

**Outbreak of Norovirus Gastroenteritis Associated with Barley's Brewhaus --
Johnson County, January, 2008:
Preliminary Report**



Investigation by:

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Background

On January 18, 2008, The Kansas Department of Health and Development was notified of a possible outbreak of gastrointestinal illness in participants of a dinner at Barley's Brewhaus, 16649 Midland Drive, Shawnee, KS 66217. The preliminary report revealed that a group of professional consultants had eaten meals served at the restaurant on January 15, and several had subsequently become ill with vomiting, diarrhea and other gastrointestinal symptoms. In response to this report, an outbreak investigation was initiated by the Johnson County Health Department and the Kansas Department of Health and Environment (KDHE).

Key Findings

All members of the group (N=47) were asked to complete a foodborne illness questionnaire, designed to collect information on demographic factors, food eaten and illness characteristics. Of this number, 30 people responded, giving a response rate of 64%. Twenty-five of the respondents claimed to have developed gastrointestinal disease. Symptoms reported included stomach ache (96%), diarrhea (88%), nausea (84%), vomiting (64%) and fever (48%). In 21 persons, symptoms began 1 to 2 days after the event. One stool specimen was collected from an ill individual and tested positive for norovirus at the KDHE Laboratories.

A gastrointestinal survey was given to the Barley's Brewhaus employees to complete. Five of the 54 employees reported experiencing gastrointestinal illness between January 12, 2008 and January 18, 2008. One employee reported onset of illness on January 9, 2008, with symptoms lasting approximately one week. This employee reported working several days while experiencing gastrointestinal symptoms, including on January 15. Three additional employees reported onset of symptoms on January 17, all of whom reported working on January 15. The onset date for the fifth employee was not reported, although this employee reported experiencing symptoms on January 17.

A food inspection of the establishment was conducted on January 18. The inspection revealed eight (8) critical violations: (1) improper hand washing procedure; (2) hand washing violations; (3) improper reheating for hot-holding; (4) improper beverage storage; (5) improper segregation of raw fish and beef; (6) lack of food preparation knowledge; (7) improper storage of food service materials; and (8) damaged food service equipment.

Conclusion and Recommendations

This outbreak was likely to be caused by norovirus. Noroviruses may be transmitted via the fecal-oral route through food that has been contaminated by the hands of an ill food handler. Noroviruses are highly contagious and as few as 10 viral particles may be sufficient to cause infection. The Centers for Disease Control and Prevention (CDC) estimate that at least 50% of all foodborne outbreaks of gastroenteritis are attributed to noroviruses.

Simple measures, including correct handling of cold foods, strict hand washing after using the bathroom and before handling food items, and excluding employees with gastrointestinal illness from food handling may substantially reduce foodborne transmission of noroviruses.

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