**Reviewer's report**

**Title:** Reporting quality of randomized controlled trial abstracts in the seven high-ranking anesthesiology journals

**Version:** 0  **Date:** 15 Mar 2018

**Reviewer:** William Cragg

**Reviewer's report:**

- Major comments:

  I am not too familiar with 'meta-epidemiology', but it seems to be an alternative to systematic reviews/meta-analyses for combining results from separate RCTs. I do not think you have done any meta-analyses, only descriptive analyses with some subgroups (i.e. percentages per journal and per CONSORT item), so I think the description is incorrect. If you think this definitely is a meta-epidemiology study, I would justify the description in the text and also define the term 'meta-epidemiology', with appropriate references, as I think it is quite a recent term and may not be familiar to everyone.

  Consider rewording some of the second and third paragraphs of the Background section - I can see why you might like to say the issue of poor abstract reporting is a specific problem for anaesthesia studies, but so far I'm not convinced - it seems like a general issue, affecting all areas of research. So the section on pain relief being a basic human right seems out of place to me. But perhaps it can be improved and clarified.

  More clarity required in methods: you mention inclusion criteria, but no exclusion criteria, though these are mentioned in the Results.

  Methods: did you consider that, given you were looking only through seven journals over three years, it might have been easier to just look through the journals themselves rather than use PubMed? More seriously, you report in the Results that there were some false positives in your searching, but is there a risk of false negatives? Did you look through at least some of the journal issues to check you had everything? It would be useful to have at least a comment on this issue.

  Methods, outcome: description of the primary outcome needs clarifying. I think your primary outcome measure was actually proportion of adherence to the CONSORT-A checklist within each article, presented as a median of all articles.
Methods: secondary outcomes also not described totally clearly here - you've used the word 'subcategories' here, but in Results you say 'individual items'; subcategories could mean 'Background', 'Methods' etc. Also you've said 'adherence to the checklist across the individual journals' - I think this could be clarified that you were looking only at overall adherence here, not within individual items.

You say you have marked all the abstracts' contact details as Yes only if an e-mail address was given - but CONSORT-A doesn't ask specifically for this. I don't think you can justify evaluating abstracts against something beyond what CONSORT-A asks for (and you also acknowledge that CONSORT-A says this is only for conference abstracts). Even if an author followed CONSORT-A perfectly, they could still fail this test. I think you should consider removing this criterion from your exercise, as I assume you had no conference abstracts in any case. In Results, you say that email address was only given in 16% of abstracts - this can't really be criticised using CONSORT-A as it doesn't ask for it. This also needs addressing in the Discussion (paragraph 9).

Results, first paragraph: did some of the results really have no abstracts? I find this amazing given you were looking for papers in high impact factor journals. What's the explanation?

Some other results are quite surprising and are not explained. For example, did 25 abstracts really not give Conclusions? I note that very little space in Discussion is taken up by detailed discussion of your results. After a short paragraph, you go on to discuss others' works.

Results suddenly present some statistics that were not mentioned in the Methods, such as medians. As mentioned elsewhere, I think it might be useful to present an interquartile range (probably instead of confidence intervals, which I don't think are too informative). Then there is a statistical test - Komogorov-Smirnov - it is not previously mentioned, it is not clear what this is a test of. How should we interpret the p-value given? The test is also not mentioned again in the paper. This needs some work.

Is it worth statistically testing the difference between the different journal and reflecting more on the difference/lack of difference?

- Minor comments:

Abstract - Results - second line reports an 'overall adherence of 41%' but actually this is the per-article median, and you should say so more clearly. Otherwise the reader might assume this is 41% across all articles, with denominator being number of articles x 17 (number of CONSORT items per article).
Abstract and main paper Results - might it be informative to add the interquartile range with the median?

Background and Discussion, you refer to readers not having access to full text articles, or these 'not being publicly available'. Surely the issue is that they are available, just at a cost, which people may not be able/willing to pay. I think you could clarify this.

Background, line 5 should read 'Reporting of research manuscripts…'

In most cases, 'CONSORT' should not have 'the' before it. A general rule to apply would be when it's followed by another noun, it should have 'the', but when it's on its own it should not. So 'the CONSORT extension' or 'the CONSORT statement', but 'CONSORT provided limited guidance for writing an RCT abstract.'

Background, paragraph 2, final sentence should be 'For this purpose it is important to have clearly reported RCT abstracts…'

Background, paragraph 3: use written 'seven', not number '7'

Methods, Search, second paragraph, should say 'In case of doubt we downloaded full texts in electronic format to judge whether an article was indeed an RCT.'

Methods, scoring the checklist, first line should say 'We designed a data scoring table in a Microsoft Excel spreadsheet…'. Add a full stop at the end of the sentence - currently missing.

Methods, scoring the checklist, line three says 'One author…' - who did which role here?

Methods, scoring the checklist, line four says a second author verified extractions - clarify, was this 100% of them?

Methods, scoring the checklist, line six: '…to ensure a consistent interpretation of each checklist item' - do you find the checklist ambiguous? Is this something to comment on in Discussion and Limitations?
Methods, scoring the checklist, paragraph 2, first line should say 'After the calibration exercise…'

Methods, scoring the checklist, paragraph 2, third line: use 'second' not '2nd'

Methods, scoring the checklist, paragraph 3, line six should say '…explicitly stated that the study was completed…'

Results, secondary outcome: adherence with CONSORT-A - title needs amending to make clear this is by journal.

Results, secondary outcome: adherence with CONSORT-A - the first sentence is not very useful without an actual number. Although I appreciate it's in a table, we might as well just look at the table instead of having this sentence. Might it be better to say something that adds to the table, like range or median or mean?

Discussion, line three - perhaps CONSORT-A 'recommends' rather than 'suggests' about RCT abstract reporting?

Discussion, paragraph 2, line 7 should say '2.7% indicates that the 2008-2009…'

Discussion, paragraph 3, line 2: I think it should say 'Cui et al showed that significant improvement was observed only in a few items…

Same line: you say Cui et al found some improvement in a few items - which? And did you also note that these same items had improved?

Discussion, paragraph 4, first line - it has been suggested...by whom?

Discussion, paragraph 5, first line - 'In this study we found that the median total adherence score…' - make clear this is per article

Discussion, paragraph 5 - you say six out of seven journals in this study endorse CONSORT - do you mean CONSORT or do you mean CONSORT-A? Which one does not endorse CONSORT and did you notice this one was worse? Or were they similar? This could be a useful finding.
Discussion, paragraph 6: 'funding may be associated with higher frequency of positive results' - I think I know what you're getting at, but all studies have funding, so you need to clarify this.

Discussion, paragraph 6, line 5: amend to 'skews the picture', and remove the first of the two 'available'

Discussion, paragraph 6, line 7, should say 'problems with selective reporting, there is now an imperative…'

Discussion, paragraph 7, line 2 - should say '1.6% of the analyzed RCT abstracts'

Discussion, paragraph 7, line 5 - you say 'reporting of this item did not improve', but the numbers indicate that it did, from 1.6% to 4%. You might clarify to 'did not improve substantially' or similar.

Discussion, paragraph 8, line 5 should say 'For example, the journal Anesthesia…'

Discussion, paragraph 8, line 6 should say 'the journal Anesthesia and Analgesia…'

Discussion, paragraph 9, line 1 should say 'second' not '2nd'

Discussion, paragraph 10, line 1 should be: 'limitations of this study are the limited number…'

Discussion, paragraph 11, line 4 should be 'In February 2017, the journal…'

Discussion - why so much about Penelope? It might be worth a mention, but not several sentences, I don't think.

Discussion, final paragraph, line 5, duplication in sentence, suggest removing 'Although poor reporting is not equal to poor methodology'.

Discussion, final line should say 'deprives a reader of important information…'
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