Reviewer's report

Title: Estimating uncertainty of alcohol-attributable fractions for infectious and chronic diseases

Version: 1 Date: 27 October 2010

Reviewer: Augusto Di Castelnuovo

Reviewer's report:

The authors present an original method for estimation of uncertainty (95% confidence intervals) around alcohol-attributable fractions when both exposure and risk derived from distinct meta-analyses. The authors applied the method to calculate confidence intervals for alcohol-attributable fractions for several chronic disease, by region, sex and age, and present results limited to 5 Asian regions.

The question posed by the authors is well defined, and the methods are appropriate and sufficiently described.

Major Compulsory Revisions
1. The authors assert they provided results by age (3 categories), but this is definitely not apparent in the paper. Table 1 shown data by region and sex. Table 2 stated that data are by region, sex and age, but actually they are by region and sex only. Table 3 is by region, in men. Have results by age been collapsed in a unique result? If this was the case, how it was achieved? Please, clarify. In any case, information for Tables 1, 2 and 3 should be provided by (region, sex and) age strata, at least as supplemental data.

2. The authors calculated AFFs and their uncertainty for alcohol at any dose. This means that the integration at numerator in the formula for AFFs always ranges from 0 to infinity, irrespective of disease (the superior limit was fixed at 150 gr/day for sake of simplicity). This approach may produce misleading results when a non-linear J-shaped dose relationship is evident, as in the case of Coronary Heart Disease, where low to moderate intake of alcohol is associated with protection, whereas high doses with risk. In addition to data presented in Table 3, the authors should provide AFFs and their uncertainty for coronary heart disease, ischemic stroke and diabetes separately for low and high doses. More precisely, besides the findings they provided as an example in the current manuscript, the authors should demonstrated the possibility (and the opportunity) of such a calculation.

Minor Essential Revisions
1. Define AAFs the first time you used it in the abstract.
2. Pag. 13 “Around 150 000” appears as a typographical error

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

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