Reviewer's report

Title: A Retrospective Cohort Study of the Potency of Lipid-lowering Therapy and Race-gender Differences in LDL Cholesterol Control

Version: 1 Date: 11 January 2011

Reviewer: Thomas Stulnig

Reviewer's report:

Major compulsory revision:

My major comment is mainly on the weight of the relative lipid-lowering potency of drugs that should be related to LDL-lowering effects as stated by the authors. First, it is not convincing that fibrates, which have only minor LDL-lowering effects, got a 0.50 relative potency which compares to atorvastatin 5 mg that has almost double the effect (Appendix Table 1). Similar applies to ezetimibe. Another inconsistency lies between relative potencies of cholestyramine and coleselvam. Second, dose-response relationships are not paralleled by potency scores. E.g., atorvastatin 80 mg has less than double the effect of atorvastatin 5 mg, but its relative potency has been set to 6-fold. Thus, relative potencies have to be carefully revisited to closely parallel LDL-lowering effects and revised potency data have to be used to recalculated the data. Moreover, the relative potency should be given for each individual dosage.

Minor essential revisions: The presentation of data is not clear in many instances:

1. Figure 2 "a-c" is not available but mentioned in the text (refers to appendix Fig. 3a-c?).
2. Figure 3: According to the legend, the figure depicts HR for race-gender groups and categories of total potency of LDL-lowering therapy, but the ordinate itself is annotated with "race/gender and baseline LDL". What is true and what is meant by the "Med" group?
3. Table 2 is not depicted completely in the file and cannot be evaluated.
4. Figure legends are missing for all additional files, which hence lack any comprehensible information in their current form.
5. App. Table 2: the comparator group is not always clear and should be specified, e.g. for total lipid-lowering drug potency, age, etc.
6. P. 5, 2nd paragraph: ATP III refers to CHD risk equivalents, not diabetes risk equivalents as stated in the text.

Level of interest: An article of importance in its field

Quality of written English: Acceptable
**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests.