

# EPIDEMIOLOGIC INVESTIGATION SUMMARY

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

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

**December 2014  
Edition 1.0  
2014 volume, issue 25**

### 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 2, 2014, the Division of Public and Behavioral Health (DPBH), Office of Public Health Informatics and Epidemiology (OPHIE) was informed by the Community Relations Director at Facility "A" of a gastrointestinal (GI) illness among residents and staff. The first ill resident was identified on March 18, 2014 and the outbreak investigation began on April 2, 2014. Initial symptomology of the ill residents included diarrhea and vomiting.

### METHODS

#### Epidemiology

On April 2, 2014, DPBH provided recommendations to Facility "A" to reduce and prevent the spread of illness. Included with the recommendations was the required submission of outbreak case report forms to OPHIE until further notice, and exclusion of symptomatic employees from the facility until 72 hours after symptoms resolve.

A **confirmed case** was defined as resident, staff member, or visitor of Facility "A" who was lab confirmed with GI agent since March 18, 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 March 18, 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 March 18, 2014.

#### Site Visit

On April 16, 2014, the Bureau of Health Care Quality and Compliance (HCQC) became involved with the investigation. Their job was to look into allegations that facility "A" failed to cooperate during an investigation of an outbreak and failed to follow the facility's infection control policies and procedures during an outbreak. The investigation came after complaints were made by family members of residents at facility "A".

#### 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 salmonella, rotavirus, *C difficile*, and 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 information and recommendations to facility “A” for the prevention and control of norovirus gastroenteritis outbreaks.

# RESULTS

## Epidemiology

A total of 25 probable cases were reported. Illness onset occurred between March 18 and April 14, 2014. The epidemic curve is presented in Figure 1 and shows the distribution of illness onset dates.

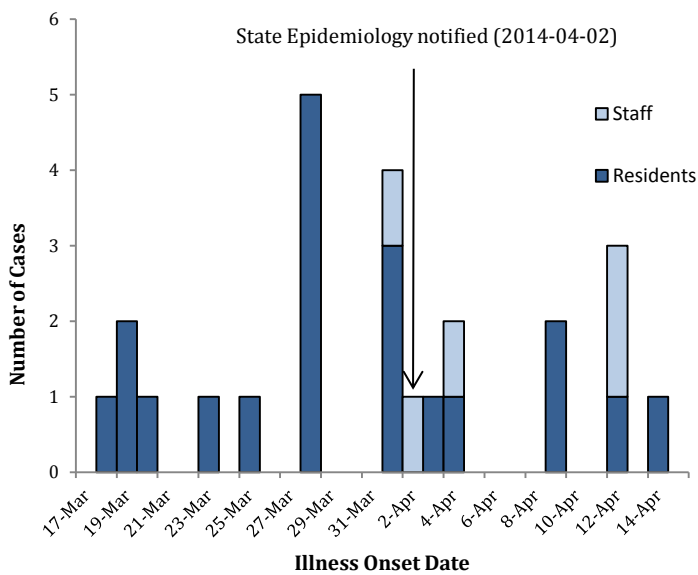


Figure 1. The epidemic curve of diarrheal illness (n=25) associated with an assisted living facility in Clark County, Nevada from March 18-April 14, 2014

The peak illness onset date was March 28, 2014. Among the 25 cases, the average age was 74 years old (range 29-57 years) and males comprised 8% of cases.

Symptomatic cases reported diarrhea (68%), nausea (60%), vomiting (40%), abdominal pain (32%), body aches (24%), and fever (4%); the average duration of illness was 3 days (range 1-11 days). The resident attack rate was 21.7%, the staff attack rate was 14.3%, and the overall attack rate was 19.7%. There were no deaths from this outbreak but one resident was hospitalized.

## Laboratory

The one specimen tested for norovirus was negative.

## 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 diarrheal illness outbreak occurred among residents and staff at Facility “A”, an assisted living facility in Clark County, Nevada, from March 18 through April 14, 2014. Test results were unable to determine the causative agent resulting in the outbreak classification of diarrheal illness not otherwise specified. Mode of transmission remains unknown.

In total, 25 persons were classified as probable cases; 20 residents and 5 staff of the facility. Symptoms included diarrhea, nausea, vomiting, fever, abdominal pain, and body aches with illness duration lasting an average of 3 days. Residents of the facility had the highest attack rate of 21.7%. 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 April 15, 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.<sup>1</sup>

## 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

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 Clark County, Nevada, 2014*. v 2014. i 25. e 1.0. December 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.