Reviewer’s report

Title: Cohort studies in chronic diseases using routinely collected databases when a prescription is used as surrogate outcome

Version: 3 Date: 20 December 2010

Reviewer: Gabriel Chodick

Reviewer’s report:

The authors aimed to examine several methods of estimating drug effectiveness from routinely collected pharma data. This is an important issue that attracted growing attention with the increasing number of computerized medical database available for pharmacoepidemiological analyses. It is unclear, however, whether it is a methodological or observational paper. For methodological paper, the authors provide no satisfactory generalization for their point other than an empirical finding on very specific case. For observational paper, the study suffers major limitations.

The paper is very difficult to follow. It has many unnecessary repetitions as well as missing information of important issues. For example, while figure 1 presents a trivial presentation of censoring in the unmatched cohort analysis, the authors provide no table on this important analysis. Other figures and tables are not much more helpful either. What is t in figure 2?, why exit from cohort occurs after event cessation in figure 2(1)? In tables A1 and A2, How come OS s is both a dependent variable and a covarite? And more importantly, it is unclear how the results prove the superiority of one analytic method over the other ?

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests: None