



FOCUS on Field Epidemiology

DISCUSSION QUESTIONS: Laboratory Diagnosis: An Overview

1. Did the last infectious disease outbreak that you worked on involve laboratory confirmation of diagnosis? Why or why not?

In some cases, a laboratory diagnosis may not be needed. For example, when time does not allow collection of samples or laboratory work, or an outbreak is ongoing and the presence of the pathogen has already been established in many patients, there is no point in conducting lab tests.

Other factors that may play into whether or not a laboratory diagnosis is obtained include resource limitations, personnel limitations (not enough people to collect the needed specimens), poor sample quality, or lack of sample remaining/available to collect (or samples are available but not in sufficient enough quantities to perform reliable diagnostic or confirmatory testing).

2. If you used the lab to diagnose the last outbreak, did the lab definitively reveal the pathogen that was involved in the outbreak?

If all goes well, cases that are epidemiologically related have the same pathogen. But it is not uncommon for the lab to determine that people are infected with different pathogens! Keep looking for the pathogen that is causing your outbreak unless it no longer matters (the outbreak has subsided) or it is no longer worth the resources. Sometimes the “answer” comes down to the best guess of the persons conducting the investigation.

3. What was the most recent outbreak your department investigated in which laboratory diagnosis was *not* used (if different from above)? Did this limit the department’s ability to contain the outbreak and implement control measures?

In some cases a laboratory investigation is not possible, for the reasons discussed above. If the disease symptoms and method of transmission can be well characterized, and the people who are most likely to be infected can be identified, it may be possible to implement successful control measures without laboratory testing.

Often, the outbreak dies out on its own, without definitive intervention from public health officials. Even if this happens, however, it is important to try to identify reasons for the outbreak and the pathogens that caused it. Every outbreak is an opportunity to learn how future cases of disease might be prevented.



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