

**Outbreak of Norovirus Associated with the University of Kansas Hospital - Marillac
Campus — Johnson County, February 2016**



Background

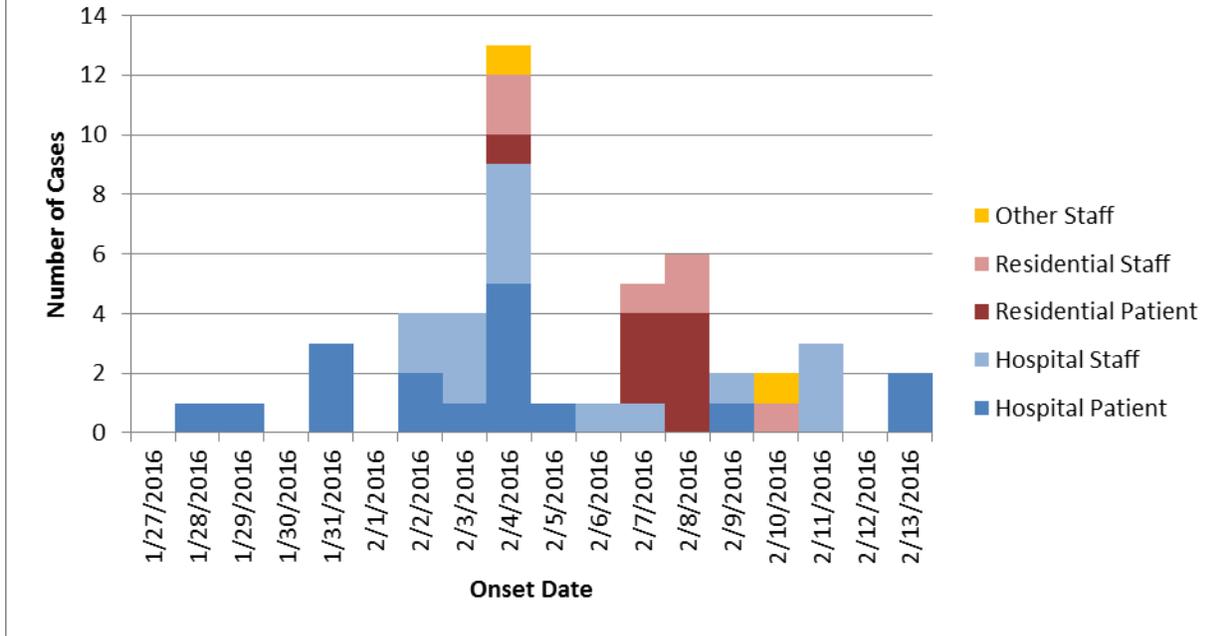
On Thursday, February 4, 2016 at 5:00 p.m. the University of Kansas Hospital – Marillac Campus (Marillac) reported an increase of gastrointestinal illness among patients and staff members to the Kansas Department of Health and Environment (KDHE) Epidemiology Hotline. Marillac specializes in mental illness and behavioral challenges in children and adolescents and caters to both acute and long term residential care. Acute care patients are admitted and treated for up to seven days.

The Johnson County Department of Health and Environment (JCDHE) was notified and an outbreak investigation was started at 8:00 a.m. on Friday, February 5, 2016 to determine the source of illness and implement appropriate control measures. A line list template and stool specimen collection kits were provided by JCHDE.

Key Investigation Findings

- Sixty-eight individuals reported gastrointestinal illness. Of those, 48 cases (25 patients and 23 staff members) met the case definition. A case was defined as vomiting or diarrhea in a patient or staff member of Marillac between January 28, 2016 and February 13, 2016.
- Marillac accommodates acute and residential patients. Of the 25 patient cases identified, 17 were acute care and 8 were residential. 15 staff member cases worked in the acute care section, 6 provided residential care, and 2 had other duties in the facility, Figure 1.
- Onset of illness ranged from January 28 to February 13, 2016. Two individual's onset dates and times indicated exposure was most likely community acquired. These were patients who developed vomiting or diarrhea less than 12 hours after admission.
- Sex was provided for 24 of the patients and none of the staff. There were 14 males and 10 females identified. Age was listed for 19 of the patients and ranged from 3 – 16 years (median = 12 years)
- A total of nine stool specimens were tested; three (2 patients and 1 staff) tested positive for norovirus genogroup II.

Figure 1: Number of Cases by Onset Date by Type of Case, (n=48)



Conclusion and Recommendations

Fifty-one individuals became ill with norovirus and met the case definition for this investigation. Norovirus was confirmed as the causative agent of this outbreak. Seventeen ill individuals did not meet the case definition or had an alternative diagnosis.

Several challenges were identified during this investigation. First, due to the special setting and population, group activities such as therapy could not be cancelled. This prompted strict monitoring of symptoms of all patients and the first sign of illness resulted in isolation to patient rooms. Second, this outbreak occurred during a time of high transmission of norovirus in Johnson County and two patients were admitted who most likely had community-acquired norovirus. There was also a report of a residential patient going home for a weekend and returning to the facility ill. In response, screening was increased to assess for illness in the patients’ household in the week prior to admission. Next, soap and paper towels were not readily available to patients since they posed a risk to the patients’ health. Options for norovirus-effective hand sanitizers were provided and hand-washing stations were brought in for the duration of this outbreak. Patients were supervised by nursing staff to ensure proper hand-washing technique. Finally, some gastrointestinal symptoms were determined to be behavior related and not due to norovirus illness.

Further recommendations included delivering meals to rooms instead of serving in the cafeteria, cancelling school, and closing the gym for large activities. Ill healthcare workers were excluded until 48 hours after symptoms resolved.

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