Reviewer’s report

Title: Comparison of intervention effects in split-mouth and parallel-arm randomized controlled trials: a meta-epidemiological study

Version: 1 Date: 17 March 2014

Reviewer: lesley wood

Reviewer’s report:

This paper describes a meta-epidemiological study that compares the intervention effects in split-mouth RCTs with those in parallel arm RCTs. It is a novel topic which the authors acknowledge should be replicated and updated as more studies become available. The study has a good rationale and the purpose of the study is clearly stated. Overall the paper is well written although I feel that the conclusion contradicts the final part of the discussion to some extent. The forest plots and RORs for both the binary and continuous outcomes suggest no difference in effect estimate between split-mouth designs and parallel arm RCTs, and yet the authors conclude that sub-group analysis is required when both designs are included in a systematic review. If the authors are suggesting that such sub-group analyses should be undertaken until there is more evidence that the two designs do not systematically differ, it might be helpful to make this clearer.

Minor Essential Revisions

The Flow chart has a typo (3rd box on the right should be 128 references, not 127 references)

It would be helpful for Figs 1-3 to have titles.

P9: maybe consider changing the four occasions of "...with a difference beyond chance" to "strong evidence of a difference between the two estimates" or similar.(as appropriate).

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:

I declare that I have no competing interests