Denis Talbot, PhD

Biostatistics Professor, Department of Social and Preventive Medicine, Laval University

A word of caution regarding stabilized weights when using marginal structural models to estimate the effect of exposure history

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3:30 pm – 4:30 pm
Purvis Hall, 1020 Pine Ave. West, Room 24

ALL ARE WELCOME

Abstract:

Marginal structural models (MSMs) are commonly used to estimate the causal effect of a time-varying exposure in presence of time-dependent confounding. These models have gained vast popularity over the recent years, in part due to their ease of implementation. Indeed, the most common implementation of MSMs consists of fitting a weighted outcome model (e.g. a linear regression), where observations are weighted according to their inverse-probability-of-treatment weights. Users must however be wary of a number of subtle issues regarding MSMs that might impact the validity of the inferences. In this talk, I first introduce MSMs and then present one such issue: the stabilization of the weights. This stabilization is usually recommended to reduce variability, but I provide a simple example and some simulation results where it is also observed to yield biased inferences.

Bio:

https://sites.google.com/site/denistalbotfmed1/home

www.mcgill.ca/epi-biostat-occh/news-events/seminars/biostatistics