Division of Biostatistics, DSI
Medical College of Wisconsin
Presents

"OPTIMAL RELEVANT SUBSET DESIGN"
By: Adam Lane, PhD

JOIN US!
Tuesday, November 12th | 3:30PM - 4:30PM
Location:
MEB M2050-M2070
Virtual Link:
https://mcw-edu.zoom.us/j/91563103648?
pwd=NmF1SmIXQzhBZmpIZS9aWIBGcnhndz09

A variable is ancillary if its distribution does not depend on the model parameters. Fisher (1934) argued that certain ancillary statistics form a relevant subset, a subset of the sample space on which inference should be restricted, and showed that conditioning on their observed value reduces the dimension of the data without a loss of information. The use of ancillary statistics in post-data inference has received significant attention; however, their role in the design of the experiment has not been characterized. The value an ancillary variable assumes during an experiment is unknown and cannot be incorporated into the design a priori. However, if the data are observed sequentially then this issue can be addressed using an adaptive design. Specifically, the relevant subset determined from existing observations could be used to determine the design assignment for the current observation. The main results of this work describe the benefits of incorporating ancillary statistics into an adaptive design.

Adam Lane, PhD

Biography: Dr. Lane joined Cincinnati Children's in July 2013. He has published novel statistical methods in the areas of adaptive and optimal experimental designs with applications to phase I and phase II clinical trials. As a graduate student he received funding from the NIH to spend the fall semester of 2011 at the University of Cambridge in the Isaac Newton Institute for Mathematical Sciences. He has also received NSF travel awards to present his research at national and international conferences.

knowledge changing life