EBOLA IN CONTEXT: UNDERSTANDING TRANSMISSION, RESPONSE AND CONTROL

# **WEEK 1** STEP 1.10. THE IMPLICATIONS OF PERIODS

This quiz will check your understanding of concepts around incubation, latent, and infectious periods. These concepts should help you to understand the logic (or lack of logic!) behind some of the decisions made by government organisations to date and those that may be made as the outbreak progresses.

## Question 1

Which of the following would make it easier for cases of disease to be isolated, and for an outbreak to be brought under control?

## Answer

Select one:

1. If the latent period is longer than the incubation period
2. If the incubation period is longer than the latent period
3. If both periods are the same
4. The relative lengths would have no influence on isolation/control

## Question 2

Kaci Hickox arrived back in the US on 24th October 2014. Her last contact with a known Ebola patient was on October 20th. If Kaci had become infected while in Sierra Leone, in which theoretical scenario could she have transmitted Ebola to others in the US?

## Answer

Select one:

1. 10 days after returning to the US, even while feeling totally well
2. Only within the first 2 days after returning to the US
3. 15 days after returning to the US when she had been feeling unwell for two days
4. 27 days after returning to the US if she had been totally well except during the last two days

# Feedback and correct answers

## Question 1

1. **If the latent period is longer than the incubation period (CORRECT)**

**Feedback: If the latent period is longer than the incubation period, cases will develop symptoms before they become infectious to others. If individuals are promptly isolated when they develop symptoms, it may be possible to reduce the number of people they are able to infect.**

1. If the incubation period is longer than the latent period

Feedback: For effective isolation, one would want to identify cases before they became infectious. When might this be possible?

1. If both periods are the same

Feedback: For effective isolation, one would want to identify cases before they became infectious. If cases became infectious at the onset of symptoms, it may be difficult to isolate the infected individuals as they will already be infectious to others by the time they are isolated.

1. The relative lengths would have no influence on isolation/control

Feedback: The relative lengths do matter, but which way round would help, and which way round would hinder control efforts?

## Question 2

1. 10 days after returning to the US, even while feeling totally well

Feedback: Remember that the incubation period of Ebola ranges from 2 to 21 days, and that the infectious period only begins after the individual shows symptoms.

1. Only within the first 2 days after returning to the US

Feedback: Remember that the incubation period of Ebola ranges from 2 to 21 days, and that the infectious period only begins after the individual shows symptoms.

1. **15 days after returning to the US when she had been feeling unwell for two days (CORRECT)**

**The incubation period of Ebola ranges from 2 to 21 days, and the infectious period only begins after the individual shows symptoms. 15 days after returning to the US is 19 days after the last contact she made with a known Ebola patient. This is within the incubation period. If she was feeling unwell due to Ebola, she could be infectious, and thus transmitting the virus to other people.**

1. 27 days after returning to the US if she had been totally well except during the last two days

Feedback: Remember that the incubation period of Ebola ranges from 2 to 21 days. In this scenario she has been ill for 2 days so we need to count to 25 days after arrival in the US to calculate the incubation period. At this point 29 days had passed since the last likely contact with an Ebola patient, and more than 25 days since leaving Sierra Leone. This is longer than the maximum incubation period for Ebola.

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