



**GASTROENTERIC OUTBREAK AMONG DAYCARE
ATTENDEES
SEDGWICK COUNTY, KANSAS
FEBRUARY 2005**

FINAL REPORT DATE

April 12, 2005

INVESTIGATORS

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BACKGROUND

On Feb. 16, 2005, a complaint of a possible foodborne outbreak associated with Restaurant X was reported to the City of Wichita's Environmental Health Department (EHD). The complainant stated that six children (ages 2-4 years) at Daycare A experienced illness after eating at Restaurant X following a field trip to the library on February 15th. Preliminary information revealed that all six children experienced vomiting, diarrhea, or fever approximately seven hours after consuming chicken nuggets, fries, and a drink at Restaurant X.) Epidemiological Services at the Sedgwick County Health Department (SGCHD) notified the Epidemiologic Services Section (ESS) at the Kansas Department of Health and Environment (KDHE) of the potential foodborne outbreak and initiated an outbreak investigation.

METHODS

On February 18, 2005 the Senior Disease Investigator at the SGCHD interviewed the daycare provider at Daycare A about the illnesses experienced by the six children, and among other attendees and staff, and about current procedures? The SGCHD investigator also provided *enteric exposure* questionnaires for parents of the ill children to complete and return to Daycare A for the purpose of collecting data related to illness and potential sources of infection, including foods eaten.

Inspections of both Restaurant X and Daycare A were conducted on February 17 and 18 by the City of Wichita's EHD and the SCHED Child Care Licensure Unit (CCLU), respectively. No stool samples or food samples were available for laboratory testing.

RESULTS

Brief illness and food consumption histories were obtained from the six Daycare A children who became ill. Individual meal histories from daycare staff and a meal history from the daycare facility were not collected.

Three of the ill children were reported to have had 4-5 episodes of loose stools within the 24-hour period between February 15th and 16th. The median incubation period was 4.5

hours (range, 2.5 to 9.5 hours). The illness was self-limiting, with recovery shortly after purging.

Table 1: Illness history (n=6)

Child #	Symptoms *	Onset	Recovery
1	Vomiting	February 15@ 1430	February 16
2	Vomiting	February 15@ 1430	February 16
3	Vomiting	February 15@ 1500	February 16
4	Vomiting	February 15@ 1600	February 16
5	Vomiting	February 15@ 1730	February 16
6	Vomiting	February 15@ 2130	February 16

* 3 cases were reported to have had 4-5 episodes of loose stools within this 24-hour period.

The restaurant inspection conducted on February 17, 2005 revealed improper hand washing and improper chemical storage. Measures were taken to correct these critical violations, with verification by the inspector while on site.

No violations were observed by the CCLU during the inspection of Daycare A. However, the daycare staff was informed about common infections associated with daycare settings and about preventive measures to reduce the occurrences of these infections.

No additional illness among the Daycare A attendees or staff were reported. Moreover, Restaurant X and SGCHD did not receive any other complaints from restaurant patrons.

DISCUSSION

Though initial information implicated the Restaurant X meal as the source of illness, other sources of infection may exist. First, person-to-person transmission among the six Daycare A attendees is highly likely. Outbreaks of enteric illnesses are common in daycare facilities, especially those that care for children who are not toilet trained. The high frequency of hand-to-mouth activity that occurs among young children facilitate the spread of disease. Second, the daycare provider had reported that one child had been ill with vomiting on February 14th, almost two days prior to the six children becoming ill. Investigations of several documented outbreaks, particularly those caused by Norovirus (average incubation period of 24-48 hours), suggest that infection may be spread through inhalation of aerosolized vomitus^{1,2,3}. However, additional data would be needed to better assess the possibility of infection from exposure to vomitus in this outbreak.

Finally, other, unidentified exposures may have been the source of infection, including other meals served and asymptomatic carriers among staff or attendees.

¹ Caul EO. Small round structured viruses: airborne transmission and hospital control. *Lancet* 1994;343:1240-2.

² Chadwick PR, McCann R. Transmission of a small round structured virus by vomiting during a hospital outbreak of gastroenteritis. *J Hosp Infect* 1994;26:251-9.

³ Marks PJ, Vipond IB, Carlisle D, Deakin D, Fey RE, Caul EO. Evidence for airborne transmission of Norwalk-like virus (NLV) in a hotel restaurant. *Epidemiol Infect* 2000;124:481-7.

CONCLUSION

A gastroenteric outbreak occurred among six Daycare A children who consumed a common meal served at Restaurant X. The illnesses presented similar symptoms with comparable onsets and duration, indicating a common-source exposure. Neither the etiology of the outbreak nor the vehicle of transmission could be determined due to the lack of a definitive diagnosis, and the possibility of other common exposures among the six cases.

ACKNOWLEDGEMENTS

EES Epidemiologists Cheryl BañezOcfemia, MPH and David Stuever, MPH for their assistance with this investigation

Attachments: none