EPIDEMIOLOGIC INVESTIGATION SUMMARY

DIARRHEAL ILLNESS OUTBREAK AMONG RESIDENTS AND STAFF OF AN ASSISTED LIVING FACILITY WASHOE COUNTY, NEVADA, 2014

Department of Health and Human Services
Division of Public and Behavioral Health
Office of Public Health Informatics and Epidemiology

September 2014
Edition 1.0
2014 volume, issue 12

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 April 22, 2014, the Division of Public and Behavioral Health (DPBH), Office of Public Health Informatics and Epidemiology (OPHIE) was informed by the Executive Director at Facility "A" of a gastrointestinal (GI) illness outbreak among residents. The problem was first identified on April 17, 2014 and initial symptomology of the ill residents included diarrhea, nausea, and vomiting. The outbreak investigation began on April 22, 2014.

METHODS

Epidemiology

On April 22, 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 17, 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 17, 2014.

A **suspect case** was defined as a resident, staff member, or visitor of Facility "A" who was not lab confirmed a GI agent but anecdotally had diarrhea and/or vomiting (along with possible other GI illnesses) since April 17, 2014.

Laboratory

Laboratory testing for GI illness was recommended for ill residents in order to identify the etiologic agent. Laboratory testing was mainly focused on identifying norovirus.

Three 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 29 probable cases were reported. Illness onset dates ranged between April 17 and May 10, 2014. The epidemic curve is presented in Figure 1 and shows the distribution of illness onset dates.

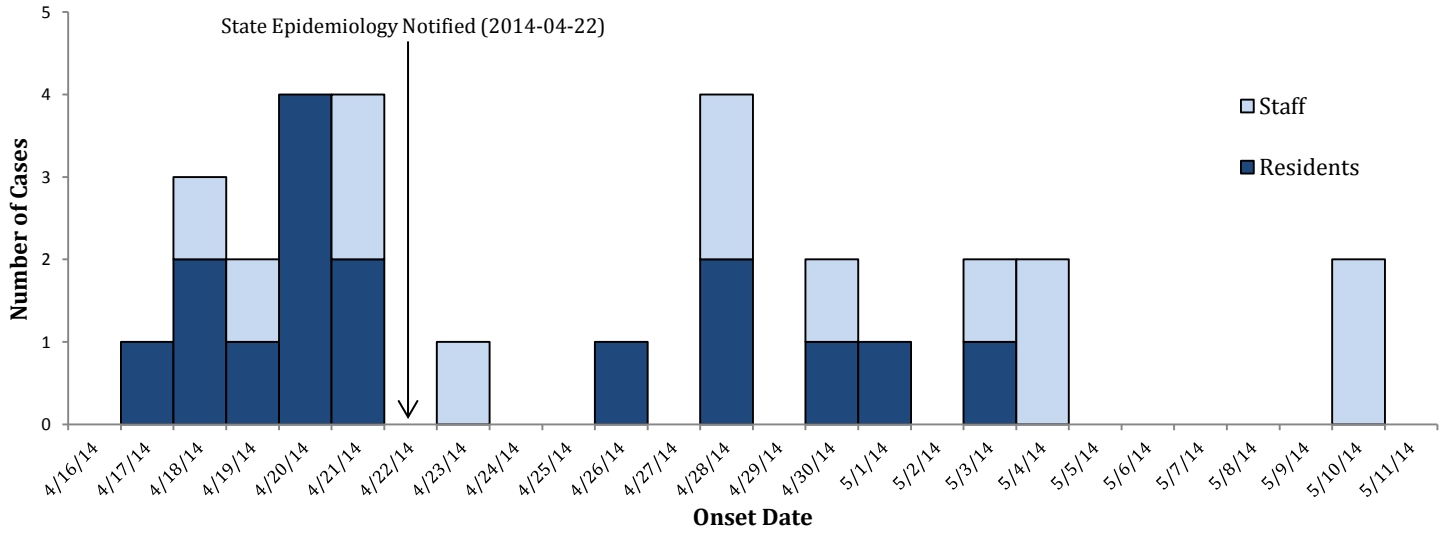

Figure 1. The epidemic curve of diarrheal illness (n=29) associated with an assisted living facility in Washoe County, Nevada from April 17-May 10, 2014

The outbreak included seven suspect cases which were not counted in the final numbers because they lacked information on symptoms and illness onset.

The peak illness onset date was April 20, 2014. Among the 29 cases, the average age was 60 years old (range 17-101 years) and males comprised 24.1% of the cases.

Symptomatic cases reported diarrhea (72.4%), vomiting (34.5%), abdominal pain (13.8%), fever (6.9%), and nausea (2.3%). The average duration of illness was three days (range one-six days). The resident attack rate was 14.3%, the staff attack rate was 16.9%, and the overall attack rate was 15.3%.

Laboratory

All three laboratory results were either pending or 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," an assisted living facility in Washoe County, Nevada from April 14 through May 10, 2014. All confirmatory test results were negative or pending for norovirus resulting in the outbreak classification: diarrheal illness not otherwise specified. It was believed to be transmitted person-to-person.

In total, 29 persons were classified as probable cases: 16 residents and 13 staff of the facility. Symptoms included diarrhea, nausea, fever, abdominal pain, and vomiting with illness duration lasting an average of two days. Staff of the facility had the highest attack rate at 16.9%. 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 11, 2013.

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.

For additional information regarding this publication, contact:

Office of Public Health Informatics and Epidemiology
4126 Technology Way, Ste 200
Carson City NV 89706
Email: outbreak@health.nv.gov
Tel: (775) 684-5911

RECOMMENDED CITATION

Division of Public and Behavioral Health. Office of Public Health Informatics and Epidemiology. Epidemiologic Investigation Summary, *Diarrheal Illness Outbreak among Residents and Staff of an Assisted Living Facility in Washoe County, Nevada, 2014*. v 2014. i 12. e 1.0. September 2014.

ACKNOWLEDGEMENTS

Thank you to all persons who contributed to this publication:
Maximilian Wegener, MPH; Danika Williams, MPH; Brian Parrish, MPH; Peter Dieringer, MPH; Kimisha Griffin, MPH; Adrian Forero, BS; Judy Dumonte; Rick Sowadsky, MSPH; Julia Peek, MHA; Ihsan Azzam, MD, MPH; Jay Kvam, MSPH

This report was produced by the Office of Public Health Informatics and Epidemiology of the Division of Public and Behavioral Health with funding from budget account 3219.