PUBLIC HEALTH & PREVENTIVE MEDICINE

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12:00PM-1:00PM
Mackenzie Hall, Room 2201

Modeling Change in the Presence of Measurement Error

ABSTRACT

Measurement error in predictors is well known to cause bias in estimated regression coefficients and to cause a loss of power for detecting associations. Methods commonly used to correct for bias require auxiliary data (e.g., replicates, validation data, instruments). We develop a solution for investigating associations between the change in an imprecisely measured outcome and precisely measured predictors, adjusting for the baseline value of the outcome, where auxiliary data are not available. We require the specification of either ranges for the measurement reliability or for the measurement error variance of the outcome. The solution allows one to investigate the associations between change in the outcome and the predictors, and to assess the impact of the measurement error. An illustration investigating the associations between three-year change in the intima-media thickness of the common carotid artery and known cardiovascular disease risk factors is provided.

Lunch will be provided

For more information or questions about this event, please contact Jodi Lapidus 503-494-1167, lapidusj@ohsu.edu

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