



McGill

Department of
Epidemiology, Biostatistics
and Occupational Health

Biostatistics Seminars

Winter 2019



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Propensity Score Matching with Time-varying Covariates for Observational Survival Data: An application to 17- Alpha Hydroxyprogesterone Caproate Treatment in Patients with Recurrent Preterm Birth

Tuesday, February 26, 2019

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

All are Welcome

Abstract: In observational studies where a survival outcome is of interest, treatment initiation may be time-dependent, which is likely to be affected by both time-invariant and time-varying covariates. In certain situations, all subjects may be exposed to the treatment sooner or later. In this scenario, the causal effect of interest is the delay in treatment. We propose a propensity score matching strategy to estimate the treatment delay effect. The goal is to balance the covariate distribution between on-time treatment and delayed treatment groups at each time point under risk set matching. We apply this method to study the delayed treatment effect of 17 alpha-hydroxyprogesterone caproate (17P) for patients with recurrent preterm birth.

Bio: Dr. Erinn Hade is a Research Assistant Professor in the Departments of Biomedical Informatics and Obstetrics & Gynecology, The Ohio State University College of Medicine. She co-leads the OSU Maternal and Child Health research group with Dr. Courtney Lynch where they focus careful design, inference and method development to improve the health of women and children. She holds a MS in Biostatistics from the University of Washington and PhD from The Ohio State University. <http://u.osu.edu/hade.2/> ; <https://u.osu.edu/osumch/>