Research design – descriptive

• Investigator studies people and exposures in nature, observational
• No control or comparison group
• Studies
  – Correlational variables – statistical association between
  – Case studies – new diseases & treatments, etc.
  – Case report – documenting researchers experience
  – Case series – following a group over time
  – Cross sectional study – survey
    • Community Survey
  – Qualitative study
  – Migrant studies – interview w/open-ended question
Research design – analytical-observational

- Investigator collects data without making changes to patient’s life or introducing treatments
- Control/Comparison group, not randomized
- Studies
  - **Case Control** – etiology; examine associations between disease/disorder/health issue and one or more risk factors
  - **Cohort Study** – measurement of one characteristic, outcome, or issues across two groups
    - Prospective Cohort
    - Retrospective Cohort
    - Time Series Study
  - **Cross sectional** – to determine prevalence
Research design – analytical experimental

• Investigator chooses and tests intervention, treatment or exposure
• Decision as to group allocation can be by either random or non-random methods
• Control and/or comparison group used
• Note: Random allocation of subjects to is used to reduce selection bias by investigator and evenly allocate subjects on basis of known and unknown characteristics
Research design – experimental studies

• Studies
  – Clinical trials
    • Non-randomized trials (quasi-experiment)
      • Randomized Controlled Trials (RCT)
      • Double-blind randomized trial
      • Single-blind randomized trial
      • Non-blind trial
      • Crossover trial (may also be observational if not interventional)
  – Community trials – conducted directly through doctors and clinics
  – Laboratory trials
Randomized Control Trial (RCT)

• Gold standard – especially for therapy studies
• Participants are randomly allocated into intervention (treatment) and control (placebo)
  – Phase I – Healthy subjects
  – Phase II – Small group
  – Phase III – Large group prior to marketing
  – Phases IV – Post-marketing study
• Rigorous evaluation of a single variable
• Seeks to falsify (rather than confirm) it’s own hypotheses
• PubMed MeSH: Randomized Controlled Trial [PT]