

EPIDEMIOLOGIC INVESTIGATION SUMMARY

NOROVIRUS: GASTROINTESTINAL ILLNESS OUTBREAK AMONG RESIDENTS AND STAFF OF AN ASSISTED LIVING FACILITY IN WASHOE COUNTY, NEVADA, 2014

Department of Health and Human Services
Division of Public and Behavioral Health
Office of Public Health Informatics and Epidemiology

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PURPOSE

The purpose of this newsletter is to provide the scientific community, decision makers, healthcare providers, and the public a summary of the outbreak investigations conducted by the Division of Public and Behavioral Health.

BACKGROUND

On May 8, 2014, the Division of Public and Behavioral Health (DPBH), Office of Public Health Informatics and Epidemiology (OPHIE) was informed by the Executive Director of Facility "A" of a gastrointestinal (GI) illness outbreak among residents and staff at Facility "A". The problem was first identified by staff on May 6, 2014. Initial reported symptomology of the ill residents included diarrhea and vomiting. The outbreak investigation began on May 8, 2014.

METHODS

Epidemiology

On May 8, 2014, DPBH provided recommendations to reduce and prevent the spread of illness in Facility "A", including the submission of outbreak case report forms to OPHIE until further notice, exclusion of symptomatic employees from the facility until 72 hours after symptoms resolved, and laboratory testing to identify the pathological agent(s).

A **confirmed case** was defined as a resident, staff member, or visitor of Facility "A" who was lab confirmed with norovirus since May 6, 2014.

A **probable case** was defined as a resident, staff member, or visitor of Facility "A" who was not lab confirmed with norovirus but had diarrhea and/or vomiting (along with possible other GI illnesses) since May 6, 2014.

A **suspect case** was defined as a resident, staff member, or visitor of Facility "A" who was not lab confirmed with norovirus but anecdotally had diarrhea and/or vomiting (along with possible other GI illnesses) since May 6, 2014.

Laboratory

Laboratory testing for GI illness was highly recommended for ill residents in order to identify the etiologic agent, target infection prevention measures and control the outbreak within Facility "A". Laboratory testing was focused on the presence of norovirus, rotavirus, and *C. difficile*.

Three laboratory tests were conducted and the specimens collected for testing were stool samples.

Mitigation

In order to prevent further spread of illness, the OPHIE Outbreak Response Team disseminated recommendations for the prevention and control of norovirus gastroenteritis outbreaks to Facility "A".

RESULTS

Epidemiology

A total of 33 cases (30 probable and 3 confirmed) were reported. Illness onset occurred between May 6, and May 19,

2014. The epidemic curve is presented in Figure 1 and shows the distribution of illness onset dates.

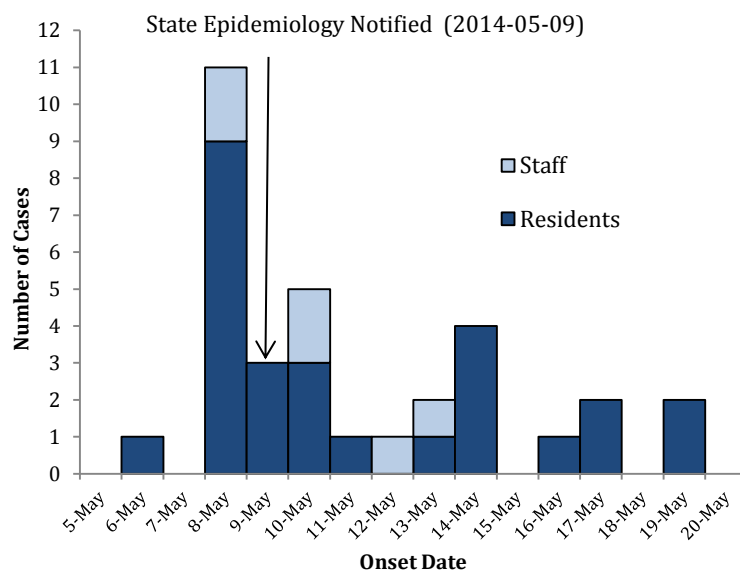


Figure 1. The epidemic curve of norovirus (n=33) associated with an assisted living facility in Washoe County, Nevada, from May 6-May 19, 2014.

The peak illness onset date was May 8, 2014. Among the 33 cases, the average age was 82 years old (range 36-102 years). Males comprised 18.2% of cases.

Symptomatic cases reported diarrhea (81.8%), vomiting (45.5%), nausea (48.5%), body aches (15.2%), and fever (1.4%). The average duration of illness for cases was approximately two days (range one – four days). The resident attack rate was 48.2%, the staff attack rate was 20.0%, and the overall attack rate was 38.4%.

Laboratory

All 3 specimens tested were positive for norovirus genogroup II (GII).

Mitigation

After the cause of the outbreak was determined to be norovirus GII, DPBH reiterated to the facility the same information given at the start of the outbreak for preventing and controlling norovirus gastroenteritis outbreaks.

CONCLUSIONS

A GI illness outbreak occurred among residents and staff at Facility “A”, an assisted living facility in Washoe County, Nevada, from May 6, through May 19, 2014. Confirmatory test results indicated norovirus GII was the causative agent and the mode of transmission was believed to be person-to-person.

In total, 33 persons were classified as cases; 27 residents and six staff. Symptoms included diarrhea, vomiting, nausea, body aches, and fever with illness duration lasting an average of 2 days. Residents of the facility had the highest attack rate (48.2%) and one resident required hospitalization. The epidemiologic link between cases was believed to be the facility in which the residents lived and the staff worked.

The outbreak ceased as of May 20, 2014.

RECOMMENDATIONS

To prevent such norovirus outbreaks in healthcare settings, the following public health measures are recommended:

- Follow hand-hygiene guidelines and careful washing of hands with soap and water after contact with patients with norovirus infection.
- Use gowns and gloves when in contact with or caring for patients who are symptomatic with norovirus.
- Routinely clean and disinfect high touch patient surfaces and equipment with an Environmental Protection Agency-approved product with a label claim for norovirus.
- Remove and wash contaminated clothing and linens.
- Exclude healthcare workers who have symptoms consistent with norovirus from work.¹

REFERENCES

1. Centers for Disease Control and Prevention. *Norovirus in Healthcare Settings*. February 25, 2013. Retrieved January 28, 2014, from <http://www.cdc.gov/HAI/organisms/norovirus.html>.

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