

# 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 – interview w/open-ended question
  - Migrant studies

# 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]