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FOCUS on Field Epidemiology

EMBARKING ON AN OUTBREAK INVESTIGATION: DISCUSSION QUESTIONS

1. Have you and/or your team ever investigated a cluster of disease that turned out not to be a true outbreak?

Discussion cues: Your experience investigating outbreaks in the community or region will be unique. It may be possible that a full outbreak investigation has been conducted in a situation where there was no outbreak, but the investigators did not have either the time or resources to determine that cases were not related. Alternatively, it might have been impossible to obtain the proper clinical specimens (stool, throat cultures, or whatever test is appropriate) and environmental samples (potentially contaminated food item or water supply, etc). Without these samples it might be impossible to say whether the "outbreak" was a true outbreak or not.

Sometimes a full investigation is conducted and interventions are undertaken even though an outbreak is not occurring. For example, when a community knows that several cases of meningitis have occurred at a local college, the level of concern can be extremely high, especially if a student has died from the disease. If the cases are coincidental and not part of an outbreak, public health officials may still feel obligated to put an intervention in place (such as offering vaccine clinics on campus), simply to calm public fears of the disease.

2. In the last outbreak you investigated, what was the case definition? Did you distinguish between "confirmed," "probable," and "possible" cases?

Discussion Cues: Did you include person characteristics in your case definition (gender, age, occupation, hobby, or other personal characteristic related to acquiring the infection)?

Did you include place characteristics in your case definition (neighborhood, community, school attended, workplace, recreational activity location)?

Did you include time characteristics in your case definition (month, day, and year that potential exposure to the source of contamination took place; or a range of time when cases that were related could have plausibly occurred)?

Was clinical or laboratory diagnosis of the disease required? What symptoms were included as part of the case definition, if any?

You might compare your case definitions to the standardized CDC case definitions for certain diseases and conditions (available at: http://www.cdc.gov/epo/dphsi/casedef/index.htm). Of course, person, place, and time characteristics for your situation are unique.

3. How does your group monitor for outbreaks, and how could this method be improved?

Discussion Cues: You might consider which diseases are responsible most often for outbreaks in your setting. How do you usually discover these outbreaks? Is that the best method of discovering excess cases of this disease? There is always a sequence of events that needs to occur for the health department to hear about excess cases (e.g. A parent takes a sick child to the doctor. The doctor collects a sample for testing, sends that sample to the lab, and requests that the correct organism be tested for. The doctor, parent, or lab decides to call the health department about that case of disease, or if it is a reportable disease, the lab is required by law to inform the proper health authorities). Perhaps there is a point along this sequence where educational interventions or more active coordination between the community and the health department would result in earlier detection of outbreaks. Additionally, do you think outbreaks exist that are *not* coming to your attention? What about outbreaks of STDs or outbreaks in marginalized populations such as the homeless? These could be areas where a little effort will result in large improvements in detection of outbreaks.

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