

# EPIDEMIOLOGIC INVESTIGATION SUMMARY

## GASTROINTESTINAL ILLNESS AND INFLUENZA OUTBREAK AMONG RESIDENTS, STAFF, AND VISITORS OF AN ASSISTED LIVING FACILITY IN CLARK COUNTY, NEVADA, 2017

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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 December 1, 2017, the Division of Public and Behavioral Health (DPBH), Office of Public Health Informatics and Epidemiology (OPHIE) was informed of an outbreak of gastrointestinal (GI) illness and influenza-like illness among residents of Facility "A." The increase in illness was first identified by staff of the facility on November 30, 2017. Initial symptomology of the ill residents included cough, congestion, fever, vomiting, diarrhea, nausea, and malaise. The outbreak investigation began on December 1, 2017.

### CASE DEFINITIONS

**Clinical criteria** An influenza-like illness, which is defined as fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza and/or an illness with gastroenteritis that presents with the following symptoms: vomiting, diarrhea, abdominal cramps or stomachache, nausea, with or without fever between November 29, 2017 to December 5, 2017.

**Epidemiological criteria** Any residents or staff members associated with Facility "A" and their ill contacts identified through investigations.

**Laboratory criteria** Any laboratory confirmation by PCR or other method from a human specimen for influenza and/or enteric etiology.

#### Case classification

**Confirmed case** A case meeting clinical, epidemiological, and laboratory criteria.

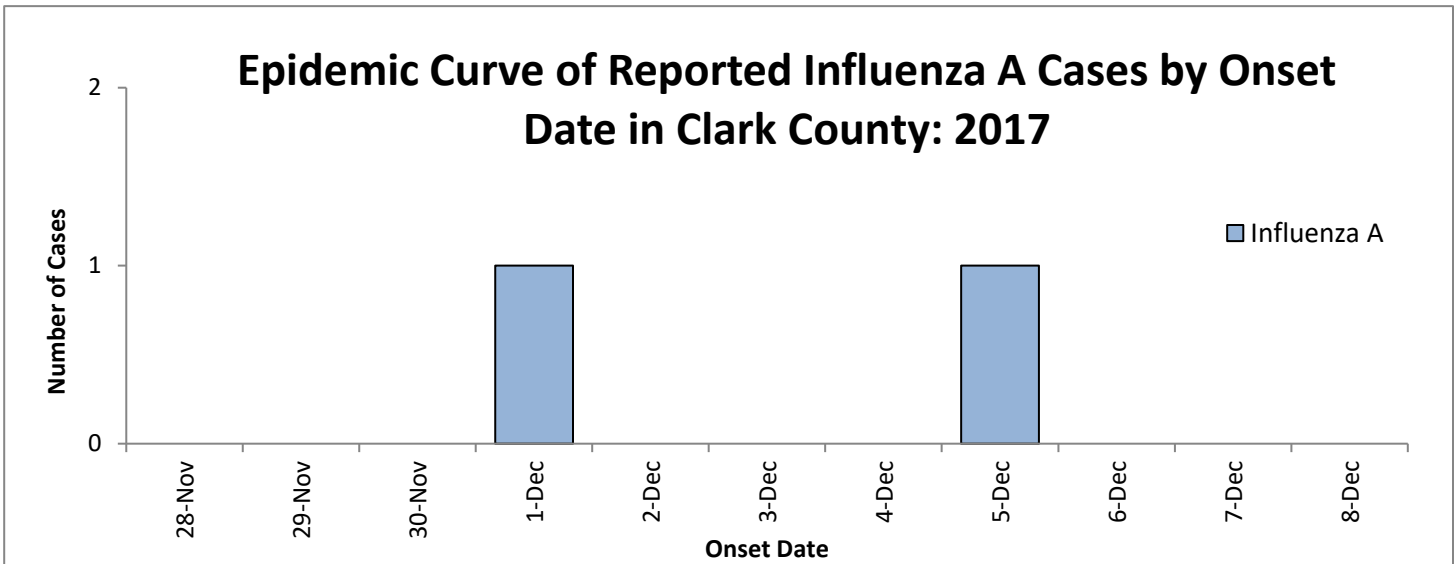
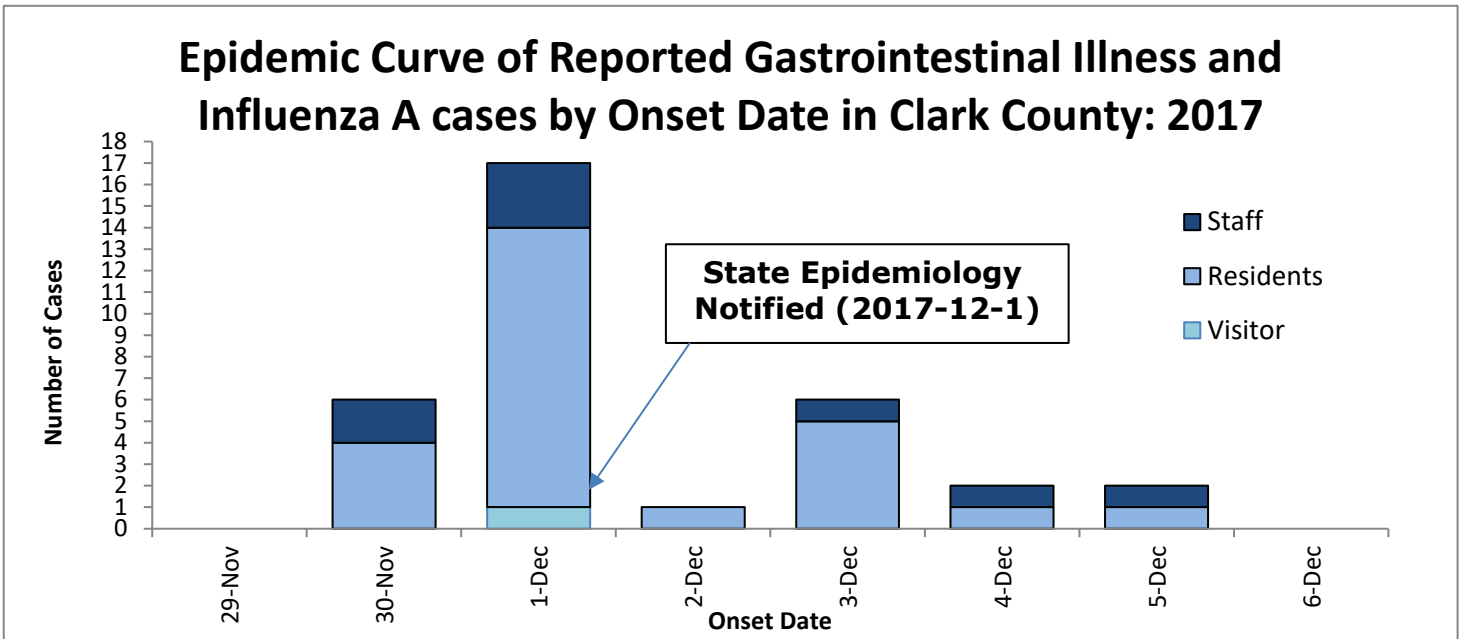
**Probable case** A case meeting clinical and epidemiological criteria without laboratory confirmation and/or vomiting OR Diarrhea OR Abdominal cramping (stomach ache) + fever\* OR Nausea + fever\*

*\*fever refers to self-reported fever or measured elevated temp.*

### Epidemiology

#### Onset Date

The peak illness onset date was December 1, 2017.



**Epidemiology Summary**

A total of 34 cases met the confirmed and probable case definition (two lab-confirmed and 32 probable). Five (5) residents were hospitalized and there was one (1) death associated with this outbreak. The resident attack rate was 69.4% (n=36) and the staff attack rate 22.9% (n=35).

*Age-* The median age was 76 (range: 22 – 100 years).

Age	n	Total N	%
20-49 years	6	34	17.6%
50-74 years	3	34	8.8%
> = 75	25	34	73.5%

*Sex-* Male 5 (14.79%), Female 29 (85.3%).

*Incubation period-* The incubation period for influenza is 1-4 days.

*Duration of illness-* The average duration of illness was approximately five days (range two – six days).

*Clinical symptoms-*

Symptoms	n	Total N	%
Congestion	7	34	21%
Cough	31	34	91%
Fever	7	34	20.5%
Sore Throat	4	34	12%
Malaise/Body Aches	18	34	53%
Runny/Stuffy Nose	5	34	15%
Chills	3	34	9%
Diarrhea	7	34	21%
Headache	2	34	6%
Nausea	1	34	3%

Vomiting	3	34	9%
Other	3	34	9%

### Laboratory

A total of 4 specimens were tested for influenza A & B, and a total of 2 were positive for influenza A.

### Data Sources

Health Clinic Visit Data. (electronic)

Residents who had complaints consistent with respiratory illness and gastrointestinal illness. (line listing form)

Staff who call in with complaints consistent with respiratory illness and gastrointestinal illness. (line listing form)

## CONCLUSIONS

The last onset date occurred on December 5, 2017. The outbreak was declared over on December 12, 2017 because the facility went two full incubation periods without a new case.

### Mitigation

After lab results confirmed that the cause of the outbreak was influenza which has an incubation period of one to four days, DPBH reiterated the importance of continued outbreak control measures for influenza and GI illness in order to interrupt further transmission. The facility continued their own mitigation efforts as well. There was no confirmation for norovirus or any other GI illness.

## RECOMMENDATIONS

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

- Remind residents, staff, and visitors of proper hand hygiene and cough etiquette in compliance with CDC/WHO guidelines.
- Clean and disinfect equipment and environment with an agent approved to kill the influenza virus.

- Educate healthcare workers, housekeepers, administration staff, residents, and families on influenza.
- Isolate residents and exclude from work any staff members who have symptoms consistent with influenza<sup>1</sup>.
- Immediately notify infection control about positive laboratory results.
- Follow hand-hygiene guidelines and careful washing of hands with soap and water after contact with patients with GI 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 with an Environmental Protection Agency-approved product with a label claim for norovirus.
- After vomiting or having diarrhea, immediately clean and disinfect contaminated surfaces using a bleach-based household cleaner, which is effective against norovirus, as directed on the product label. If no such cleaning product is available, you can mix a solution with ½ cup of bleach to one gallon of water.
- Remove and wash contaminated clothing and linens.
- Exclude healthcare workers who have symptoms consistent with GI illness from work for 48 hours after the resolution of symptoms.
- During outbreaks, place patients with GI illness on Contact Precautions for a minimum of 48 hours after the resolution of symptoms to prevent further exposure to susceptible patients.

## REFERENCES

1. Centers for Disease Control and Prevention. Prevention Strategies for Seasonal Influenza in Healthcare Settings: Infection Control Practices Advisory Committee. January 9, 2013. Retrieved February 2, 2015, from: <https://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm>

2. <https://www.cdc.gov/hai/pdfs/norovirus/229110-anorocasefactsheet508.pdf>

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