

Outbreak of Norovirus Associated with  
Mexican Restaurant,  
Shawnee County, January 2017

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## Background

On January 9, 2017 at 1:30 PM, the Infectious Disease Epidemiology and Response section at the Kansas Department of Health and Environment (KDHE) was notified by the Kansas Department of Agriculture (KDA) that three persons ate at a Mexican restaurant in Topeka, KS and subsequently experienced gastrointestinal illness. KDHE notified Shawnee County Health Agency (SCHA) and an outbreak investigation was initiated on January 9, 2017 at 2:15 PM to determine the cause, scope of illness and to initiate appropriate measures for control and prevention. A special questionnaire was developed and submitted to ill persons.

## Key Investigation Findings

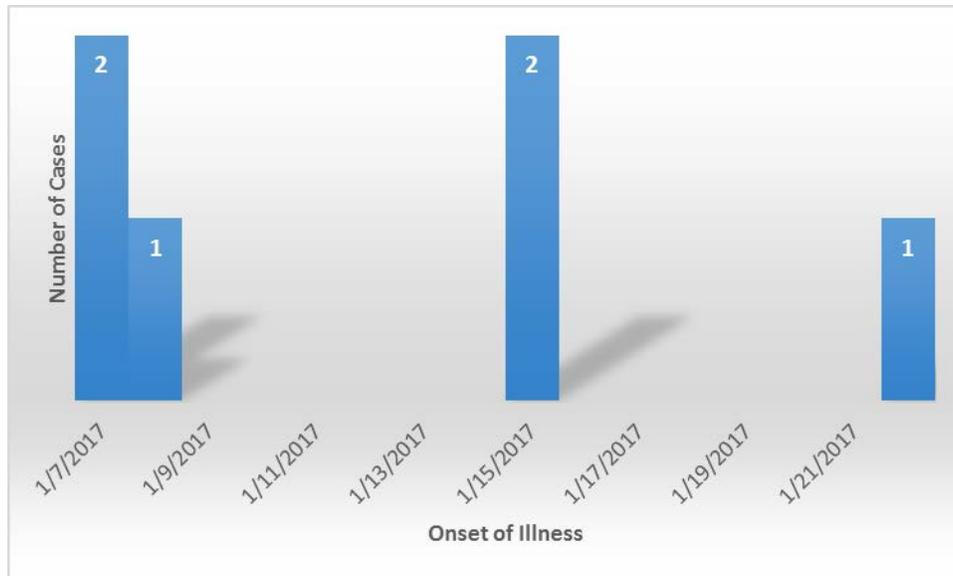
- Ill persons were interviewed with an outbreak specific questionnaire to determine exposure, incubation and duration.
- A case was defined as diarrhea or vomiting in a person that developed within 12-55 hours of consuming food from this restaurant between January 6<sup>th</sup> and January 21<sup>st</sup>.
- Six individuals met case definition
- Demographics:
  - 100% were female
  - Median age: 54 years (range 28 years – 70 years)
- The most common symptom was the presence of nausea (100%), followed by diarrhea, vomiting, abdominal pain (83%) and rash (50%) (Table 1).

Table 1: Symptoms Reported among Cases

<i>Clinical Information</i>	<i># Cases with Symptom</i>	<i># of Cases Reporting</i>	<i>% of Cases with Symptom</i>
Nausea	6	6	100
Diarrhea	5	6	83
Vomiting	5	6	83
Abdominal Pain	5	6	83
Muscle Aches	3	6	50

- Onset of illness ranged from January 7, 2016 to January 21, 2016 (Figure 1).  
Median duration of illness: 46 hours (range was 21– 47 hours)

Figure 1: Number of Cases by Illness Onset (n=18)



- Two specimens were collected and tested. Both tested positive for Norovirus.
- KDA interviewed employees, none reported gastrointestinal illness.
- KDA inspected the restaurant three times between January 10<sup>th</sup> and January 23<sup>rd</sup>
  - Inspections observed improper sanitation and hand hygiene practices.
  - All violations were corrected on site.
- The restaurant was cleaned utilizing the norovirus cleaning protocol and was monitored by KDA.

## Conclusions and Recommendations

This outbreak of norovirus was associated with a Mexican restaurant in Topeka, KS. The epidemiologic and clinical data collected was insufficient to determine an environmental source of illness or if illness was spread person-to-person or both. During multiple inspections improper sanitation and hand hygiene practices were observed and could have contributed to the spread of norovirus within the restaurant and to the patrons. The norovirus cleanup protocol was used by the restaurant and no further illnesses were reported. Education was provided to the restaurant managers by KDA concerning norovirus symptoms, transmission, importance of hand washing, and work exclusion while ill.

Norovirus is a highly contagious pathogen and common between November and April. The leading cause of illness and outbreaks is food contaminated by infected food workers. Incubation period is typically 12-48 hours and symptoms typically last one to three days. Infected persons can transmit the virus for up to two weeks after recovery from symptoms of norovirus.

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