

Foodborne Disease Spotlight: Outbreak of Norovirus

Outbreak of Norovirus Associated with Local Restaurant in Whitley Co.

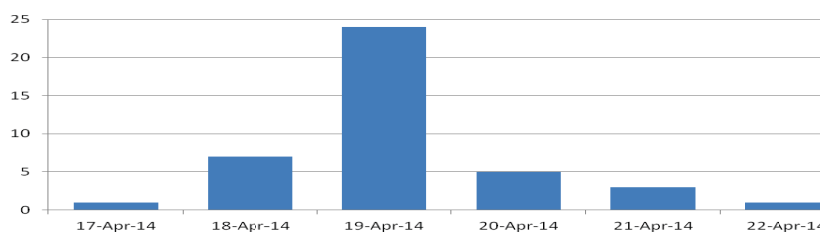
Earlier this year ISDH and Whitley County Health Department (WCHD) investigated an outbreak of Norovirus identified through the food complaint system. On April 20, 2014, WCHD received complaints from two separate parties who dined at a restaurant on April 17. Illness onset occurred approximately 24 hours afterwards. Symptoms included diarrhea, vomiting, nausea and abdominal cramps.

On April 21, WCHD and ISDH conducted an environmental assessment of the restaurant during which it was discovered that five of the nine food employees had experienced a similar illness beginning on April 18. Many violations were also noted at this time, including: an inadequate employee health policy, improper cooling and reheating procedures, and unacceptable personal food storage practices. The restaurant was temporarily closed on April 21 in order to allow the staff to recover from their illness and prevent the continued transmission of the virus. A follow-up assessment occurred on April 28, however, the facility was not allowed to re-open due to repair issues and the inability of the owner to demonstrate knowledge on the employee health policy, sanitation, cooling and reheating. Surfaces were properly disinfected with bleach and all dishes were re-washed and sanitized in the dishwashing area. The establishment was allowed to re-open on May 2.

On April 22 WCHD received two more food complaints from two additional parties who dined at the facility on April 17 through 19. Individuals who were identified as din-

ing at the restaurant with one of the parties reporting ill cases were interviewed with a standard foodborne illness questionnaire. The data below shows the first symptom onset dates reported for outbreak cases.

Epidemiological curve of first onset dates from known outbreak cases



On April 22-24, the lab received stools for four patron cases, and five restaurant employees. All of the stool samples tested PCR positive for Norovirus GII. Norovirus sequencing results were available for 4 of these cases and all four were identified as GII Sydney.

Simultaneously, WCHD had received a complaint from a party (four attendees, all ill) who dined at another Whitley Co. restaurant on April 18 and became ill with severe diarrhea, chills, nausea, vomiting, and bloating about 1-1.5 hours later. Food histories were collected from these cases, and it was determined that all four individuals had also dined at the restaurant on April 17. Given the food history and the results of specimen testing, these four cases were also included in this outbreak.

“In all, a total of 44 cases were identified as part of this outbreak. As the investigation proved, food complaints are a useful tool for identifying enteric disease outbreaks; however, as the outbreak has also shown, complaints may be the result of last meal bias. It is important for us to collect more complete food histories from cases to identify other possible connections.”

Norovirus symptom onset

generally occurs within 12 and 48 hours after exposure. Diarrhea and vomiting lasting about 24-48 hours are the most common symptoms. While individual cases of Norovirus are not nationally reportable, patients are encouraged to submit stool samples for confirmation of a

Norovirus infection.

Outbreaks of Norovirus are to be immediately reported to the local health department or ISDH. Norovirus outbreaks can only be confirmed by laboratory testing clinical specimens; therefore it is important to collect stool specimens from multiple patients for Norovirus testing. The ISDH laboratory can test stool specimens for norovirus; collection containers can be made available by contacting through the local health department.

Treatment for a Norovirus infection is limited to replacing and maintaining fluid and electrolyte balance through oral or intravenous rehydration. Prevent Norovirus infections by practicing proper handwashing procedures, carefully washing fruits and vegetables and thoroughly cooking seafood. Do not prepare food, provide healthcare or work in a daycare while symptomatic. School-aged children and children in daycare should stay home while symptomatic. Control Norovirus infections by cleaning and disinfecting contaminated surfaces and immediately wash laundry that may be contaminated with vomit or feces. Find out more information about Norovirus from ISDH at <http://bit.ly/MWKd31> or the CDC at <http://1.usa.gov/1eOwr17>.

by Tess Gorden, Enteric Epidemiologist, Epidemiology Resource Center, ISDH

NOROVIRUS OUTBREAK: Food Protection's Role

On April 20, WCHD contacted ISDH) Field Food Specialist (FFS) to inform them of an outbreak. The FFS recommended that she contact Ms. Erica Pitcher the ISDH Field Epidemiologist and Ms. Laurie Kidwell from ISDH Food Protection. Ms. McClusky requested assistance from the FFS for the environmental assessment of the restaurant.

On April 21, the FFS and Ms. McClusky conducted an environmental assessment. The food preparation and employee health procedures were reviewed with the restaurant owner. During the environmental assessment, many violations were noted. It was discovered that the establishment had an inadequate employee health policy, improper cooling and reheating procedures and unacceptable personal food storage practices. This establishment has also been noted as a chronic violation establishment including a history of poor sanitation.

During the assessment, it was discovered that five out of the nine food handlers that work at the restaurant have been experiencing similar illness starting on April 18. The first food handler that experienced symptoms was the owner's 14 year old son. The son had just returned from a school trip to Chicago on Thursday and went to work that day.

The queso cheese sauce was made prior to the assessment on April 21. The sauce had been dumped into several large white square buckets and placed into the walk-in cooler around 10 am. The bucket was approximately 12 inches deep. Temperatures were taken at 1:50 p.m. and registered in a range of 81°F to 88°F. In discussing the temperature problem with the owner, who stated again that he could not heat the product up to the required 165°F because the cheese sauce will separate. He said the product remains on the steam table until it is used and was not able to indicate an approximate time it normally remains on the steam table.

The cheese sauce temperature had been discussed with the owner on previous inspections. Time as a Public

Health Control was discussed, but no procedure had been submitted to the Health Department for approval. The cheese product was disposed of at the time of the inspection.

Another issue that was observed and discussed was that there was a large pan of beef product in the walk-in cooler stored with other food products. The owner immediately stated that it was their own personal food that they made at home and brought into the establishment for the staff to eat. The product was removed from the cooler. The owner and his son had both experienced diarrhea and stomach symptoms.

The restaurant was shut down on April 21 in order to allow the staff to get over their illness and stop transmission. The restaurant was revisited on April 28, and was not allowed to reopen due to repair issues and the inability of the owner to demonstrate knowledge on the employee health policy, sanitation, cooling and reheating.

The owner was unable to verify that employees had recovered from the illness. Additionally, the FFS discussed disinfecting surfaces with a concentration of 1000-5000 ppm, or 5 to 25 tablespoons of bleach per gallon of water. The establishment purchased three new gallons of unscented bleach and used 16 tablespoons of bleach per 1 gallon of water. All door handles, tables and chairs, preparation counters, sink and sink handles, equipment handles, counter equipment, the restroom facilities, floors and walls were wiped down. After they allowed at least a 30 minute contact time with the solution, they re-cleaned the surfaces and sanitized with a 100 ppm solution. All dishes were re-washed and sanitized in the dishwashing area. The establishment was allowed to reopen on May 2.

Traceback:

No traceback was conducted since the outbreak was attributed to employees working while ill and not a particular food.

Contributing Factors:

The current outbreak was caused by food handlers working while ill as well as the lack of an em-

ployee health policy. Additionally, the establishment had a history of poor sanitation. Furthermore, having two known outbreaks associated with this establishment was a great concern. During the current investigation, it was discovered that contributing factors (cooling and reheating violations) associated with the first outbreak were continuing practices. This history of the establishment's violations and lack of compliance is a concern for future outbreaks if these violations are not corrected.

Mitigation Actions:

The establishment was closed until Norovirus positive food employees were 48 hours asymptomatic, and the establishment was sanitized with the CDC's recommended bleach solution for destroying Norovirus. Additionally, the establishment will receive increased regulatory oversight (more frequent inspections) and the Whitley County Health Department will have the option to close the establishment if marked improvements are not seen.

by Laurie Kidwell, Public Health Administrator I, ISDH Food Protection Program