

Norovirus Outbreak Associated with the Lakeview Village Retirement Community —Johnson County, February 2016



Background

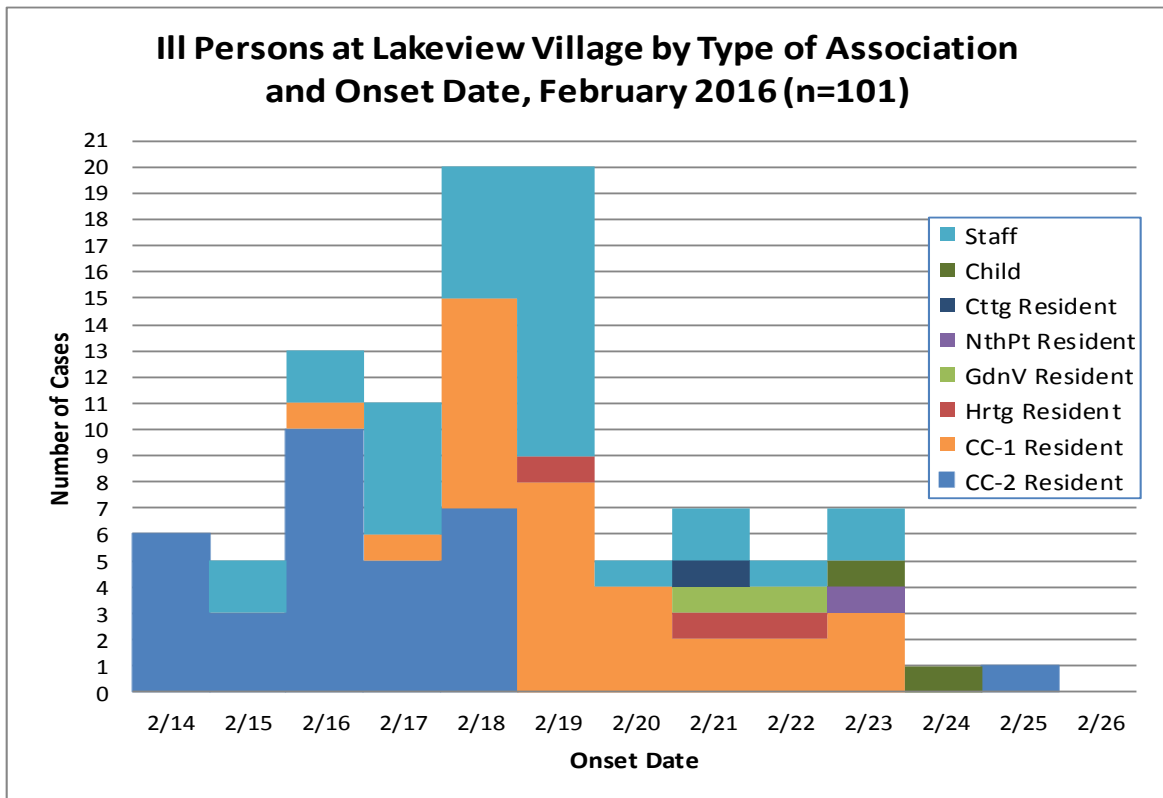
On Monday, February 22, 2016 at 10:35 AM, the Johnson County Health Department (JCHD) notified the Infectious Disease Epidemiology and Response section (IDER) at the Kansas Department of Health and Environment (KDHE) that 76 residents and 17 staff of the Lakeview Village (LV) were ill with gastrointestinal symptoms. Two of the residents had tested positive for Norovirus genotype II. The retirement community is on a 100-acre campus in Johnson County and has approximately 750 residents with 600 employees. The campus has a nursing care center (CC) located at Centerpointe with up to 120 residents. Twenty-six assisted living apartments at Eastside Terrace, residential apartments at Southridge, Northpointe (NthPt), Gardenview (GdnV) and Heritage Place (Hrtg), duplex homes at Cottage Place (Cttg) and four-plex villas are also located on campus, Figure 1. A childcare facility serving 39 attendees is available to provide opportunities for the children and adults to interact in various activities. At the time of the initial report, JCHD had begun to coordinate with the community to prevent transmission of illness by limiting activities including the closing of the CC to visitors and the closing of communal dining areas. A line listing of potential cases was started to monitor illness within the community as communications continued between JCHD and LV, with the findings reported to KDHE-IDER. This increase in gastrointestinal illness at LV was occurring during a time of increased norovirus activity in the general population of Johnson County.

Figure 1: Lakeview Village Campus Map



Key Investigation Findings

- From February 14 to March 7, 2016, illness was reported in 108 residents, 36 staff members, and seven children.
- To examine the impact of norovirus-like illness, a case was defined as more than one vomiting episode in a 24-hour period or diarrhea with nausea or fever, occurring between February 14 and February 25, 2016, in a resident, attendee, or staff member of the Lakeview Village community.
- Thirty-eight residents, five staff members, and four children did not have symptoms matching those of a case. Four other residents and one child had symptom onsets after March 3, 2016. Of the 151 illnesses reported, 101 persons were included in the final case counts, including 68 residents, 31 staff, and two children.



- The symptoms reported included vomiting (90%), diarrhea (64%), nausea (37%), and fever (17%).
- The age of cases ranged from three to over 95 years of age (median age, 90 years); 70% of the cases were female. Ages and gender were not available for staff.

- No deaths or hospitalizations associated to norovirus-like illness were reported during the investigation.
- Among residents in the CC, illness occurred in 52% of the residents.
- Transmission from CC to another neighborhood was noted to have occurred on February 19, 2016, after a Hrtg resident experienced illness within 24 hours of a visit to CC.
- Two stool specimens were collected; both were positive for norovirus genotype II.
- Preventative measures began on February 20, 2016 and were modified, as needed, based on the descriptive epidemiology of the outbreak. Initial measures included the following:
 - Isolation of ill residents in rooms or residences until 72 hours after last reported symptoms.
 - Ill employees were excluded from work until 72 hours after the last episode of vomiting, diarrhea, or fever.
 - Use of disposable plates and utensils for meals.
 - Closing of the communal dining areas on campus.
 - No visitors to the CC, including floor 1 (CC-1) and floor 2 (CC-2).
 - No activities between floors with CC-1 and CC-2, including the use of communal areas, such as the beauty shop.
 - Educating visitors to other areas of the community to postpone visits if ill within the last 72 hours.
 - Extra cleaning measures were put into place; this included the initiation on February 23, 2016, of steam cleaning in all areas with reported exposures.
 - Reinforcement of handwashing with soap and water upon arrival, after each “dirty” task, between residents and neighborhoods, before and after meal service, before eating or drinking, and before and after breaks.
 - Use of masks, gowns and gloves by staff when entering neighborhoods with reported illnesses.
 - Additional measures added on February 25, 2016, included no visitors to the assisted living facilities in Eastside, closing of child care center until February 29, 2016, and no visits between children and residents until April 1, 2016.
- The measures continued until March 7, 2016, at which time, normal activities resumed. This included the joint activities between floors in the CC, opening of communal areas, normal dining routines, and welcoming of visitors. Precautions that stayed in place were exclusion of daycare children from activities with residents until April 1, and the 72-hour exclusion of ill persons.

Conclusion and Recommendations

This was an outbreak of norovirus which affected 101 individuals either residing in, working for, or attending activities within a retirement community. The epidemiologic and clinical data collected for this outbreak are consistent with a person-to-person transmission. The procedures implemented to limit the spread of illness were effective in controlling the outbreak. It is recommended that the community administration review actions that occurred to determine if the outbreak could have been recognized earlier to allow the successful control measures to be implemented sooner.

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