Session 1: Recognizing an Outbreak
Session Overview

Summary

By definition, an outbreak is the occurrence of more cases of disease than expected for a given place and time. The decision whether or not to investigate an outbreak depends on several factors, including whether a true outbreak can be verified. There are basic steps that can be followed to investigate an outbreak, and but these steps can be followed in a flexible manner, so the order can change and steps can be skipped or repeated as needed. These steps include verification of the diagnosis, allow for identification of the incubation period, and are necessary for generating hypotheses about the exposure that may have caused the outbreak. A case definition is needed to classify case-patients related to the outbreak and to conduct additional case finding.

Conducting descriptive epidemiology is a first step in characterizing the outbreak so that possible causes can be identified. Descriptive epidemiology familiarizes the investigator with data about time, place, and person and is essential for hypothesis generation. Measures of central tendency provide a means of assessing the distribution of data. These measures include mean and median. Finally, epi curves, spot maps, and line listings are all ways in which you can summarize and review the time, place, and person elements – respectively – of descriptive statistics. These methods can provide additional information and clues about the cause of the outbreak.

Intended Audience

All public health, medical, veterinary, pharmacy, emergency management, hospital and other professionals interested in public health preparedness and field epidemiology.

Running Time

35 minutes of lecture
20 minutes for pre-test, post-test, and evaluation
Optional Discussion: 15 minutes (approximate)

Learning Objectives

- Identify steps of an outbreak investigation
- Develop a case definition
- Identify a process for case finding in an outbreak
- Apply methods used to orient data by person, place, and time
- Create and interpret epidemic curves