The spokesperson reported that all individuals consumed the same food items with the only difference being the types of soda. All individuals reported diarrhea and two individuals also reported vomiting (Table 1.). The median incubation period was 10 hours from the time of meal consumption on October 16 at 10:00 PM (range 9 to 12 hours). The duration of illness was reported for all individuals and ranged from two to seven days (median 4.5 days).

Table1: Clinical Information for Cases (n=4)

<i>Symptoms</i>	<i># with Symptoms (%)</i>
Diarrhea	4/4 (100%)
Bloody Diarrhea	1/4 (25%)
Abdominal Pain	4/4 (100%)
Vomiting	2/4 (50%)
Nausea	2/4 (50%)

One visit to a physician was reported, but no stool specimens were collected. The spokesperson reported that there were no other common exposures outside of the restaurant, but information was not provided on the purpose of travel to Lyon County or if separate vehicles were used in transit.

The restaurant inspection by KDA revealed only one critical violation. It was observed that handwashing did not occur after soiled gloves were removed prior to new single use gloves being put on. All foods were stored, cooked, and handled properly. Of the nine foodborne employee surveys, one employee reported a gastrointestinal illness onset on October 11, 2011, but that employee did not report working at the restaurant on the day of potential exposure. KDA, KDHE, and LCHD did not receive any other complaints of illnesses associated to the restaurant.

Conclusions

No definitive diagnosis was obtained for the four cases, and they may have shared other common exposures. Although the restaurant was initially implicated as the source of illness, neither the etiology of the outbreak nor the vehicle of transmission could be determined.

The restaurant inspection occurred in a timely manner and education was provided to the manager and employees on proper handwashing and glove use. The manager's initial refusal to allow the employee surveys was quickly corrected by KDA.

The investigation could have been assisted by the collection of stool samples by the physician. The Center of Disease Control encourages physicians and other health care professionals to recognize the potential for a foodborne etiology in a patient's illness and obtain stool cultures in appropriate setting¹.

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¹ Centers for Disease Control and Prevention. "Diagnosis and Management of Foodborne Illnesses: A Primer for Physicians and other Health Care Professionals." MMWR 2004:53 (No. RR-4). Accessed on-line on November 21, 2011 at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5304a1.htm>