EPIDEMIOLOGIC INVESTIGATION SUMMARY

DIARRHEAL ILLNESS OUTBREAK AMONG RESIDENTS AND STAFF OF AN ASSISTED LIVING FACILITY CHURCHILL 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 1, 2014, the Division of Public and Behavioral Health (DPBH), Office of Public Health Informatics and Epidemiology (OPHIE) was informed by the Resident Care Director at Facility "A" that the facility was experiencing a gastrointestinal (GI) illness outbreak among its residents. The first ill residents were identified on April 28, 2014, and the outbreak investigation began on May 1, 2014. Initial reported symptomology of the ill residents included diarrhea.

METHODS

Epidemiology

On May 1, 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 GI agent since April 28, 2014.

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

No laboratory specimens were collected or tested during this outbreak.

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 15 probable cases were reported (12 residents and 3 staff). Illness onset occurred between April 28, and May 6,

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

The outbreak included 3 suspect cases which were not counted in the final numbers due to a lack of information on symptoms.

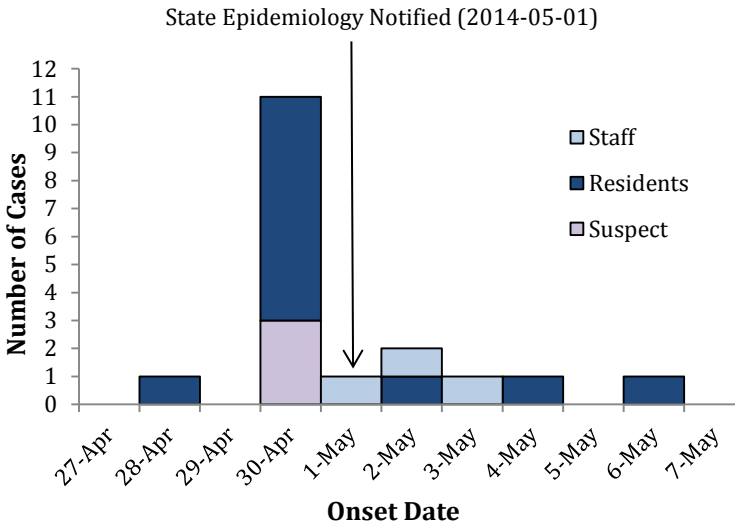

Figure 1. The epidemic curve of diarrheal illness (n=15) associated with an assisted living facility in Churchill County, Nevada from April 28, to May 6, 2014

The peak illness onset date was April 30, 2014. Among the 15 cases, the average age was 77 years old (range 67-101 years) and males comprised 40% of the cases.

Symptomatic cases reported diarrhea (80%), vomiting (46.7%), nausea (13.3%), and abdominal pain (6.7%). The resident attack rate was 23.1%, the staff attack rate was 10%, and the overall attack rate was 18.3%.

Laboratory

No specimens were collected or tested.

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 Churchill County, Nevada from April 28, through May 6, 2014. Lack of testing resulted in the outbreak classification: diarrheal illness not otherwise specified. Mode of transmission was believed to be person-to-person.

In total, 15 persons were classified as probable cases, 12 residents and three staff members. Symptoms included diarrhea, nausea, vomiting, and abdominal cramps. Residents of the facility had the highest attack rate of 23.1%. 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 7, 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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