Reviewer's report

Title: Agreement between decision analysis and matching systematic review of randomized controlled trials in assessment of treatment comparisons: a systematic review

Version: 2 Date: 16 May 2014

Reviewer: Geert JMG van der Heijden

Reviewer's report:

To my opinion this manuscript has been revised appropriately.
There remain however some final minor questions and suggestions.

Major compulsory revision
The authors reply that regarding the previously suggested change of wording (concordance instead of validity and agreement) they have revised the language outlining their study objective. However, instead of “concordance” (appears 12 times), they still use the words “validity” (occurs 6 times) and “agree”, “agreed” or “agreement” (together occur 45 times). “Agreement” still appears in the title of the paper as well as in figures, tables and legends thereof. Please revise throughout.

Minor Essential Revisions
1- Abstract-Results-last line:
The authors report statistical significance of their comparison between single and multiple data source use in the design of DA. To my opinion it would be more appropriate and informative to include the proportions for single and multiple data source use, and include their difference and its confidence interval.

2- Abstract-Conclusions-1st line (page 2) & Conclusion (page12):
When the authors (still) use the wording "high validity" I expect that they will mean "high concordance". While they state to take the SR of RCTs as highest level of evidence, in the background section they state that SR of RCTs lack power and long duration of follow-up. Hence this conclusion may be misleading. The authors are advised to change wording accordingly.

3- Abstract-Conclusions-2nd line:
This conclusion is not fully justified. In the way this conclusion is worded they implicitly claim that they have made a direct comparison of DA with single RCT and with SR of RCTs. The authors are advised to delete the part of this sentence from " compared" to "single RCT".

4- Abstract-Conclusions-2nd line & Conclusion (page12):
The wording "totality of evidence" appears rather vague to me. Do the authors, given their findings of 73% for concordance, mean, that to their opinion, SR of
RCTs need to be used to inform DA? If so the authors are asked to rephrase this sentence accordingly.

5- Background-line 2 and 12 (page 4):
The authors state that SR of RCTs lack power and long duration of follow-up; DA are derived from shorter-term empirical studies. Together these statements left me with confusion, i.e. if both have a drawback on their time window for outcomes, why then maintain that SR of RCTs provide a reference for DA? The authors are suggested to add a comment on this in the limits paragraph of their discussion section.

6- Methods-Data extraction (page 6):
Here information (and a short explanation) is missing on classification and extraction on the use of “single and multiple data source” in the design of DA.

7- Discussion (page 11):
Reference to the study by Bress et al [11] is perhaps a bit confusing due to the wording “this study”.

8- Conclusion, 3rd sentence (page 12):
Incorporation of the conclusion from another previous study by the authors (50% concordance between conclusions of DA and single RCTs) appears awkward, and may give rise to spin. Please rephrase and include an appropriate reference #12.

**Level of interest:** An article of outstanding merit and interest 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.