JOHNS HOPKINS
BLOOMBERG
SCHOOL of PUBLIC HEALTH

Lecture 1c: Practice Problem Solutions

John McGready
Johns Hopkins University

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