

Outbreak Management

OUTBREAK MANAGEMENT

Infection Prevention & Control
Boot Camp For Long-Term Care Facility
Infection Preventionists

OBJECTIVES

At the conclusion of this presentation, participants will be able to:

- Define "epidemic"
- Describe the steps in managing and outbreak or cluster in a long-term care facility

DEFINITIONS

- Incidence – new or newly diagnosed cases of a disease or infection, usually reported during a time period
- Prevalence the number of cases of a disease or infection at a specific point in time or period of time

CDC.gov: Principles of Epidemiology in Public Health Practice



Outbreak Management

DEFINITIONS (continued)

- Epidemic – the number of cases of a disease or condition that is greater than the expected number in that population
- Epidemics occur when an agent and susceptible hosts are present in adequate numbers, and the agent can be effectively spread from a source to the susceptible hosts
 - An epidemic may result from:
 - A recent increase in amount or virulence of the agent
 - The recent introduction of the agent into a setting where it has not been before
 - An enhanced mode of transmission so that more susceptible persons are exposed
 - A change in the susceptibility of the host to the agent
 - Factors that increase host exposure or involve introduction through new portals of entry

CDC.gov: Principles of Epidemiology in Public Health Practice

DEFINITIONS (continued)

- Outbreak – means the same thing as an epidemic but often refers to a more limited geographic area
 - Common examples seen in LTC facilities:
 - Scabies
 - Norovirus
 - Influenza
- Cluster – means the same as Outbreak and Epidemic but is used commonly in health care settings
 - Also refers to an aggregation of cases grouped in place and time that are suspected to be greater than the number expected, even though the expected number may not be known
 - Term is often used in lieu of outbreak to prevent panic among staff

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DEFINITIONS (continued)

- Endemic – the constant presence and/or usual prevalence of a disease or infectious agent in a population within a geographic area
- Pandemic – an epidemic that has spread over several countries or continents, usually affecting many people

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Outbreak Management

VERIFY

- Establish the existence of an outbreak/cluster
 - Verify the diagnosis
 - Consider reliability of the source
 - Consider clinical vs. laboratory findings
 - Clinical assessment or laboratory testing as indicated

VERIFY (continued)

- Initiate a line list
 - Establish the time, place, person, procedure (as applicable)
 - Search for additional cases and their characteristics
 - Look for signs and symptoms
 - Conduct chart review
 - This includes staff as well as residents

VERIFY (continued)

- Compare with normal occurrence for significant increase in incidence
- Request help!!!
 - Contact the local or state Public Health Department for assistance with outbreak investigation as soon as an outbreak is suspected



Outbreak Management

CONTAIN & CONTROL

- Attempt to classify the mode of transmission
 - Institute transmission-based isolation precautions based on most likely cause of infection or organism and mode of transmission
- Institute additional precautions aimed at decreasing spread, as indicated, e.g.,
 - Compliance with hand hygiene
 - Additional personal protective equipment (PPE) as indicated
 - Appropriate cleaning procedures
- Restrict activities as appropriate depending on presumed transmission

CONTAIN & CONTROL (continued)

- Determine who is at risk of becoming infected
 - Separate infected from non-infected residents (cohort)
 - Suspect cases should be isolated as well
 - Consider whether it is necessary to cohort staff
 - Consider the need to restrict visitors
- Evaluate effect of control procedures
- Refine the control measures as indicated

REPORT

- Notify of preliminary findings:
 - Administration
 - Committee Chair - Infection Control or QAA
 - Public Health
- Inform physicians, staff and residents, as appropriate, regarding outbreak and control measures
 - Provide education regarding the infectious disease or organism and control measures implemented
 - Offer informational material
 - Be available for questions and concerns from staff, residents and visitors



Outbreak Management

REPORT (continued)

- Keep key persons apprised of subsequent findings
- Consult with Public Health as to when outbreak is considered resolved
 - Evaluate which additional interventions to contain and control the outbreak may now be discontinued

CONCLUSION

- Analyze data to identify cause of outbreak
- Evaluate whether policy, procedure or product changes need to be made, based on findings
- Share your success story with colleagues (e.g., APIC)

Management of an Outbreak



