Reviewer's report

Title: Systematic reviews, systematic error and the acquisition of clinical knowledge

Version: 4 Date: 12 April 2010

Reviewer: Jessie McGowan

Reviewer's report:

This is an interesting paper on knowledge sources allegedly threatened by EBM and using an epistemologic framework. I think the overall idea of the paper is great and debate on this topic is always welcome. However, I feel that the supporting literature used in the article is too narrow and that a broader inclusion of literature is necessary.

The discussion of the acquisition of knowledge is very interesting. It would also be interesting to broaden the use of EBM to its use in other domains (such as nursing, dentistry, etc.) as the issues of use and implementation tend to be similar.

The writing style and flow of the paper is very nice. The last paragraph provides a nice summary.

• Major Compulsory Revisions

The author must respond to these before a decision on publication can be reached. For example, additional necessary experiments or controls, statistical mistakes, errors in interpretation.

1. The background section discusses the use of the evidence-based philosophy and this is the basis for the article. I would expect to find some of the early citations about EBM from Sackett, Gyatt, Richardson, et al. I would also expect to find references to support the use of systematic reviews as well. I think its important to have this well-referenced to set the stage for the rest of the article.

2. The discussion “The implication is that EBM asserts on this basis the ability to exercise judgement (e.g. through the appraisal of clinical studies during systematic reviews) and thus devalues and replaces knowledge sources of other types”…- this was recognized early on and again, Sackett should be referenced [Evidence based medicine: what it is and what it isn't.Sackett DL, Rosenberg WM, Gray JA, Haynes RB, Richardson WS. BMJ. 1996 Jan 13;312(7023):71-2.]

3. The references used in the background are a small subset of literature available on this topic. I would recommend including the earlier citations (as mentioned above) as well as adding in more recent citations. The literature for this is basically from between 1993 and 2010.

4. To have a discussion on epistemologic concepts, you really need to consider: Djulbegovic B, Guyatt GH, Ashcroft RE. Epistemologic inquiries in
5. In the discussion of systematic reviews, it would be useful to mention meta-analyses and the differences between the two. As well, systematic reviews are not necessarily based on trials – they can even have no included studies. Figure 2 shows MA, but the reader doesn’t know how the author got there or why this is different than another systematic review.

Minor Essential Revisions

The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

6. This sentence is unclear to me “thesis in clinical case studies and qualitative research is represented by the knowledge of the clinician or researcher before the study and antithesis based on the observed novelty.”

7. I would like to see a bit more discussion on Figures 1 and 2.

• Discretionary Revisions

These are recommendations for improvement which the author can choose to ignore. For example clarifications, data that would be useful but not essential.

Level of interest: An article whose findings are important to those with closely related research interests

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'