

Research Study Designs

Graduate Medical Education

Chelsea McQueen

CONFIDENTIAL – Contains proprietary information.
Not intended for external distribution.

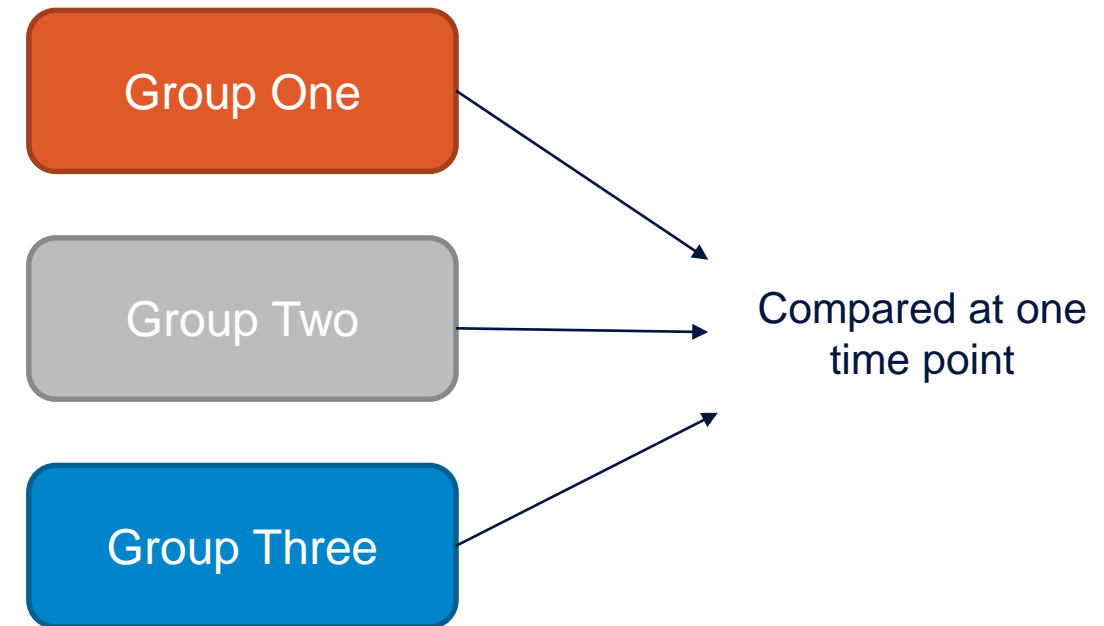


Agenda

- A. Cross sectional studies
- B. Cohort studies
- C. Case-control studies
- D. Randomized control trials

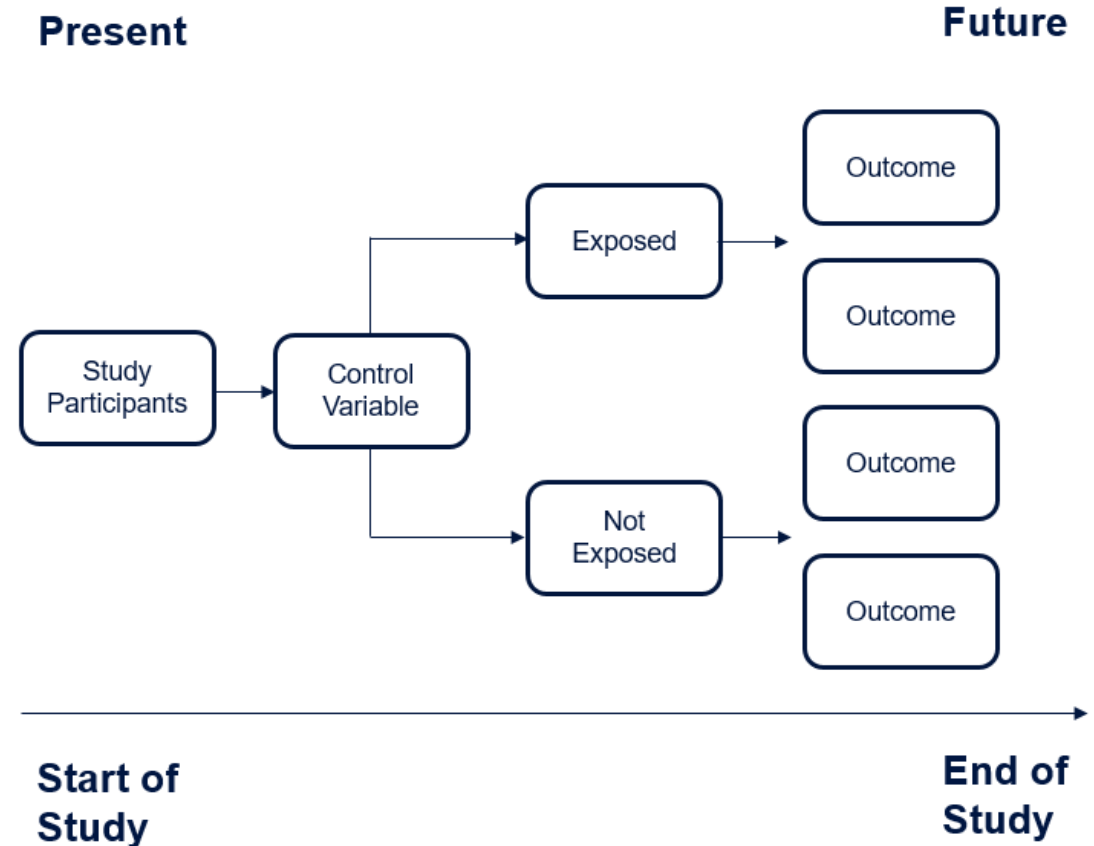
Cross Sectional Study Design

- All measurements are captured at the same time point
- Measures the proportion of people with a condition compared to the total population at a single point in time
- Quick and inexpensive
- Cannot establish associations



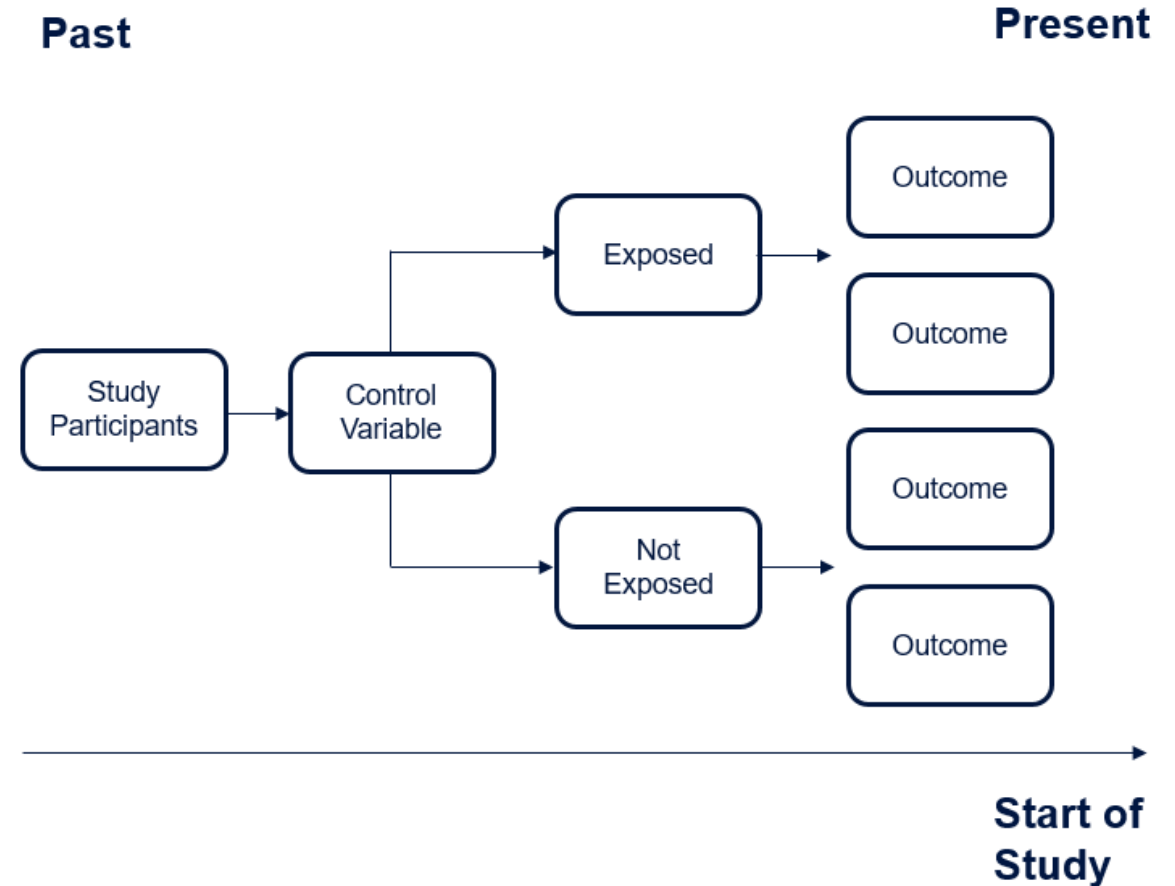
Cohort Study Design

- A form of longitudinal study design that follows a group of people from exposure to outcome
- Measurements take place over time
- Allows for measuring “incidence” which is the proportion who develop a condition over time
- Allows for a degree of inference



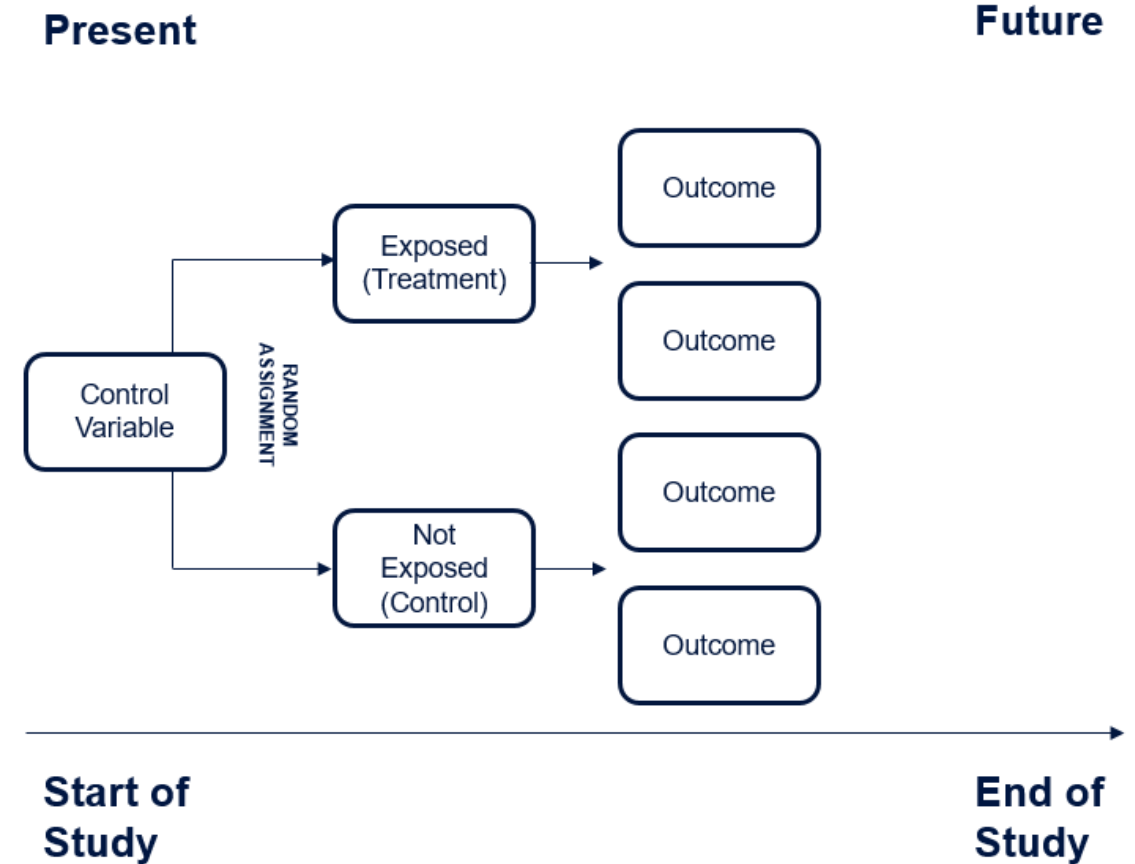
Case Control Study Design

- Starts with the identification of a group of cases and a group of controls to be included in the study
- Best for retrospectively finding differences in predictor variables
- Vulnerable to the effects of bias
- Relatively cost efficient



Randomized Controlled Trial Study Design

- Gold standard for clinical research
- One group receives a proposed intervention while another receives either a placebo or standard of care treatment
- Randomized to minimize bias
- Expensive and time consuming



Knowledge Test #1:

What is the advantage of a cross-sectional study?

- A. Relatively fast and inexpensive
- B. Can establish casual associations
- C. Allows for the measurement of incidence

Knowledge Test #2:

What is the advantage of a cohort study?

- A. Good for rare conditions
- B. Can establish casual associations
- C. Relatively inexpensive

Knowledge Test #3:

A study aims to describe the distribution of incomes among all nurses at hospitals in the Phoenix area.

A. Randomized controlled trial

B. Cross sectional study

C. Cohort study

Knowledge Test #4:

What is the weakness of a cohort study?

- A. Good for rare conditions
- B. Can not establish casual associations
- C. Relatively expensive