Reviewer's report

Title: Optimizing Search Strategies to Identify Randomized Controlled Trials in Medline

Version: 1 Date: 16 June 2005

Reviewer: Ellen Crumley

Reviewer's report:

General
- Highly recommend a good proof-reading of this article as there are grammatical errors and inconsistencies throughout
- Medline should be noted as MEDLINE throughout
- I have not seen the term high sensitivity search in the literature and suggest it be changed to the more standard highly sensitive in the manuscript
- The search terms are italicized in the abstract, bolded and in quotes in the background, regular font in the tables, SSw word combinations are inconsistently listed (e.g., SSw instead of SSword); please standardize all of these throughout the manuscript (see paragraph 2 in the results)
- OVID should be in caps throughout
- I would recommend you take a look at the article Kagolovsky Y, Moehr JR. Current status of the evaluation of information retrieval. J Med Syst.2003 Oct;27(5):409-24 which was recently referred to me as it discusses the limitations of using precision and sensitivity
- Also see the protocol in Cochrane: McDonald S, Crumley E, Eisinga A, Villanueva E. Search strategies to identify reports of randomized trials in MEDLINE. (Protocol) The Cochrane Database of Methodology Reviews 2004, Issue 2. and Carol Lefebvre has submitted an article for publication re: the revised Cochrane strategy.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

- I would give Appendix 2 more context as it seems to be searching for different studies; I found this a bit confusing to understand

Methods:
- Please explain why the particular search terms were chosen as there are others that may have also been used (e.g., Cochrane search strategy, Dickersin search strategy, etc.)

Results:
- The results section is a little sparse, I would prefer more results to be presented (also see suggestions in Minor Essential Revisions section); for instance, what were the sensitivities from the 61 reviews that included the search strategies? How do these sensitivities compare to the results from the 94/96 reviews for each of the 6 search categories (i.e., known vs. unknown search strategies)? I would recommend you discuss the precision results for all the search categories (I realize they are in Table 3, but would think some discussion of these would help shed more light on your results).

Discussion:
- I am not sure it can be concluded that SSversus is more effective for musculoskeletal injury reviews based upon 2 studies. Can you explain this conclusion further please.
Tables
- Are the results from 96 or 94 reviews (94 is stated in the text but 96 is in table 2)? The 2nd paragraph in the results states 94 reviews in the first sentence but a few sentences later 96 reviews are discussed.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Background:
- The acronym and full spelling for RCT is listed twice in the first paragraph
- The first instance of Cochrane highly sensitive search strategy (2nd paragraph) needs to have the acronym in brackets after it as its the first time mentioned in the text
- In the 3rd paragraph cite do you need to cite reference #10 for Lefebvre and Clarke?

Discussion:
- The call for reporting search strategies has occurred in Cochrane and the full strategies for all resources searched are now included in the additional tables; you may want to mention this
- What about considering the statement search strategies are available from the author as a criteria in case the journal publishing the systematic review doesn't have room to publish the full search strategy?
- The last sentence in the discussion sounds like there is a call for a single subject search. I'd recommend pluralizing this.

Authors Contributions:
- should AI be IA?

References:
- #3: MEDLINE and EMBASE need to be in caps
- #10: has edited by twice
- #19 and #22: MEDLINE needs to be in caps
- #23 and #25: [see comment] should be removed
- #24: the journal name should be shortened

Tables:
- the term cross-over studies/ is presented as a subject heading with the slash but this is inconsistent with the way its presented in the text (i.e., CROSS-OVER STUDIES); I'd recommend making this consistent

Appendices:
- The references in Appendix 3 all have a colon at the end

Discretionary Revisions (which the author can choose to ignore)

Tables:
- including another table showing the results of the 6 search strategies broken down by Cochrane review group and sensitivity and precision for the reviews by group would be useful

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.