Reviewer's report

Title: The Impact of Statins on Health Services Utilization and Mortality in Older Adults with Cardiovascular Disease: a cohort study.

Version: 1 Date: 21 January 2009

Reviewer: David J McLernon

Reviewer's report:

Major Compulsory Revisions

1. The major comment I have regards the time at which statins are prescribed to the new initiators after diagnosis of IHD. What is the range of time to statin prescribing in these patients? Do any of these patients get statins prescribed three years after diagnosis, for example? Since the maximum follow-up time is over 3 years then surely patients who are prescribed statins at 3 years may have had them for some other medical reason, in contrast to someone who is prescribed statins on the discharge date for example. If the time is quite varied the authors may wish to consider adjusting the survival models with statins as a time-varying covariate. This variable would equal zero at baseline until some time point where statins are prescribed during the study where it would equal one from that time point on.

Minor Essential Revisions

1. Overall, I felt this was an interesting, well written paper and the statistical methods used appeared correct (with the possible exception of the major comment above depending how it turns out).

2. On page 5, the second last sentence is not totally clear: ‘if a patient had more than one hospital admission during the study period, the first hospitalisation date was used as the index hospitalisation.’. Is this first hospitalisation date not the first date that diagnosis of IHD was made and hence the baseline of the study? If so, then this should be obvious. I am not quite sure what use this sentence has other confuse the reader.

3. On page 7, in the Propensity model section, the authors should list all of the variables that were incorporated into the model to derive the propensity scores. Also, were any additional variables used to predict the outcomes of interest, such as mortality? Where the same variables used to derive propensity scores used to predict these outcomes?

4. Authors should also add a reference for the c-statistic on page 7.

Discretionary Revisions

1. In the abstract methods it may be useful to mention the propensity scores.
Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:
I declare that I have no competing interests