Reviewer's report

**Title:** Studying the Potential Impact of Automated Document Classification on the Systematic Review Update Scheduling Process

**Version:** 1  **Date:** 21 September 2011

**Reviewer:** Andrea Tricco

**Reviewer's report:**

Major Compulsory Revisions
1. Title: I wonder if the title should be revised to “Studying the impact of automated document classification on when to update a systematic review” – this might help explain what the article is focusing on

2. Abstract - Background: The last line of the background states that “relatively little work has been performed studying when and how to update .” I don’t agree. I think that there are quite a few studies in this area. Instead, may wish to rephrase to something along the lines of “Although work has been performed in this area, further research is warranted because when to update is unclear”. Since this article does not discuss how to update I would not put this in the abstract.

3. Abstract – Methods: The methods seemed scant. May wish to discuss that the investigators annotated articles included in 9 reviews from a database with over 70,000 articles. May wish to discuss the annotation scheme and how the system was trained to annotate the articles.

4. Abstract – Conclusions – Might want to point out that this is a method that can be used to supplement when to update systematic reviews – the process is not perfect (yet) so you are not suggesting to replace other methods. May also wish to state that this is an “initial test” (as you do in the conclusions from the main text).

5. Methods, fifth paragraph, second sentence: It was unclear as to why February 12, 2010 was chosen. Shouldn’t the investigators have used all updated reviews in the database to test the automated system? Wouldn’t this be more reliable? If this is intended as a pilot test, perhaps this needs to be specified up front in the abstract and maybe even in the title.

6. Methods, eight paragraph: the process of annotating the articles was a bit vague. For example, it was unclear who annotated the publications. All of the authors? Two of the authors? Was this done independently? Did the authors classify all of the 3654 publications or only the 80? How were the 80 originally identified? Further detail here is warranted.

7. Discussion: Might want to point out that this is a method that can be used to supplement when to update systematic reviews – the process is not perfect (yet) so you are not suggesting to replace other methods.
8. Discussion: May wish to discuss the utility of the machine. For example, who can use this program and what types of skills are necessary to use it? Do you think it will be used for all systematic reviewers performing an update or is this unrealistic? Is there a chance that investigators won’t trust the results of the machine?

- Minor Essential Revisions
General:
9. Please use the SR acronym after you spell it out the first time – this was inconsistent throughout the paper
10. All acronyms need to be spelled out in the tables
Specific:
11. Abstract – Background: Evidence-based Medicine should be “evidence-based medicine”
12. Background, first paragraph, first sentence: Evidence-based Medicine should be “evidence-based medicine”
13. Background, second paragraph, sixth sentence: suggest rewording to “Although research guidance on when to update SRs exists [references], this area is still not well understood”
14. Background, fifth paragraph, sentence beginning “Furthermore, the reviewers can get a better idea of the”: I don’t understand how New Update Alerts can be used to appraise the quality of new information. Perhaps you can clarify?
15. Methods, seventh paragraph, last sentence: “(such as other Ms)” was unclear. Perhaps you can elaborate with an example of what is meant by this?
16. Table 4 – unclear why sensitivity and specificity were not calculated
17. Table 4 – please specify what “F1” stands for
18. Discussion, last paragraph, last sentence: may wish to explain what “topic drift” means, perhaps by giving an example

- Discretionary Revisions
19. Background, first paragraph, second sentence: should revise to “While this is certainly a desirable goal, given a typical physician’s heavy workload, it can be difficult to realize.” And delete the rest of the sentence
20. Background, first paragraph, fourth sentence: suggest using the Cochrane definition of a systematic review from the Cochrane Handbook
21. Background, second paragraph, third sentence: suggest deleting “moving target”, as “continually changing” is sufficient
22. Background, third paragraph, first sentence: add an ‘s’ after SR
23. Background, third paragraph, sentence beginning with “We seek to study”: add an ‘s’ after the word update
24. Background, third paragraph, sentence beginning with “Here, we define”: 
suggest making this a new paragraph
25. Background, third paragraph, sentence beginning with “When an article likely to be included”: spell out RSS
26. Methods, first paragraph, first sentence: spell out SYRIAC
27. Methods, third paragraph, first sentence: suggest deleting “For this study” (it’s already implied)
28. Methods, eighth paragraph, first sentence: put the word “the” in front of “Pre-Update Period”
29. Discussion, fourth paragraph, sentence beginning “Note that this is true for this example even”: put “and colleagues” after “Shojania”

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

- Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this paper, either now or in the future? NO
- Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this paper, either now or in the future? NO
- Do you hold or are you currently applying for any patents relating to the content of the manuscript? Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript? NO
- Do you have any other financial competing interests? NO
- Do you have any non-financial competing interests in relation to this paper? YES

I am a member of the Cochrane Collaboration and have participated in systematic reviews conducted by the University of Ottawa Evidence-based Practice Centre, funded by the Agency for Healthcare Research and Quality. I have also participated in research related to updating systematic reviews through the University of Ottawa Evidence-based Practice Centre.