

Outbreak of Norovirus at
Long Term Care Facility,
Mitchell County, December 2016



Background

On December 5, 2016 at 2:10 PM, the Infectious Disease Epidemiology and Response section at the Kansas Department of Health and Environment (KDHE) was notified by the Mitchell County Hospital infection preventionist that a patient in a Mitchell County long term care facility tested positive for norovirus and seven additional patients in that facility were experiencing gastrointestinal illness. KDHE notified Mitchell County Health Department (MCHD) and an outbreak investigation was initiated on December 5, 2016 at 2:30 PM to determine the cause and scope of illness and to recommend appropriate measures for control and prevention. A line list was developed and submitted to the infection preventionist at Mitchell County Hospital for completion.

Key Investigation Findings

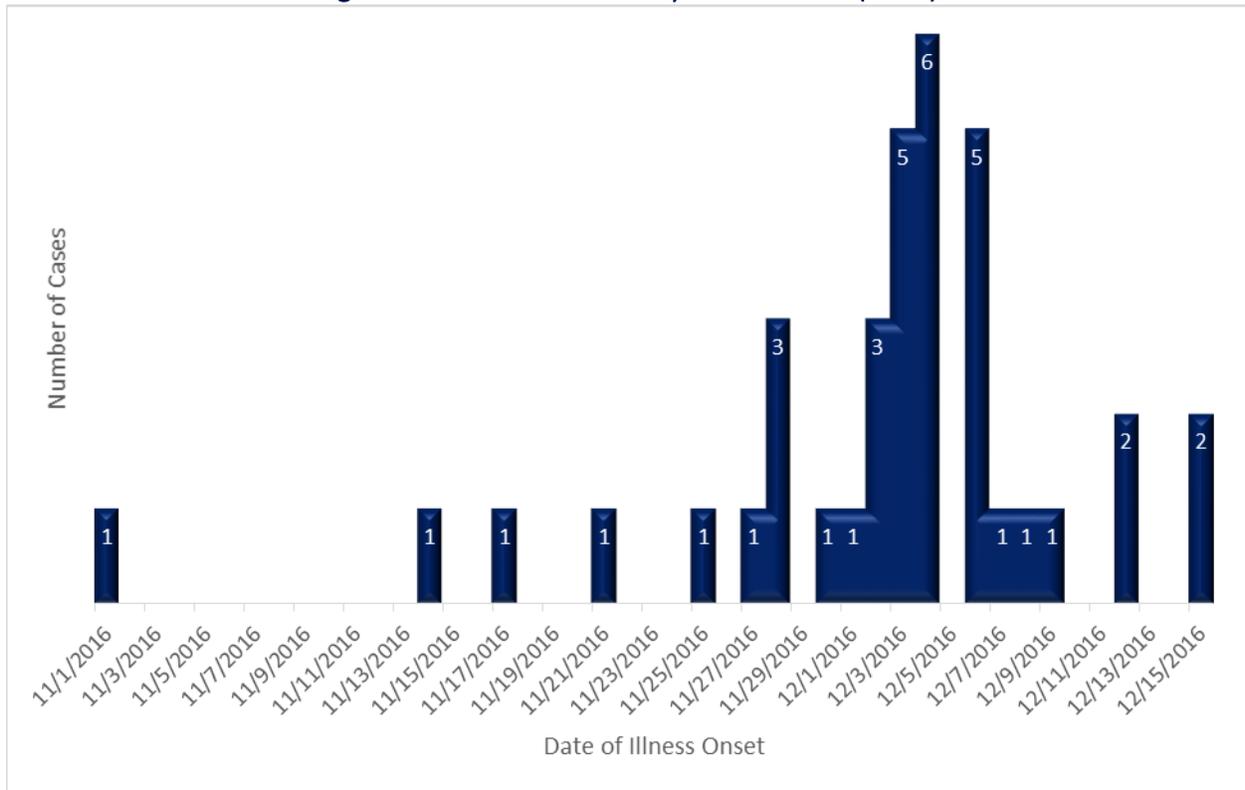
- A confirmed case was defined laboratory confirmation of norovirus and diarrhea or vomiting in a resident or staff member between November 1st and December 15th
- A probable case was defined as diarrhea or vomiting in a resident or staff member between November 1st and December 15th without laboratory confirmation.
- 37 individuals (16 residents and 21 staff members) met case definition, 3 confirmed and 34 probable.
- Demographics
 - 76% were female
 - 70% were residents of Mitchell County, 19% from Jewell County, and 10% from Lincoln and Cloud counties.
 - Median age: 56 years (range 18 years – 94 years)
- The most common symptom was diarrhea (89%), followed by nausea (59%) and vomiting (54%) (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>
Diarrhea	32	36	89%
Nausea	22	37	59%
Vomiting	20	37	54%
Fever	18	37	49%
Abdominal Pain	15	37	41%

- Onset of illness ranged from November 1 – December 15, 2016 (Figure 1).
- Median duration of illness: 2.6 days (range was 0.3 – 6 days)
- Four persons visited the emergency room and 3 persons were hospitalized.

Figure 1: Number of Cases by Illness Onset (n=37)



- Five stool specimens were collected and tested.
 - Three specimens tested positive for norovirus at the facility. These specimens were submitted to the Kansas Department of Health and Environment and tested positive for Norovirus genotype II.

Conclusions and Recommendations

Thirty-seven individuals (16 residents and 21 staff members) became ill with gastrointestinal illness and met one of the case definitions for this outbreak. Norovirus genotype II was confirmed as the causative agent of this outbreak that was associated with a long term care facility in Beloit, KS. Most prevention measures were instituted by the facility on December 5, 2016. These measures included restriction of visitation to the facility, increase in hand hygiene, use of cleaner that is Environmental Protection Agency (EPA) approved for norovirus, monitoring personnel absenteeism due to gastrointestinal illness, isolation of ill residents and exclusions of ill employees until 48 hours after symptoms resolved.

While norovirus can occur year-round, a majority of cases in the United States occur during the winter months. Transmission is often person-to-person, however, consumption of

contaminated food or water or contact with contaminated surfaces also can be a source of transmission the virus. Symptoms appear 12 to 48 hours exposure, include diarrhea, vomiting, nausea and abdominal pain and usually last for one to three days.

Report by:

Kelly Gillespie, MPH

Kansas Department of Health and Environment

Report date: January 24, 2017

Investigation by:

Mitchell County Health Department

310 W 8th St

Beloit, Kansas 67420

<http://www.mcks.org/Health.htm>

Kansas Department of Health and Environment

Bureau of Epidemiology and Public Health Informatics

1000 SW Jackson Street, Suite 075

Topeka, Kansas 66612

www.kdheks.gov