



FOCUS on Field Epidemiology

DISCUSSION QUESTIONS: Cohort Studies for Outbreak Investigations

1. In what cohorts (groups of people) have you conducted or read about outbreak investigations? Is there one cohort, or particular group of people that you conduct investigations in more often than others?

Cohorts that you have investigated might include all the students at a school, all children attending a day care, or all attendees at a particular event. These are very well defined groups of people, and this is ideal for conducting a cohort study. In some cases, you can even prepare in advance if you know an upcoming event carries a high risk of outbreaks.

However, sometimes the cohort is not as well defined. For example, you could have reports of a particular disease coming in from doctors located all over town. Since it is difficult to conduct a cohort study on a very large group like the population of an entire town, you may not have conducted a cohort study in these types of situations. However, if you discover that all the cases have something in common—perhaps they all are construction workers and work at the same site—then a cohort study might be possible after all.

If you are frequently conducting investigations in a particular population, say diarrheal outbreaks in children under 3 years of age, perhaps education or intervention is called for at daycare centers, preschools, or community clinics.

2. Can you calculate risk directly from a cohort study? Why?

Yes, you can calculate risk from a cohort study. In a cohort study you know the number of people who are at risk of developing disease—they are all in your cohort. This forms the denominator of your risk calculation ($\text{risk} = \frac{\text{number of cases}}{\text{total number of people who were at risk in the population, at the beginning of your study time period}}$). In contrast, in a case-control study, only a sample of people who are at risk of developing disease are included in your study, so you cannot calculate risk directly. You may not even know the total number of people at risk in a case-control study.



UNC
SCHOOL OF
PUBLIC HEALTH

NORTH CAROLINA
CENTER FOR PUBLIC
HEALTH PREPAREDNESS

The North Carolina Center for Public Health Preparedness is funded by Grant/Cooperative Agreement Number U90/CCU424255 from the Centers for Disease Control and Prevention. The contents of this publication are solely the responsibility of the authors and do not necessarily represent the official views of CDC.