**Outbreak Management**

**Date Implemented:**

**Review/Updated Date:**

**Policy**

An outbreak is defined as the occurrence of more cases of a communicable disease than expected in a given area or among a specific group of people over a particular period of time.

Early recognition of an outbreak is key to implementing infection prevention and control measures to reduce the spread of communicable disease among residents and staff.

Triggers for outbreak investigation include but are not limited to:

* An increase over baseline infection rates.
* A sudden cluster of infections on a unit or during a short period of time.
* A single case of a rare or serious infection.

Common outbreaks in nursing homes include but are not limited to:

* Respiratory including influenza, legionella, strep-pneumonia, parainfluenza, and RSV.
* Gastrointestinal including norovirus, c-diff, salmonella.
* Other outbreaks include group A streptococcus, MRSA.
* Syndromes such as conjunctivitis or skin infestations.

Pseudo-Outbreaks include perceived increases in an infection that may not reflect a true change in infection rates. Pseudo-outbreaks may reflect:

* Changes in surveillance practices (such as a turnover in the infection preventionist role)
* Changes in testing practices (such as criteria to perform a urinalysis)
* Contamination of samples in the laboratory.

**Procedures**

Steps of an outbreak (note that some steps may happen at the same time or overlap. Facilities should not wait until the end to prevent ongoing transmission of an infection):

* Establish existence of an outbreak. This is completed through establishing a baseline surveillance rate of infection and identifying that an outbreak is occurring based on an increased rate of infection over baseline or identifying that a particular unit has an increased prevalence of infection.
* Develop a hypothesis and case definition, which are explained later in this procedure.
* Conduct case findings.
* Implement additional or develop new infection prevention and control measures.
* Determine outbreak resolution and report to QAA/QAPI team.

Upon identification of an outbreak, the infection preventionist should determine if the infection is reportable to local or state public health. A list of reportable infectious diseases can be located [here](https://idph.iowa.gov/CADE/reportable-diseases).

Conducting research to develop a hypothesis will help you:

* Develop a case definition used to identify other affected residents and staff. A case definition consists of:
	+ Person – age, gender, clinical symptoms, and diagnostic testing.
	+ Place – location such as a unit, floor, facility.
	+ Time – period associated with illness onset and incubation period.
	+ Developing a line list to collect detailed information about each person affected by the outbreak will assist with a case definition. Items included in the line list include but are not limited to the location of the resident, department/shift of a staff member, onset of symptoms, clinical signs and symptoms present, laboratory data and illness outcomes.
* Monitor for ongoing transmission.
* Identify and implement additional infection control and prevention measures.
* Provide education on addition measures or infection processes to residents, staff and visitors.
* Gather information about mode of transmission, incubation period, methods for diagnosis and treatment and measures to prevent spread.

The infection preventionist has key responsibilities for implementing infection prevention and control measures to prevent transmission. Infection prevention and control measures may include:

* Limiting movement throughout the facility. Based on the line list identified above limiting movement may consist of one wing or neighborhood that are affected by the outbreak or the entire resident population depending on the extent of the outbreak.
* Implementing contact precautions for residents affected.
* Staff education on potential modes of transmission.
* Encouraging additional hand hygiene measures or process surveillance of current hand hygiene practices.
* Evaluating cleaning and disinfection procedures and verifying that products are appropriate for the infectious process that is being identified.
* Educating residents and visitors on the outbreak in basic terms, including what mitigation measures the facility has implemented and what residents, visitors and families can do to assist with mitigating the outbreak.

During the outbreak, the development of an epicurve may be beneficial to identify if mitigation measures are effective by showing whether the number of cases is increasing or decreasing and if additional mitigation measures are indicated.

Determining outbreak resolution is completed by assessing the incubation period (which is the time from exposure to illness onset), determining the period of contagious time when infected individuals are capable of transmitting the disease to others and identifying when the last case was diagnosed.

Reporting:

The infection preventionist should summarize the outbreak to report to the facilities QAA/QAPI team. Information that may be included in the report include:

* Case definition
* Outbreak period
* Laboratory test results
* Staff information
* Staff and resident outcomes
* Control measures that were implemented or revised
* Numbers of cases per day/week or during the entire outbreak.

The infection preventionist should review with the QAA/QAPI team if measures were effective such as the facilities detection of an outbreak, response to the outbreak, required changes to policies and procedures or activities to improve in the future. Evaluation of the facilities education to residents, families, visitors, and staff should also be conducted including if the education was timely, appropriate, and effective.

**Resources**

CMS. (2017, Nov. 2). *State Operations Manual, Appendix PP – Guidance to Surveyors for Long Term Care Facilities, F880*. <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Downloads/Appendix-PP-State-Operations-Manual.pdf>

CDC. (2020, June 10). *Infection Prevention Training | LTCF*. <https://www.cdc.gov/longtermcare/training.html>