Reviewer's report

Title: Research gaps identified during systematic reviews of clinical trials: Glass-ionomer cements

Version: 1 Date: 26 April 2012

Reviewer: Cor van Loveren

Reviewer's report:

The manuscript identifies research gaps in previous published systematic reviews. It amazes me greatly that these gaps were not observed or mentioned in the original reviews. Were all the original manuscripts reevaluated? I think it is worthwhile to comment the previous work in this way, although I think it is better to do this directly with the first systematic reviews..

In the discussion the author states "...one of the challenges reported by the team that developed the framework was that they were not involved with the conduct of the evidence review and the writing of its results". Reviewers of articles like the present one face the same challenges and actually it is impossible to check the validity of the results. I think in order to do this kind of analysis validly, at least two investigators should be involved and some indication of inter examiner reliability should be given like in systematic reviews and meta analyses.

Compulsory:
Another point I want to raise is that the author promises to use the PICOS elements. I was specifically interested in the S-element. Unfortunately this not reported in Table 2. Could this be added? The setting may be important to judge the external validity of the studies. And that is important in evidence based dentistry.

Compulsory:
Another question that remains is to what extent this analysis changes the conclusions of the original systemic reviews that were analyzed in this study? An overview of this is appreciated. If not it should be clarified why the shortcomings have no effect on the conclusions.

In the Materials and Method section under imprecision of results:
In my perception precision relates to narrow confidence intervals and not to wide intervals. Moreover superiority or inferiority also depends on the effect that is judged to be clinically desirable. Please more information on this.

In the section results the report on table 4.
In my version nit is not clear that criteria A is lighter shaded.

In the section: identified research gaps in the internal validity.....:
In the sentence “Some trials from three systematic reviews should be referenced with 3 citations and not with 8.

**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, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests**:

'I declare that I have no competing interests'