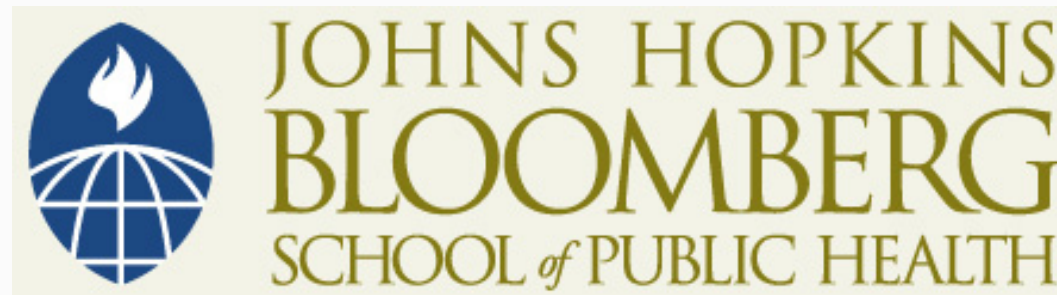


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## Lecture 1c: Practice Problem Solutions

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# Solutions

1. Compare the “natural experiment” to an observational study
  - Both are used when the exposure or “treatment” of interest can not be randomly assigned (HIV, smoking, vegetarianism, etc.)
  - In the natural experiment, subjects are “assigned” to groups via a mechanism which acts randomly
  - In observational studies, there may be other factors associated with group assignment

# Solutions

2. What are some potential issues that make the study of an outcome/exposure relationship more difficult with an observational study, than with a randomized study?
  - The biggest issue stems from the fact that those “exposed” may be different than those “not-exposed” with respect to other characteristics that may also relate to the outcome of interest
  - This makes more difficult the task of getting a “clean estimate” of a disease/exposure relationship