# Minutes of the Population-Level Estimation Workgroup

June 1, 2016

Present: Kenneth Man, Jenna Reps, Peter Rijnbeek, Martijn Schuemie, Rae Woong Park, Usman Iqbal, Students in South Korea

Martijn was supposed to discuss “Identifying the important questions that can be answered using observational research”, but due to circumstances beyond our control the slides were not ready. Instead, Martijn discussed a pilot experiment on the evaluation of methods. The experiment used data from the Truven Medicaid database, and included the Self-Controlled Case Series (SCCS), Self-Controlled Cohort (SCC), and Cohort Method (CM) methods. The negative controls were diclofenac and outcomes that we assume are not caused by diclofenac (based on LAERTES). The positive controls were created by injecting outcomes on top of the negative controls.

Results showed that MSCCS is the best SCCS performer, but still vulnerable to confounding by indication. SCC performs really well, but is expected to be vulnerable to contra-indication (not injected). CohortMethod was the least powerful (largest confidence intervals) but had high coverage.

Peter suggested stratifying the analysis by frequency of the outcome to see whether performance differed for controls with lots of data compared to controls with little data.

Usman brought up the notion of dose: currently, all exposures are assumed to have the same dose. Also, it is not always possible to determine the exact length of exposure, and our injection approach does not take that into account.

Rae would like to see if such an approach could be used to evaluate the quality of a database.

Next meeting will be in two weeks (June 15), and this time we will discuss “Identifying the important questions that can be answered using observational research”.