

## **Reviewer's report**

**Title:**Analysis and reporting of stepped-wedge randomised-controlled trials: synthesis and critical appraisal of published studies, 2010-2014

**Version:1****Date:**30 March 2015

**Reviewer:**Marion Campbell

### **Reviewer's report:**

Thank you for the opportunity to review this interesting manuscript. The interest in, and use of, the stepped wedge design is rapidly increasing and the publication of a series of papers around the design, analysis and reporting of the field is to be welcomed - I understand from my reading of this manuscript that it is one of a series of linked papers discussing key issues in the field.

This particular paper describes the reporting of, and approaches to analysis adopted in, a series of published stepped wedge trials (published between 2010 and 2014). It essentially provides a narrative overview of the included studies, a more in-depth description of three case studies and a series of initial recommendations for improvements in reporting and analysis practices. I found the manuscript interesting and informative; however, I have a number of comments that I believe would enhance the paper

Major compulsory revisions:

This manuscript is part of a proposed series of papers on the topic of stepped wedge design. However, in my view, each paper should have sufficient information contained within them such that each paper can stand alone. As such, I believe that the methods section of this paper should be significantly expanded such that the reader has sufficient information to fully follow the methodology adopted for this manuscript (rather than just referring to another paper for extra details). Specifically, I would ask that:

- Further details be included to describe the search strategy adopted – what databases were searched; what terms were used; what restrictions (if any) were used on the search strategy; what was the overall yield of papers etc (whilst this does not have to be detailed comprehensively, a summary of the methodology undertaken should be included)

- More detail should be provided on the process of selecting the three case studies. We are only told that they were selected to “reflect a range of characteristics”. Details should be included to inform: what process was adopted to select the case studies; what characteristics was each study selected to display; why were these specific cases chosen as the “best” examples of the phenomena being written about etc

In the reporting section, it is commented that “seven of the studies adapted the

CONSORT diagram” – please add details as to how the diagrams were adapted  
Different descriptors are used throughout the paper eg groups, steps, time periods to describe essentially the same things. Please ensure consistency throughout the paper. (The use of the word “groups” is particularly problematic as it is often used as an alternative to cluster in the cluster RCT literature - as in the group-randomised trials)

In the discussion there is no section discussing the potential limitations (or indeed strengths) of the paper – this should be added.

Minor compulsory revisions:

Table 1 is not referenced in the paper – I assume it should come at the end of the first sentence in the results.

In the introduction, reference is made to another paper in the series – current reference no. 3. The authors indicate that reporting of stepped wedges is covered in that paper too. I think clarification is required in the manuscript as to what aspects of reporting are covered in each paper – ie ensuring there is not overlap.

Discretionary revisions:

Several references are made to the CONSORT reporting standards for the standard cRCT – it would be helpful for readers not aware of this standard to have it referenced directly.

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

**Quality of written English:**Acceptable

**Statistical review:**Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests