Sample Size Analysis for Preparation of Grant Applications

Date: Monday, June 9, 2014
Location: 106 Farrall Hall
Time: 9:00 AM - 4:00 PM

In this full day workshop we will consider sample size issues in the preparation of grant applications for exploratory developmental research projects (NIH R21 mechanism) and larger projects (NIH R01 mechanism). Sample size and power considerations for studies aiming to determine the effect of a treatment will be discussed. Sample size considerations for the comparisons of two means or two proportions will be tied to the trial design and analysis strategies (covariance adjustment, repeated measures). Superiority, non-inferiority and equivalence clinical trial designs will be considered for studies comparing treatment to control, or treatment to another treatment. The implementation of sample size calculations in GPower and SAS software will be illustrated.

Topics:

- Hierarchy of evidence in clinical research
- Distributional and anchor-based measures of treatment effect
- Effect size
- Clinical and statistical significance
- Sample size determination for superiority clinical trials
- Sample size determination for equivalence and non-inferiority clinical trials

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