

EPIDEMIOLOGIC INVESTIGATION SUMMARY

NOROVIRUS: GASTROINTESTINAL ILLNESS OUTBREAK AMONG PATIENTS AND STAFF OF A HOSPITAL WASHOE COUNTY, NEVADA, 2014

Department of Health and Human Services
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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 2, 2014, the Division of Public and Behavioral Health (DPBH), Office of Public Health Informatics and Epidemiology (OPHIE) was informed by an infection preventionist at Facility "A" of a gastrointestinal (GI) illness outbreak among patients and staff. The problem was first identified on April 28, 2014, and initial reported symptomology included diarrhea, nausea, and vomiting. The outbreak investigation began on May 2, 2014.

METHODS

Epidemiology

On May 2, 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 patient, staff member, or visitor Facility "A" who was lab confirmed with norovirus since April 28, 2014.

A **probable case** was defined as a patient, 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 April 28, 2014.

A **suspect case** was defined as a patient, staff member, or visitor of Facility "A" who was not lab confirmed norovirus but anecdotally had diarrhea and/or vomiting (along with possible other GI illnesses) since April 28, 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 rotavirus, *Clostridium difficile*, and/or norovirus.

Six laboratory tests were conducted and the specimens provided 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 six cases (four confirmed and two probable) were reported. Illness onset occurred between April 28, and May 1, 2014. The epidemic curve is presented in Figure 1 and shows the distribution of illness onset dates.

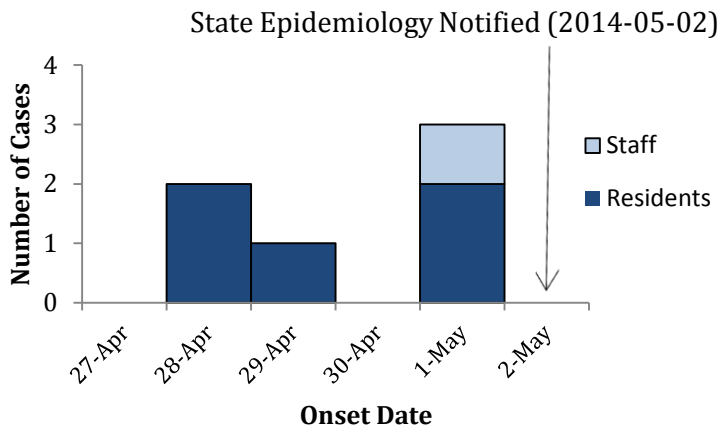


Figure 1. The epidemic curve of norovirus ($n=6$) associated with a hospital in Washoe County, Nevada from April 28-May 1, 2014

The peak illness onset date was May 1, 2014. Among the six cases, the average age was 71 years old (range 42-86 years) and males comprised 33.3% of the cases.

Symptomatic cases reported diarrhea (100%) and vomiting (16.7%). The average duration of illness was four days (range three–six days). The resident attack rate was 0.6%, the staff attack rate was 1.6%, and the overall attack rate was 0.7%.

Laboratory

Of six specimens tested, four tested positive for norovirus: two norovirus genogroup I (GI) and two norovirus genogroup II (GII).

Mitigation

After the cause of the outbreak was determined to be norovirus, 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 patients and staff at Facility “A”, a hospital in Washoe County, Nevada from April 28, through May 1, 2014. Confirmatory test results indicated norovirus (GI and GII) was the causative agent and the mode of transmission was believed to be person-to-person.

In total, six persons were classified as cases: five residents and one staff of the facility. Symptoms included diarrhea and vomiting with illness duration lasting an average of four days. Staff of the facility had the highest attack rate at 1.6%. The epidemiologic link between cases was believed to be the facility in which the patients were treated and the staff worked.

The outbreak ceased as of May 2, 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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