

EPIDEMIOLOGIC INVESTIGATION SUMMARY

DIARRHEAL ILLNESS OUTBREAK AMONG RESIDENTS AND STAFF OF A LONG TERM CARE FACILITY CARSON CITY, 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 3, 2014, the Division of Public and Behavioral Health (DPBH), Office of Public Health Informatics and Epidemiology (OPHIE) was informed by a nurse at Facility "A" they were experiencing a gastrointestinal (GI) illness outbreak among their residents. The first ill resident was identified by staff on May 24, 2014, and Initial reported symptomology of the ill residents included diarrhea and vomiting. The outbreak investigation began on June 3, 2014.

METHODS

Epidemiology

On June 3, 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, employee, or visitors of Facility "A" who was lab confirmed with GI agent since May 24, 2014.

A **probable case** was defined as a resident, employee, or visitor of Facility "A" who was not lab confirmed with GI agent, but had diarrhea and/or vomiting (along with possible other GI illnesses) since May 24, 2014.

A **suspect case** was defined as a resident, employee, 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 May 24, 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.

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

Mitigation

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

RESULTS

Epidemiology

A total of 39 probable cases were reported. Illness onset dates occurred between May 24, and June 10, 2014. The

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

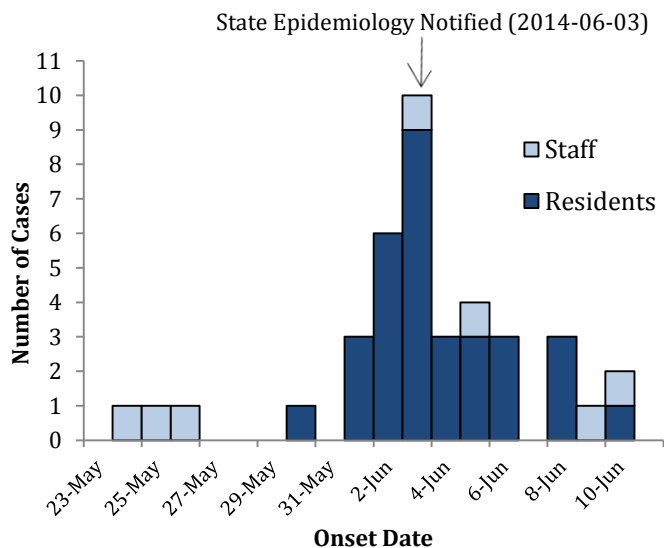


Figure 1. The epidemic curve of diarrheal illness (n=39) associated with a long term care facility in Carson City, Nevada from May 24, to June 10, 2014.

The peak illness onset date was June 3, 2014. Among the 39 probable cases, the average age was 71 years old (range 72-95 years) and males comprised 28.2% of the cases.

Symptomatic cases reported diarrhea (82.1%), vomiting (43.6%), nausea (46.2%), abdominal pain (20.5%), fever (2.6%), and body aches (2.6%). The resident attack rate was 28.6%, the staff attack rate was 6.1%, and the overall attack rate was 17.2%.

Laboratory

All 4 specimens tested were 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 at Facility "A", an assisted living facility in Carson City, Nevada from

May 23, through June 10, 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, 39 persons were classified as probable cases, 32 residents and seven staff members. Symptoms included diarrhea, nausea, vomiting, abdominal cramps, fever, and body aches. Residents of the facility had the highest attack rate of 28.6%. 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 June 11, 2014.

RECOMMENDATIONS

To prevent diarrheal illness outbreaks in healthcare settings, the following public health measures are recommended:

- Follow hand-hygiene guidelines, and carefully wash hands with soap and water after contact with patients with diarrheal illness.
- Use gowns and gloves when in contact with, or caring for patients who are symptomatic.
- Routinely clean and disinfect high touch patient surfaces and equipment.
- Remove and wash contaminated clothing and linens.
- Exclude healthcare workers who have symptoms consistent with diarrheal illness 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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