



South Central Public Health Partnership

TRAINING PROFESSIONALS TO PROTECT THE PUBLIC

<http://lms.southcentralpartnership.org/scphp>

Introduction to Disease Detection and Investigation

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Concepts of case definition, measures of disease frequency, will be briefly reviewed. Then the course will address the key concepts and terminology used in disease surveillance, including the strengths and limitations of different surveillance methods. It will introduce the concepts and issues surrounding the screening of asymptomatic populations for disease and then focus on the basic steps involved in conducting outbreak investigations. The topics covered in this course include:

Learning Objectives

- Define and compute basic measures of disease prevalence and incidence
- Describe characteristics of an effective screening program
- Calculate and interpret sensitivity, specificity and predictive value positive
- Describe the role of screening in the control and mitigation of bioterrorism events
- Identify key sources and limitations of surveillance data
- Describe characteristics of an effective surveillance system
- Describe the role of surveillance in the recognition and control of bioterrorism events
- Define characteristics of disease transmissions that make outbreak investigations a relevant response
- Describe the steps of an outbreak investigation
- Describe who is involved in an outbreak investigation and the roles they play
- Construct an epidemic curve from outbreak data
- Calculate and compare attack rates to identify possible causal exposures
- Describe the specific challenges associated with bioterrorism outbreak situations

Module Titles:

Module 1: Review of Basic Measures of Disease Frequency

Module 2: Screening

- Screening in healthy populations
- What does an effective screening program include?
- How good are the tests used in screening?
- What does the mean for preparedness?

Module 3: Surveillance

- Disease detection through surveillance
- Critical characteristics of an effective surveillance system
- Additional characteristics of an effective surveillance system
- How does surveillance contribute to preparedness?

Module 4: Outbreak Investigation

- What is an outbreak?
- Steps in an outbreak investigation
- Interpretation of the results of an outbreak investigation
- The role of outbreak investigation in preparedness

Competencies

- Identify limits to own knowledge/skill/authority and identify key system resources for referring matters that exceed these limits.
- Recognize unusual events that might indicate an emergency and describe appropriate action.

* *Bioterrorism and Emergency Readiness*

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<http://lms.southcentralpartnership.org/scphp>*