Author's response to reviews

Title: Evaluating heterogeneity in cumulative meta-analyses

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Author's response to reviews: see over
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The Editor
BioMed Central Journals

Dear Editor,

We are pleased to submit revisions to our manuscript entitled “Evaluating Heterogeneity in Cumulative Meta-analyses”. The revisions were made in response to the comments of three peer-reviewers. We are honoured that three of the most eminent experts in the field have reviewed our work and are pleased by their wholly positive tone. In addition, we have made changes according to the BMC’s formatting requirements as laid out in the document entitled “BMC Medicine Journals – Authors’ Checklist for Manuscript Formatting”.

We are mortified that we have failed to acknowledge early work by Takkouche and colleagues on heterogeneity in meta-analysis. We thank Professor Takkouche for pointing to their 1999 publication. We have appropriately referenced his work and thank him for the chance to rectify this embarrassing oversight.

We have expanded the implications for research/practice by outlining specific sources of potential heterogeneity [Higgins]. While we have offered some suggestions based an examination of the source studies (and hence the delay in our reply), we hesitate to explore this in any more depth as we feel this to be better tackled by the authors of the reviews.

We have included a short description of confidence intervals [Olkin]. We agree with Professor Olkin that better graphs than those we provided in Additional File 1 need to be generated. The graphs showed the limitations of the technology we have and, instead of spending more time or effort, have elected to omit them.
altogether. We have two reasons for this. First, the graphs replicate generic forest plots available in the original Cochrane review. Second, we do not have the technology or graphics design expertise to enable us to improve on the generic outputs of the statistical software we used.

In deference to Professor Takkouche’s opinion that the manuscript is better submitted as a short report, we believe that the BMC publishing model allows us to provide useful examples from a variety of settings (at least within the smoking cessation field) without undue emphasis placed on the article length due to page costs. While we wholeheartedly support the idea that any manuscript should be no longer than necessary, we believe that the additional examples provide the reader with useful information about the evolution of heterogeneity in different but related settings. Of course, final arbitration is at the editor’s discretion.

Professor Takkouche’s additional point about increased heterogeneity being an expected function of the increased number of studies was covered by Higgins and Thompson and is something we had already stated in the first paragraph of the Methods section.

We have made changes following items listed as minor essential revisions:

• Revision of descriptions of $I^2$, $V^2$ [Higgins].
• Elimination of imprecise terms such as “plateau” [Higgins] or “rate” [Takkouche].
• Revision of odds ratios “including $I^2$” [Higgins].

Once again, we thank the reviewers for offering invaluable advice.

Yours sincerely

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