EBOLA IN CONTEXT: UNDERSTANDING TRANSMISSION, RESPONSE AND CONTROL

# **WEEK 1** Step 1.15. CALCULATING A SERIAL INTERVAL

In this quiz you will apply your knowledge of the different periods to estimate the minimum and maximum serial interval for Ebola. Remember that the serial interval is the time between the same stage of disease (e.g. fever onset) in consecutive cases in a chain of transmission.

## Question 1

Assume that in Ebola the infectious period starts a minimum of one day after the onset of fever. What is the minimum serial interval for Ebola? (Hint: the minimum incubation period is two days.)

## Answer

Select one:

1. 4 days
2. 3 days
3. 1 day
4. 2 days

## Question 2

What is the approximate maximum serial interval for Ebola?

Remember that the maximum incubation period for Ebola is 21 days and that men who survive Ebola may continue to have the virus in their semen for up to 3 months after their symptoms have ended.

## Answer

Select one:

1. Approximately 2 months
2. Approximately 6 months
3. Approximately 4 months
4. Approximately 3 months

# Feedback and correct answers

## Question 1

1. 4 days

Feedback: If the primary case develops a fever on day 0 and transmits the infection on day 1, the shortest time until the secondary case develops fever (i.e. the minimum incubation period) is 2 days. What would the minimum time be from the onset of fever in the primary case to the onset of fever in the secondary case?

1. **3 days (CORRECT)**

**Feedback: If the primary case develops a fever on day 0 and transmits the infection on day 1, the shortest time until the secondary case develops fever (i.e. the minimum incubation period) is 2 days. Thus the minimum serial interval is 3 days.**

1. 1 day

Feedback: If the primary case develops a fever on day 0 and transmits the infection on day 1, the shortest time until the secondary case develops fever (i.e. the minimum incubation period) is 2 days. What would the minimum time be from the onset of fever in the primary case to the onset of fever in the secondary case?

1. 2 days

Feedback: If the primary case develops a fever on day 0 and transmits the infection on day 1, the shortest time until the secondary case develops fever (i.e. the minimum incubation period) is 2 days. What would the minimum time be from the onset of fever in the primary case to the onset of fever in the secondary case?

## Question 2

1. Approximately 2 months

Feedback: To calculate the maximum serial interval, think how long after the fever onset the first case can transmit, and how late after that the second case can get ill.

1. Approximately 6 months

Feedback: To calculate the maximum serial interval, think about how long after the fever onset the first case can transmit, and how late after that the second case can get ill.

1. **Approximately 4 months (CORRECT)**

**Feedback: If we assume that the first case transmits as late as possible (3 months after symptoms have ended), and that the second case has the maximum incubation period of 21 days, then the maximum time between the onset of fever in successive cases is approximately 4 months. This is worked out as below:**

**Maximum duration of illness in the first case (about 2 weeks) + 3 months (maximum of transmission in semen) before transmission to the second person (total so far: 3 and a half months). Then another 21 days (maximum incubation period) before the second case becomes ill - so slightly over 4 months.**

1. Approximately 3 months

Feedback: To calculate the maximum serial interval, think how long after the fever onset the first case can transmit, and how late after that the second case can get ill.

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