# EPIDEMIOLOGIC INVESTIGATION SUMMARY

## DIARRHEAL ILLNESS OUTBREAK AMONG RESIDENTS AND STAFF OF A SKILLED NURSING 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 2, 2014, the Division of Public and Behavioral Health (DPBH), Office of Public Health Informatics and Epidemiology (OPHIE) was informed by the Director of Education of Facility "A" of a gastrointestinal (GI) illness outbreak among residents and staff of Facility "A". The problem was first identified by staff of the facility on April 30, 2014 and initial reported symptomology of the ill residents included 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 resident, staff member, or visitor of Facility "A" who was lab confirmed with a GI agent since April 30, 2014.

A **probable case** was defined as a resident, staff member, or visitor of Facility "A" who was not lab confirmed with a GI agent but had diarrhea and/or vomiting (along with possible other GI illnesses) since April 30, 2014.

A **suspect case** was defined as a resident, staff member, or visitor of Facility "A" who was not lab confirmed with a GI agent but anecdotally had diarrhea and/or vomiting (along with possible other GI illnesses) since April 30, 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.

One laboratory test was conducted and the specimen collected was a stool sample.

### 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 the facility.

The facility conducted its own prevention measures to include no mixing of staff between symptomatic and non-symptomatic sections of the facility. The facility also served those in the symptomatic side food with disposable dishware. The facility also increased cleaning of high touch

surfaces and linens along with reiterating proper hand hygiene.

# RESULTS

## Epidemiology

A total of 20 probable cases were reported. Illness onset dates occurred between April 18 and May 8, 2014. The epidemic curve is presented in Figure 1 and shows the distribution of illness onset dates.

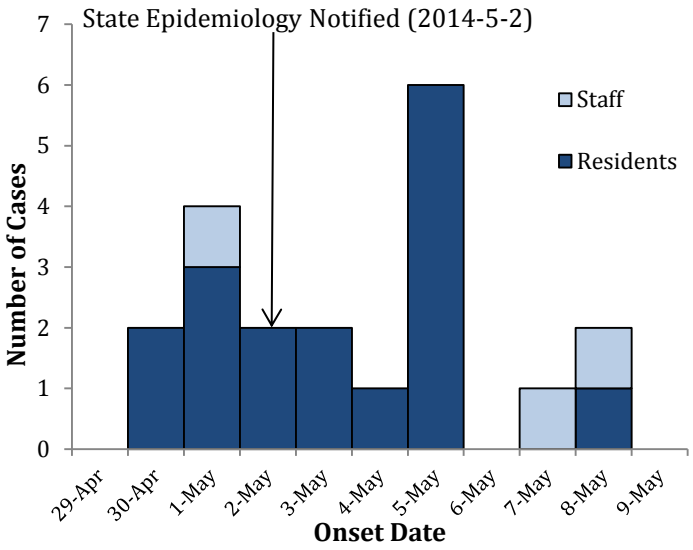


*Figure 1. The epidemic curve of diarrheal illness (n=20) associated with a skilled nursing facility in Washoe County, Nevada from April 30-May 8, 2014*

The peak illness onset date was May 5, 2014. Among the 20 probable cases, the average age was 73 years old (range 51-91 years) and males comprised 40% of the cases.

Symptomatic cases reported vomiting (65%), nausea (65%), and diarrhea (55%). The average duration of illness for cases was approximately 1 day (range 1 – 2 days). The resident attack rate was 15.9%, the staff attack rate was 2.0%, and the overall attack rate was 7.8%.

## Laboratory

The laboratory specimen tested was negative for norovirus.

## Mitigation

Although the cause of the outbreak was undetermined, DPBH reiterated to the facility the recommendations for preventing and controlling future norovirus gastroenteritis outbreaks.

# CONCLUSIONS

A GI illness outbreak occurred among residents and staff at Facility "A", a skilled nursing facility in Washoe County, Nevada from April 30 through May 8, 2014. Test results were unable to determine the causative agent, resulting in the outbreak classification: diarrheal illness not otherwise specified. Mode of transmission was believed to be person-to-person.

In total, 20 persons were classified as probable cases; 17 residents and 3 staff members of the facility. Symptoms included diarrhea, nausea, and vomiting with illness duration lasting an average of 4 days. Residents of the facility had the highest attack rate at 15.9%. 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 9, 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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# RECOMMENDED CITATION

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