Session 2: Study Design
Session Overview

Summary
In this session, we will discuss the development and testing of hypotheses, and study designs to test these hypotheses. Specifically, we will look at cohort and case control studies and how to decide which one to use. We will conclude by briefly presenting considerations for sampling.

Analytic study is used to test scientific hypotheses about the exposures that could cause disease. These types of studies may help support actions for specific control measures and to help prevent recurrence of a problem.

A case definition with specific criteria helps you identify cases from the study population, as long as it does not include exposures in the hypothesis.

Cohort studies provide a direct estimate of the risk of disease, whereas case-control studies do not. Cohort studies may be preferable when you work with easily identifiable and accessible study populations such as on a cruise ship or at a wedding reception. Case-control studies, when conducted properly, can be an efficient alternative to cohort studies. However, controls in a case-control study should represent the source population, and not matched on the exposure factor if matching is used.

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

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

Learning Objectives
- Develop a hypothesis about an exposure and an outcome
- Describe the design of cohort studies and case control studies
- Assess which study design to apply during an outbreak investigation
- Explain the rationale for sampling in an outbreak investigation