EPIDEMIOLOGIC INVESTIGATION SUMMARY

GASTROINTESTINAL ILLNESS OUTBREAK AMONG RESIDENTS OF AN ASSISTED LIVING FACILITY IN CARSON CITY, NEVADA, 2015

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 Thursday, April 30, 2015, the Division of Public and Behavioral Health (DPBH), Office of Public Health Informatics and Epidemiology (OPHIE) was informed by the Assistant Director of Facility "A" of a gastrointestinal (GI) illness outbreak among residents and staff of Facility "A." The problem was first identified by staff on April 28, 2015 and initial reported symptomology of the ill individuals included diarrhea. The outbreak investigation began on April 30, 2015.

METHODS

Epidemiology

On April 30, 2015, 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 is lab confirmed with a gastrointestinal agent who has diarrhea or vomiting (and possibly other GI symptoms as well e.g. nausea, abdominal pain) since April 28, 2015.

A **probable case** was defined as a resident, staff member, or visitor of Facility "A" who is not lab confirmed with a gastrointestinal agent but who has diarrhea or vomiting (and possibly other GI symptoms as well e.g. nausea, abdominal pain) since April 28, 2015.

A **suspect case** was defined as a resident, staff member, or visitor of Facility "A" who is not lab confirmed with a gastrointestinal agent but who anecdotally has diarrhea or vomiting (and possibly other GI symptoms as well e.g. nausea, abdominal pain) since April 28, 2015.

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 norovirus.

No laboratory specimens were collected and tested during this outbreak.

Mitigation

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

Additionally, Facility "A" took precautionary measures by isolating ill patients and reducing group activities.

RESULTS

Epidemiology

A total of 15 probable cases were reported. Illness onset occurred between April 28 and May 4, 2015. The epidemic curve is presented in Figure 1 and shows the distribution of illness onset dates.

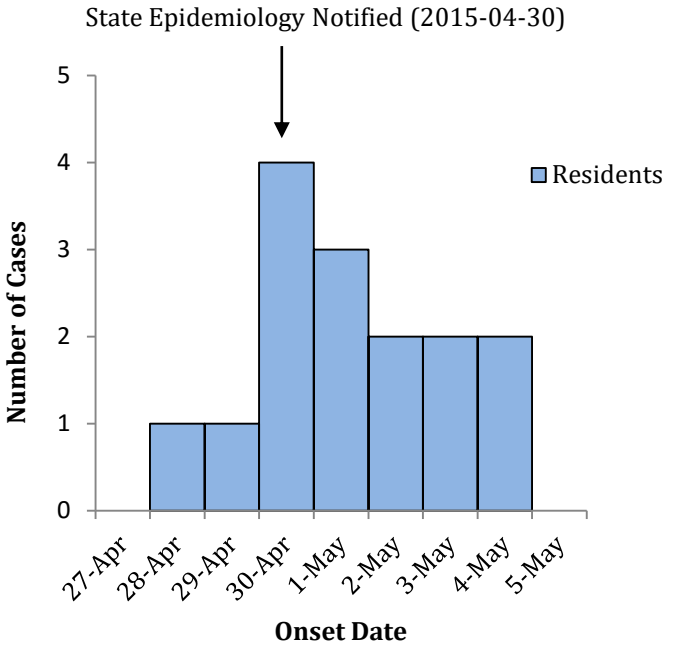

Figure 1. The epidemic curve of GI illness (n=15) associated with an Assisted Living Facility in Carson City, Nevada from April 28-May 4, 2015

The peak illness onset date was April 30, 2015. Among the 15 cases, the average age was 85 years old (range 74-94 years) and males comprised 53%% of the cases.

Symptomatic cases reported diarrhea (87%), vomiting (53%), and nausea (7%). The average duration of illness for cases was approximately two days (range one – three days). The resident attack rate was 18.1%, the staff attack rate was 0%, and the overall attack rate was 10.4%.

Laboratory

No laboratory specimens were collected and tested during this outbreak.

Mitigation

DPBH reiterated to the facility the same information given at the start of the outbreak for preventing and controlling norovirus and GI illness outbreaks.

CONCLUSIONS

A GI illness outbreak occurred among residents and staff at Facility "A," an assisted living facility in Carson City, Nevada from April 28 through May 4, 2015.

In total, 15 persons were classified as probable cases; all cases were residents. Symptoms included diarrhea, vomiting, and nausea with illness duration lasting an average of two days. Residents of the facility had the highest attack rate at 18.1% and one resident required hospitalization. The epidemiologic link between cases was believed to be the facility in which the residents lived.

The outbreak ceased May 5, 2015.

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.
- After throwing up or having diarrhea, immediately clean and disinfect contaminated surfaces using a bleach-based household cleaner as directed on the product label. If no such cleaning product is available, you can use a solution made with five tablespoons to 1½ cups of household bleach per one gallon of water.[1]
- Remove and wash contaminated clothing and linens.

- Exclude healthcare workers who have symptoms consistent with norovirus from work.[2]

REFERENCES

1. Centers for Disease Control and Prevention. *Prevent the Spread of Norovirus.* November 20, 2014. http://www.cdc.gov/features/norovirus/
2. Centers for Disease Control and Prevention. *Norovirus in Healthcare Settings*. February 25, 2013. Retrieved from http://www.cdc.gov/HAI/organisms/norovirus.html.

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