Reviewer's report

Title: Comparison of Serious Adverse Events Posted at ClinicalTrials.gov and Published in Corresponding Journal Articles

Version: 1  Date: 27 May 2015

Reviewer: Yoon Kong Loke

Reviewer's report:

Thank you for giving me the opportunity to review this interesting work. I have a number of comments.

Major Compulsory Revisions

1) The documents on clinical trials.gov sometimes undergo repeated updates or additions of data. How then would you be able to judge when the SAE data were posted? It may be that the efficacy data were put up first soon after trial completion, and the SAE data may only have been put up later. Hence the analysis on time to availability of SAE may be unreliable.

2) It wasn't clear to me if the Groups of SAEs on clinicaltrials.gov actually matched those for the published articles. Sometime, the groups are constructed by organ system, or by threshold (e.g. >1%), or by causality (judged related). It is only possible to compare the matching numbers only if similar Groups are reported.

3) Similarly, what were the denominators used? It could be that the two datasets analysed SAE at different cut-off points e.g, at end of randomized treatment period, or within 30 days after end of trial. Again, this could have led to discrepancies in numbers of SAEs.

Minor essential revisions

1) I think this sentence may be an exaggeration "Our results highlight that ClinicalTrials.gov provides complete and clear information on serious harms,..". Actually, we do not know that it does; the only way to find out is to compare against the original company study report to see if the clinical trials.gov version is clear or complete (or neither).

2) The other big problem is that we do not know which dataset is 'true', particularly when we are trying to resolve discrepant findings between the two.

3) There needs to be some discussion on the implications for systematic reviewers and meta-analysts who are confronted by discrepant data - what should they include in their meta-analysis? I think the extent of publication bias here is really important.

4) There needs to be more discussion on concrete proposals to solve this problem. Do you think that efforts towards mandatory posting of trial summaries
is sufficient? After all, this will not solve the problem of discrepant numbers of SAEs between sources (ie. full reporting of wrong numbers in two or more datasets). Moreover, unless full and transparent format is agreed, the Summary of Results may only consist of a few SAEs.

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests