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Title:  Causal Inference for polypharmacy: Propensity score estimation with multiple concurrent medications

Abstract: This talk investigates different approaches for causal estimation under multiple concurrent medications. I'll explore through parametric and non-parametric methods to estimate the generalized propensity score proposed by Imbens (2000) for multiple concurrent medications. I'll use different machine learning methods in order to estimate this generalized propensity scores. Further, I'll use different causal estimator approaches like IPTW, Propensity Score Adjustment and TMLE to estimate our causal parameter of interest in various simulation data. Finally, we'll use these approaches on a real data set to contrast the utility of the mentioned approaches.