



FOCUS on Field Epidemiology

DISCUSSION QUESTIONS: Case-Control Studies for Outbreak Investigations

1. Did you use matching in your last case-control study? Why or why not? Was it helpful? Would it have been useful? How did you analyze the matched data?
2. How have you minimized recall bias in past case-control studies? Has selection bias been a concern in your case-control studies?

Matching is sometimes used in case-control studies to ensure that cases and controls are as similar as possible in all respects except exposure. Matching can be efficient in terms of time and cost-effective, and can improve statistical power. However, finding a match can be difficult, especially if you choose to match on multiple characteristics. Also, once you match on a characteristic, you can no longer assess any association between that characteristic and disease/outcome. If you decide to use matching, you need to take that into consideration when you conduct analysis of the data. A matched odds ratio should be used with matched data.

Recall bias is often an issue in outbreak investigations, as the time between exposure and the identification of an outbreak can be lengthy. People will have a hard time remembering what they ate for dinner 7 days ago. To minimize recall bias, be sure to provide specific date references. Also, you can ask the respondent to refer to calendars or receipts to help them remember.

Selection bias indicates a systematic difference in characteristics between those who were selected as cases and those who were selected as controls. To minimize selection bias, you might consider matching your cases and controls to make them as similar as possible.



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