Author's response to reviews

Title: An optimal search filter for retrieving systematic reviews and meta-analyses that evaluate the effectiveness of public health interventions

Authors:

Edwin Lee (elee2011@meds.uwo.ca)
Maureen Dobbins (dobbinsm@mcmaster.ca)
Kara DeCorby (kdecorby@health-evidence.ca)
Lyndsey McRae (lmcrae@health-evidence.ca)
Daiva Tirilis (dtirilis@health-evidence.ca)
Heather Husson (hhusson@health-evidence.ca)

Version: 5 Date: 6 March 2012

Author's response to reviews: see over
February 23, 2012

Adrian Aldcroft
Executive Editor, BioMed Central

Dear Mr. Aldcroft:

I am pleased to submit the enclosed revised manuscript entitled: An optimal search filter for retrieving systematic reviews and meta-analyses that evaluate the effectiveness of public health interventions, for publication in *BMC Medical Research Methodology*. This paper reports on the performance of the health-evidence.ca Systematic Review search filter for retrieving systematic reviews and meta-analyses that evaluate the effectiveness of public health interventions. We believe this manuscript will contribute to search filter literature, specifically methodological filters, since the health-evidence.ca Systematic Review filter provides a high degree of sensitivity as well as precision, saving considerable time and resources for those conducting literature searches in the field of public health.

We appreciate the reviewers’ feedback and have made revisions to the manuscript to reflect them below.

**REVIEWER 1**

**Comment 1:**

There is still a lot of repetition of the objectives of the paper - once all the edits have been accepted, these will be easy to see and the repetition can be removed.

We have addressed this comment…

**Comment 2:**

Introduction – what is a ‘moderate level’ of improvement? It looks very much like any improvement in NNR was desired – this is fine if that was the case– but the authors can probably just say this - it seems to be the predominant message but could be said more simply and directly.

We did not find the words ‘moderate level’ of improvement in the introduction (Background) section; however, in the discussion where NNR is presented, we have noted that “any reduction in NNR was desirable”, in order to clarify.

**Comment 3:**

The authors’ objective of a ‘best balance’ is the most difficult concept to explain to the reader as it is very context-specific - ie the filter that suits the needs of the database producers. If the authors are able to express the usefulness of the filter/or describe a wider audience who might find this very specific filter useful, more succinctly, it will help searchers to understand whether this filter is the one for their needs as well as the authors’. In what circumstances would I want to use this filter if I am not preparing a major database resource?
We have addressed this comment by indicating first that “The balance struck by the SR search filter means that this filter would be useful to those wishing to retrieve systematic reviews related to health care, with wider application than that of our own database of reviews on the effectiveness of interventions.”

Comment 4:

Table 3 – Montori has a precision of 0.0 - perhaps need to explain this?

The reason that the Montori search filter has a precision score is because of the sheer size of the denominator in doing the calculations. Precision is calculated as relevant articles/total number of articles retrieved. The actual value is $4.5 \times 10^{-4}$ or closer to 0.04. With the calculator used, it computed a number that was 0.0.

Comment 5:

Discussion: "Fortunately, research into search filters has also found that more terms are not necessarily better [46] and fewer terms have been shown to perform at least as well as more lengthy searches [44]." - the authors should be careful to contextualise these two references.

We have addressed this comment on page 25 (last paragraph) by restating how these references relate to our work on the SR search filter.

Comment 6:

Conclusions: "Methodological search filters reduce the number of articles needed to be screened and read while maintaining a high level of sensitivity for finding relevant articles" - this should be qualified with ‘may’ or ‘might’

The suggested wording change has been made on page 27 in the Conclusions.

Comment 7:

There are some typos and some sentences which will, inevitably, need revision once all the track changes have been accepted.

We have endeavored to correct all typographical and grammatical errors in this final version of our paper.

REVIEWER 3

Comment 1:

P1: It would be clearer if the authors retitled the paper “An optimal search filter for retrieving systematic reviews and meta-analyses for use in health-evidence.ca”. The proposed evidence.ca SR filter does not by itself identify only public health systematic reviews. This, presumably, is accomplished by screening for relevance or by combining with topic searches.
We have addressed this suggestion by re-titling the paper *An optimal search filter for retrieving systematic reviews and meta-analyses*. We have only left out the ‘health-evidence.ca’ part of the reviewer’s suggestion since we felt that the search retrieves reviews in health care, as opposed to those in public health, since it is a search that finds reviews using the methodology rather than those related to a specific field. This comment is very much appreciated and we agree that the filter is not specific to public health reviews.

**Comment 2:**

P14, para 3, pt 1: The two subsets of the gold standard used were selected as they were the ones used originally in developing and validating the evidence.ca SR. A comment as to why a third independent set was not used may be useful.

A third independent set may be useful; however, unfortunately, we do not know of the existence of one. The specific task of the health-evidence.ca search filter is to retrieve systematic reviews and meta-analyses evaluating the effectiveness of public health interventions. As far as I am aware, health-evidence.ca is the only database that archives this specific set of articles. If there is another such database, it would be useful to test the search filter against this independent set. We understand the concern of questioning the performance of a search filter in the database in which it was derived, and we attempted to make distinct the development and validation sets. The first subset was to develop the search filter and the second subset was to ensure that search filter would perform well and consistently from year to year for the task in which we created it.

**Comment 3:**

P27, para 2, line 3 ...distinguishes the best filter. Please add to this sentence for our purposes.

The suggested wording change has been made; however that change appears on page 23, paragraph 2 of the Word version we are uploading.

**Comment 4:**

P12 para 2, line 5 CINAHL not CIHAHL

We have corrected this instance and also reviewed to ensure there are no other instances of CIHAHL or other misspellings of the database name in the paper.

I hope you will find these revisions acceptable. We look forward to hearing from you. Please do not hesitate to contact me at dobbinsm@mcmaster.ca or (905) 525-9140 extension 22481, should you have any questions or concerns.

Sincerely,

Maureen Dobbins, RN, PhD