DIU Knowledge Check 1/14/2025

1) In the context of epidemiology, an agent refers to:
   a) The person who transmits the disease
   b) The environment that supports disease transmission
   c) The host population at risk of disease
   d) Any factor (biological, chemical, or physical) that can cause a disease.

2) Which of the following best describes a confounder in epidemiology?
   a) A variable that modifies the effect of exposure on outcome
   b) A variable associated with both the exposure and the outcome, but not the causal pathway.
   c) A variable that is on the causal pathway between exposure and outcome.
   d) A variable that is not associated with the exposure or outcome.

3) When assessing for confounding, which of the following criteria must be met?
   a) The confounder is associated with the exposure.
   b) The confounder is associated with the outcome.
   c) The confounder is not on the causal pathway.
   d) All the above

4) In the epidemiological triad, an agent refers to:
   a) The environment in which the disease
   b) The organism or substance that causes the disease.
   c) The population at risk of disease
   d) The mode of transmission of disease

5) A contact is defined as:
   a) A person who is responsible for spreading the disease
   b) A person who is immune to the disease
   c) A person who has been exposed to a source of infection.
   d) A person who is receiving treatment for an infectious disease

6) What is the primary purpose of monitoring contacts in an outbreak?
   a) To identify potential secondary cases of the disease
   b) To ensure they develop secondary cases of the disease.
   c) To reduce the population at risk of exposure
   d) To calculate the basic reproduction number

7) A foodborne disease outbreak occurs at a local restaurant. Several patrons report symptoms of severe vomiting, diarrhea, and abdominal pain within 6 hours after eating. Upon investigation, it is found that most of the sick individuals consumed a salad containing mayonnaise that had been left unrefrigerated for several hours.
   Based on the scenario, which of the following is most likely the agent responsible for the outbreak?

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a) Salmonella
b) Staphylococcus aureus toxin
c) Norovirus
d) Escherichia coli (E. coli)

8) A local public health department investigates an outbreak of foodborne illness at a community picnic. Several attendees report symptoms such as nausea, vomiting, and diarrhea within 24 hours of the event. Upon investigation, it is found that the potato salad served at the picnic was contaminated with Salmonella bacteria.

Question:
In this scenario, what is the "agent" of the outbreak?

a) The attendees who consumed the potato salad
b) The Salmonella bacteria
c) The potato salad
d) The community picnic

9) Which of the following can act as reservoirs?
a) Animals
b) Carriers
c) Cases
d) All the above

10) Carriers are only important in the spread of infectious diseases during outbreaks.
a) True
b) False

Answers

1) D
2) B
3) D
4) B
5) C
6) A
7) B
8) B
9) D
10) B

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