

Define the outbreak...

Case Definition: *Lower Respiratory Tract Infection (LRTI)* (bronchitis, tracheobronchitis) is defined as an individual who has at least three of the following signs or symptoms: (a) new or increased cough, (b) new or increased sputum production, (c) fever $\geq 100.4^{\circ}\text{F}$ / 38°C , (d) pleuritic chest pain, (e) new or increased physical findings on chest examination (rales, rhonchi, wheezes, bronchial breathing), (f) one of the following indications of change in status or breathing difficulty: new/increased shortness of breath or respiratory rate of 25 per minute or worsening mental or functional status. This diagnosis can be made only if no chest-x-ray (CXR) was done or if the CXR failed to confirm pneumonia.

A case of *Pneumonia* is defined as a person who has new evidence of pneumonia/infiltrate on CXR and at least two symptoms/signs of LRTI (McGeer, 1996).

Outbreak Definition: an increase in the number of cases of respiratory diseases over and above the expected number of cases. After determining the usual/expected rates of respiratory diseases and giving consideration to seasonal variation you can determine the threshold for considering an outbreak.

Prior to having an outbreak

- 1- Develop policies to address the authority of Infection Preventionist (IP), such as implementing control measures.
- 2- Maintain ongoing surveillance to determine the usual rates of respiratory infection within the facility.
- 3- Educate all staff about their roles in outbreak prevention and control, such as hand washing, isolation precautions, cohorting, staying home when they get sick, the use of personal protective equipments, and the benefits of influenza vaccination in preventing outbreaks within the facility.

When you have a suspected outbreak...

- 1- Report the outbreak immediately to your local health department **and stay in touch throughout the outbreak.**
- 2- Every ill resident should be evaluated as follows:
 - Complete physical examination by the facility physician.
 - Complete Blood Count (CBC) with differential, blood culture and sputum gram stain and culture (**before considering antibiotic treatment**).
 - Chest x-ray (CXR)
 - Nasopharyngeal swab. (Please collect 8-10 nasopharyngeal swab specimens from recently ill persons. Information on collection and shipment can be found on the Office of Laboratory Services website. <http://www.wvdhhr.org/labservices/labs/virology/influenza.cfm>)
 - Other tests as indicated, such as tests for legionella, mycoplasma, etc.
- 3- Look for new cases and inform your physician about every new case.
- 4- Begin a line listing of ill persons (including staff and residents). Update the line list daily or as needed for the duration of the outbreak.
- 5- Use the line listing to track the progress of the outbreak and to adjust your control measures.
- 6- Implement appropriate control measures (see below)
- 7- Avoid the unnecessary use of empiric antibiotics particularly if you suspect a viral illness

To help control the spread of infection...

- 1- Practice appropriate cough etiquette and assure compliance with hand hygiene by staff, visitors and residents if possible.
- 2- In addition to standard precautions, immediately initiate droplet precautions as follows:
 - Place ill patients in private rooms. If this is not possible, place ill patients with similar symptoms (and no other infections) in the same room or wing (Cohorting).
 - If cohorting is not possible maintain separation of at least 3 feet between the infected resident and other residents, staff, and visitors. Utilize a cubicle curtain between beds.
 - Cohort staff. Avoid sharing staff between affected and unaffected residents.
 - Use personal protective equipment (PPE), such as gloves, gowns, and mask, when entering the room of an infected resident. Remove and properly dispose of gloves, gown and mask upon leaving the room of an infected resident, Wash hands, and then use new gloves, gown, and mask before moving to another room.
- 3- Ill staff should stay off work until recovered.
- 4- Limit transportation of ill residents. Have the ill resident wear a surgical mask if transport is necessary. Notify the receiving facility when transferring ill residents.
- 5- Stop all group activities (dining halls, activity rooms, etc) and serve meals in resident rooms.
- 6- Stop or limit visitation to the facility. Instruct visitors on appropriate hand hygiene and cough etiquette. Instruct ill visitors not to enter the facility.
- 7- Close affected units to new admissions and transfers.

REMEMBER: Outbreaks are immediately reportable to your local health department!
For further questions or information contact the Division of Infectious Disease Epidemiology at
304-558-5358 or 800-423-1271