Reviewer's report

Title: The impact of increased treatment rates for alcohol dependence in the United Kingdom in 2004

Version: 3  Date: 7 November 2013

Reviewer: Matthijs Blankers

Reviewer's report:

Dear authors,

I have read your manuscript with great interest. A quantification of the number of deaths that would have been avoided if the alcohol treatment rates had been increased could be a convincing argument for policymakers to increase the investments in alcohol treatment. At this point I do however have a number of comments I hope you can address in order to improve the manuscript you have submitted.

Major comments

1. The main result presented assumes that it is feasible to increase the treatment coverage rate for alcohol use disorders from less than 10% now, to 40% in the model. Although such results can of course be modelled, I think it is overly optimistic to assume a 40% treatment rate is feasible in practice. I would suggest to limit the treatment rate to a maximum of two times the current rate, or any other rate that you think is feasible to achieve in practice.

2. Appendix 1: "For people with alcohol dependence the relative risk function was calculated by multiplying the RR for people for the general population by 2 to account for the overall higher mortality risk of people with AD". I think this is a very imprecise estimation of RRs related to alcohol dependence/problem drinking. As this RR estimate is very important for the presented mortality estimates, could you use more precise RR estimates, as assess the sensitivity of your results to misspecification of these RRs in sensitivity analyses?

3. In reality, one would always find a combination of the modelled interventions being implemented, not a single one as currently presented in the results section. Could you please adjust your model in such a way that the impact of further implementation a more realistic combination of interventions (eg brief, pharma and MI/CBT) is explored?

4. Please elaborate more extensively on how the sensitivity analysis were performed (page 10).

5. Could you insert a section on the study's limitations in the discussion section?

Minor comments

a. Please provide a source of the definition of heavy drinking in the Background
section.

b. Page 5: please include a section title (eg "Alcohol treatment in the UK" above "Given the burden of AD…")

c. Page 7: please elaborate on the methodology used, in addition to the referral to [3].

d. Page 8: people with AD were randomly selected among samples with an average alcohol consumption of 72g / 48g per day. Where do these figures (grams per day) stem from? On what grounds were these chosen?

e. I would suggest to change the term AD to heavy alcohol use, as AD is currently operationalized using drinking quantities only.

f. Where does the formula in Appendix 1 stem from? Can you provide a reference?

g. Page 9: please indicate whether the deaths avoided are per year, or another quantity of time.

h. The manuscript would profit from a discussion of the implications and costs of implementing alcohol interventions to the extent presented in the results section of the manuscript.

**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.