Author's response to reviews

Title: Alcohol consumption, drinking patterns, and ischaemic heart disease: a narrative review of meta-analyses and a systematic review and meta-analysis of the impact of heavy drinking occasions on risk for moderate drinkers

Authors:

   Michael Roerecke (m.roerecke@web.de)
   Jürgen Rehm (jtrehm@gmail.com)

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Author's response to reviews: see over
Reviewer: Tanya N Chikritzhs

Reviewer's report:

Discretionary revisions

This is a very useful paper which covers a lot of ground. The drinking pattern outcomes are particularly useful. The methods are appropriate and similar to studies the authors have conducted and published in the past.

1) This good effort may however be cast into shadow by the recent cutting edge work by Holmes et al (2014) which I urge the authors to consider in their intro and discussion. See Holmes et al (2014) Association between alcohol and cardiovascular disease: Mendelian randomisation analysis based on individual participant data. BMJ 2014;349:g4164 doi: 10.1136/bmj.g4164 (Published 10 July 2014). Another paper worth noting is that by Rogers et al (2013) Nondrinker Mortality Risk in the United States. Popul Res Policy Rev (2013) 32:325–352. At the least, a discussion of the findings in the light of these papers will make the review and discussion sections less likely to be considered dated – and may even prompt the authors to re-interpret their findings.

Answer:

We have included a discussion of these papers in the revised manuscript, in the section on lifetime abstention and experimental evidence. The BMJ paper came out after our submission. While Mendelian randomization has a lot of potential, the Holmes paper unfortunately does leave many questions open as we had indicated in our response in BMJ (http://www.bmj.com/content/349/bmj.g4164/rr/760786), and in an editorial for Addiction. These pieces have been added to our paper as well.

2) Is this a typo or relic from another Roercke and Rehm paper ‘(i.e. comparisons of mortality risks of patients in alcohol use disorder treatment’

Answer:

We have deleted this part from the revised manuscript.

Reviewer: Lorenza Scotti

Reviewer's report:

The paper “Alcohol consumption, drinking patterns, and ischemic heart disease: a review of meta-analyses” has the aim to summarize the available scientific literature which analyzes the association between alcohol consumption and ischemic heart disease focusing in particular on the reference
category and the drinking patterns. Even if the revision is complete and well conducted including the statistical analysis some additional information are needed:

Major Compulsory Revisions

3) I think that the method section is a bit confused. It looks like the methods section of a quantitative meta-analyses but the main part of the results is a qualitative review of the available literature with additional results provided by pooled estimates obtained by individual studies. To improve the paper, please specify separately what has been done for the qualitative review from what has been done for the qualitative one.

**Answer:**

Following the suggestion of the reviewer, we have revised the methods part of the manuscript and the appendix accordingly.

4) Please specify if the article search was made to detect meta-analyses, original studies or both and how these studies were used which ones for the quantitative and which ones for the qualitative review.

**Answer:**

We have revised the manuscript and appendix to show that we did a systematic search for a narrative review of meta-analyses, and a systematic search for primary studies on drinking patterns and lifetime abstention. Both searches contributed to the narrative review.

5) Please separate the part related to the review of the meta-analyses from the meta-analysis you performed and provide more detailed comments of the results.

**Answer:**

We have more clearly separated the narrative and quantitative part of our paper ion the revised manuscript. We further provide more detail on the analyses of drinking patterns in relation to lifetime abstainers (Figure 1 and text).

Minor essential revision

6) The abstract is focused on the results of the quantitative review while the results section of the paper on the qualitative review, please harmonize the two parts.

**Answer:**

We have revised the Abstract as the reviewer suggested.
7) Please specify more clearly the objectives. First of all that the one side the aim is to perform a qualitative review of the available literature and on the other side to perform a quantitative review to evaluate the effect of drinking pattern and alcohol dose on IHD incidence in the population studies and IHD mortality in clinical studies compared to general population and to comment the results obtained by both review.

Answer:

The objective was to review the evidence base for the relationship between alcohol intake and IHD, paying special attention to drinking patterns, and both beneficial and detrimental effects. We have revised the Introduction to make this clearer.

8) Please specify better the differences between the two search strategy in the text and not only in appendix.

Answer:

The appendix in the revised manuscript is now much better readable and shows the search for meta-analyses, and search and analyses involving drinking patterns.

9) In table S1, are the numbers in brackets the article's reference number? If so please check.

Answer:

We have deleted Table S1 from the revised manuscript as these estimates are now published in a separate article (Roerecke M, Rehm J: Chronic heavy drinking and ischaemic heart disease: a systematic review and meta-analysis. Open Heart 2014, 1(e000135)).

10) Please explain better what is reported in figure 1. Are the pooled estimates of the retrieved studies stratified by alcohol dose? Are the estimates obtained using a meta-regression model? Please add some details to the text.

Answer:

We have added more text to describe figure 1. All estimates were from categorical analyses stratified by alcohol dose.

Discretionary revisions

11) Define the acronym AUD before using it.
Answer:

In the revised manuscript, we have defined AUD at its first use.

12) Specify that clinical setting means patients with AUD.

Answer:

We have specified that clinical setting means patients with AUD in treatment in the revised manuscript where it is mentioned.