

EPIDEMIOLOGIC INVESTIGATION SUMMARY

NOROVIRUS: GASTROINTESTINAL ILLNESS OUTBREAK AMONG RESIDENTS AND STAFF OF A REHABILITATION CENTER IN CLARK 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 June 27, 2014, the Division of Public and Behavioral Health (DPBH), Office of Public Health Informatics and Epidemiology (OPHIE) was informed by the Infection Control Nurse of Facility "A" of a gastrointestinal (GI) illness outbreak among residents and staff of Facility "A". The problem was first identified by staff on June 26, 2014, and Initial reported symptomology of the ill individuals included diarrhea, vomiting, and nausea. The outbreak investigation began on June 27, 2014.

Facility "A" reported an outbreak three months prior on March 27, 2014. The outbreak consisted of 38 cases (32 probable, 5 confirmed, and 1 secondary probable) of which 22 were residents, 15 were staff, and one was a secondary case. The outbreak was determined to be caused by norovirus and ceased on April 12, 2014.

METHODS

Epidemiology

On June 27, 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 June 26, 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 June 26, 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 June 26, 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.

Eleven laboratory tests were conducted and the specimens collected were stool samples.

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 25 cases (19 probable and 6 confirmed) were reported. Illness onset occurred between June 26, and July 2, 2014. The epidemic curve is presented in Figure 1 and shows the distribution of illness onset dates.

The outbreak included five suspect cases which were not counted in the final numbers due to a lack of information on symptoms.

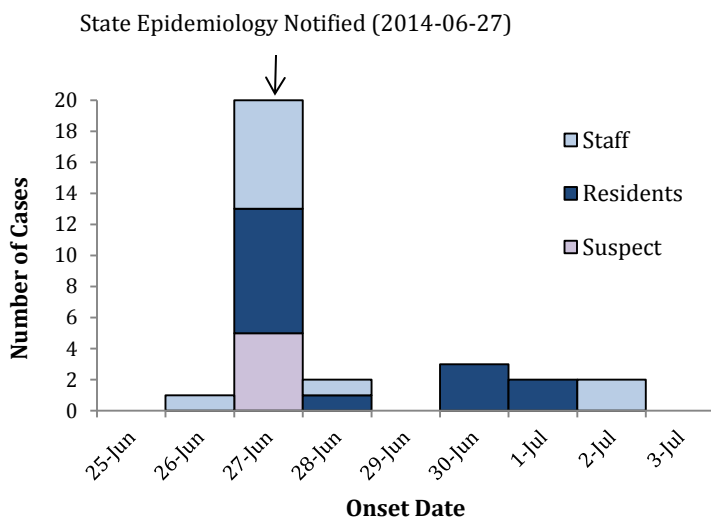


Figure 1. The epidemic curve of norovirus (n=25) associated with a rehabilitation center in Clark County, Nevada, from June 27-July 2, 2014.

The peak illness onset date was June 27, 2014. Among the 25 cases, the average age was 62 years old (range 27-98 years) and males comprised 40% of the cases.

Symptomatic cases reported diarrhea (76%), vomiting (32%), and nausea (24%). The average duration of illness for cases was approximately one day (range one – two days). The resident attack rate was 18.9%, the staff attack rate was 3.7%, and the overall attack rate was 6.7%.

Laboratory

Of the 11 specimens tested, six tested positive for norovirus genogroup unspecified.

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 residents and staff at Facility “A”, a rehabilitation center in Clark County, Nevada from June 26, through July 2, 2014. Confirmatory test results indicated norovirus was the causative agent and the mode of transmission was believed to be person-to-person.

In total, 25 persons were classified as cases; 14 residents and 11 staff of the facility. Symptoms included diarrhea, vomiting, and nausea with illness duration lasting an average of 1 day. Residents of the facility had the highest attack rate at 18.9% 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 July 3, 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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