
Advancing Infection Control Capacity & Education (ACE): COACHING TO CERTIFICATION

Session 19: Surveillance and Epidemiology – Part 4

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HEALTHCARE-ASSOCIATED INFECTIONS PROGRAM
Public Health Division

Surveillance and Epidemiology

4 Parts

1. Statistics in Infection Prevention
2. Epidemiology
3. Surveillance
- 4. Outbreak Investigation**
 - 22 questions on CIC exam





Q1: The IP receives a call from a physician who is concerned that there is an outbreak of *Acinetobacter baumannii*, because he has cared for patients in the past week who are infected with the organism. What is the IP's first step in responding to this call?

- a. Contact the lab and ask them to create an alert for any *A. baumannii* cases
- b. Contact the hospital administration to request additional resources to investigate the outbreak
- c. Confirm that there is an outbreak by using her own surveillance data and lab records to compare the rates of *Acinetobacter baumannii* over the past year.
- d. Initiate a case-control study to determine risk factors for *A. baumannii* infection



Q2: Primary components of an initial outbreak investigation are...

1. Preparing a line list and epidemic curve
2. Notifying key partners about the investigation
3. Continuing case finding
4. Initiating an analytic study

- a. 1,4
- b. 2,3
- c. 1,2
- d. 3,4



Q3: An outbreak of norovirus in a LTCF would most likely have an epidemic curve (epi curve) that:

- a. Indicated a common source of infection
- b. Indicated a propagated sources of infection
- c. Indicated a point source of infection
- d. Indicated a common vehicle of infection





Q4: Which one of the following best describes the difference between a common point source outbreak and a propagated outbreak?

- a. Case fatality rates in common source outbreaks are higher
- b. Person to person transmission is a feature of common source outbreaks
- c. The attack rate in propagate outbreaks is higher
- d. All cases in a common point source outbreak occur within one incubation period of exposure



Q5: What healthcare-associated viral outbreaks are most frequently reported among infant and children?

- a. Hepatitis A
- b. Coxsackie A
- c. Staphylococcus aureus
- d. RSV



 **Q6:** An IP notes that there appears to be an increase in positive AFB results for a two-week time period. She recalls that there had been a confirmed case of *Mycobacterium tuberculosis* in a college student at the beginning of the time period. In all, six patients have culture results that confirmed TB. After conferring with the microbiology supervisor, a break in the lab procedure is identified. The buffer solution that is used in these tests was contaminated with the initial patients TB. This conclusion is confirmed with polymerase chain reaction (PCR) testing of the isolates. What would this type of outbreak be called?

- a. TB outbreak
- b. Pseudo-outbreak
- c. Epidemic
- d. Propagated outbreak



Q7: Because of the rapid spread, one confirmed case of this disease is considered an urgent public health situation, and the IP should immediately report suspected and confirmed cases to the health department

- a. Chickenpox
- b. Influenza
- c. Measles
- d. Legionnaires' disease



Q8: Plague is endemic in parts of the Southwest United States. The word "endemic" means:

- a. Natives are immune to plague
- b. An expected number of cases occurs each year in a given geographical area
- c. Plague has become resistant to all forms of treatment for this population
- d. The disease is seen in a seasonal pattern each year for this area

? **Q9:** On July 7, a 30-year-old male is admitted to the medical ICU with a 2-day history of acute gastroenteritis symptoms. The IP suspects the patient is infected with norovirus. Which of the following statements regarding the epidemiology of norovirus infection support this?

- a. Most norovirus outbreaks are caused by genotype GII.2
- b. Severe cases of norovirus are most common in adults aged 25 to 45
- c. Noroviruses are the most common cause of epidemic gastroenteritis worldwide
- d. Norovirus outbreaks occur most commonly in the summer months



Q10: Targeted surveillance focuses on:

- a. Tracking high-risk, high-volume procedures and potentially preventable healthcare-associated infections (HAI's)
- b. Providing whole-house infection rates
- c. Tracking infection rates that are publicly reported
- d. Using the electronic surveillance systems to identify infections

? **Q11:** What key infection control activity is defined as the systematic, ongoing collection, management, analysis, and interpretation of data followed by the dissemination of these data to public health programs to stimulate public health action?

- a. Research
- b. Surveillance
- c. Benchmarking
- d. Accreditation

Resources

Certification Study Guide 6th Edition

APIC Text – Chapter: Outbreak Investigations

<https://www.cdc.gov/training/QuickLearns/epimode/#:~:text=An%20epidemic%20curve%2C%20or%20%E2%80%9Cepi%20curve%2C%E2%80%9D%20is%20a,date%20or%20time%20of%20illness%20onset%20among%20cases.>

<https://www.cdc.gov/infectioncontrol/projectfirstline/healthcare/print.html>

<https://www.cdc.gov/csels/dsepd/ss1978/lesson6/section2.html>

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