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Causal Inference Methodology to Evaluate the Time-Varying Effect of Asthma Medication on Pregnancy Duration

Uncontrolled asthma during pregnancy could have potentially adverse effects on the fetus' health. To assess the comparative impact of maternal use of different asthma controlling therapies on pregnancy duration we used a cohort of pregnant women from the linkage of provincial administrative databases (RAMQ and MED-ECHO). Since asthma control is a time-varying confounder it must be adjusted for using a causal analysis. We will address this issue by defining the causal parameter of interest through Marginal Structural Cox Models estimated using Inverse Probability of Treatment Weighting and Targeted Minimum Loss-based Estimation. I will present early results from this study.