

Taxonomy of Clinical Research Designs

Experimental

- Randomized Controlled Trials
- Other Intervention Studies
 - Non-randomized designs
 - Historical Controls
 - Before vs. After

Observational

- Prospective Cohort Study
 - Concurrent
 - Non-Concurrent
- Case-Control Study
- Cross-Sectional Study
- Other / Mixed / ?

Quasi-Experimental Designs

- Non-equivalent Group design
 - Assignment to groups not random
 - Last year large barbershop vs. 2 smaller shops
 - Historical Controls
- Post Only
- Pre-Post
 - 1 time point for data collection
 - Multiple time points for data collection: time series; interrupted when data collection is “suspended” when intervention is introduced

Benefits of Interrupted Time Series

- Allows for detection and correction for biases including:
 - Secular trends
 - In the outcome of interest or in other things that could affect this outcome such as treatments
 - Cyclical or seasonal effects
 - Autocorrelation
 - Point immediately preceding predicts next point
 - Duration of the intervention effect
 - Do the effects last?
 - Random fluctuations

Changes in the hospital-wide incidence density of MRSA-infected patients/1000 pd 30 months before and 24 months after the intervention (INT = implementation admission screening for MRSA, 6 month implementation period)

