# Minutes of the Population-Level Estimation Workgroup

May 4, 2016

Present: Dukyong Yoon, Jenna Reps, Peter Rijnbeek, Nicole Pratt, Martijn Schuemie, Rae Woong Park, Students in South Korea

Martijn discussed the CohortMethod package in detail. This package implements a new-user cohort method design. It can automatically generate a large set of covariates, and use a regularized regression to fit a propensity model. This propensity score can be used for trimming, stratifying, or matching. The same covariates can also be included in an outcome model to produce a ‘doubly robust’ estimate.

Nicole wondered whether co-linearity between the many covariates might cause problems. Martijn pointed out that the regularization makes the regression robust against co-linearity by selected one of the correlated covariates, and shrinking the other to 0.

Peter asked how one chooses the comparator drug. Martijn responded that often the comparator comes naturally from the context of the study. For example, if an existing treatment (e.g. warfarin) is being replaced by a new one (e.g. dabigatran), it makes sense to compare those two drugs. Other times one might pick a comparator with the same indication as the target drug. Alex Walker has suggested a data-driven approach, where we can compute propensity score overlap for every conceivable comparator drug, and pick the comparator with the greatest overlap.

Martijn asked if anyone would like to present at the next meeting, or whether there were specific topics people would like to hear about. It was decided that Martijn will present the SelfControlledCaseSeries package at the next meeting.

The next meeting will take place on May 18.