Reviewer's report

Title: Designing a theory-informed, contextually appropriate intervention strategy to Improve Delivery of Paediatric Services in Kenyan Hospitals.

Version: 1 Date: 17 December 2012

Reviewer: Richard Byng

Reviewer's report:

Review for Implementation Science

This paper addresses an extremely important topic, namely the possibility that mid-level management interventions can contribute substantially to improving child and maternal mortality, in particular within the African sub-continent.

By its nature, it is ambitious, and necessarily so, but for this reason there are a number of weaknesses which, if they are addressed, could make this an important paper. While the literature reviewed is wide in scope, I was left wondering as to whether it might be important to further involve experts in behavioural change and organisational change. Someone with an African perspective might also provide further insights.

Major compulsory revisions

It is not entirely clear as to whether the paper is a methodological paper or a review article. This ambiguity leads to my first major point. The article needs to either be framed as a review or as the development of an intervention model. It is currently a review of literature with a number of recommendations about the content of the intervention. Currently, the results of the review outweigh the detail of the intervention. So either it should be further clarified that the article is a review of the literature leading to some overall conclusions about the kind of intervention that is required, the results of the article being the literature reviewed. Alternatively, and this would be my preference, the article could be restructured so that the results of the review derive the theoretical basis for the intervention. I think it would be much more powerful to take up most of the article describing the intervention with the justification of the components based on the literature reviewed. As it is, I waited in anticipation for a long description of the intervention as a theory and was disappointed by the small amount of text along with the tables. Alternatively, there could be a brief introduction, a methods section describing the rationale for components of the literature reviewed and then the method for deciding on which components to include within the intervention. The results could then be in two parts, firstly the review of the literature and secondly a description of the intervention.

My second major general observation is that there needs to be a significantly stronger link and justification for the inferences made and the method by which they were made (even if this is, as appears to be the case, an assessment by
the author that the particular organisational or behaviour change issue is particularly pertinent to the context and public health issue in question). On a couple of occasions, the author used the words “it seemed” or “felt” to justify a particular proposal, whereas a more theoretical justification is required.

The following detailed issues should also be addressed (minor compulsory)

1. Conflicts of Interest - I wonder whether the possibility that the author will be developing the intervention and attempting to evaluate it with a complex evaluation design might count as a conflict of interest.

2. The abstract will need to be rewritten in keeping with whichever structure is used for the article as a whole.

3. 1.1 first paragraph – The final sentence is weak, especially with the use of the word “seem” and should probably indicate that some more details about poor performance before leading to the next paragraph which starts to examine the reasons for poor performance.

4. 1.2 – The detailed description of context is clearly important but I wonder whether it could be more closely linked to the literature reviewed, i.e. some inferences could be made about the type of intervention which might be required on the basis of an analysis of the context alongside an analysis of behaviour change and organisational change literature.

5. Section 1.3 focuses on guideline dissemination as a part of the more general issues around implementation. While this appears to have been one of the major methods used in Kenya for implementation of best practice, this widespread attempt at guideline distribution should be set in the wider context of other potential implementation strategies.

6. Section 2 describes a range of intervention strategies usefully summarised in Table 1 but as above it might have been more useful to make very clear links between why these particular strategies may or may not be useful within the Kenyan context, for example, paragraph 3, section 2, third sentence, reasonably generic techniques are promoted to help achieve overarching goals should be specified further.

7. Overall, this section on strategies of change needs more signposting and justification as to why the focus has been on those selected, otherwise it is at risk of neither doing justice to the wide area of literature reviewed nor demonstrating the specificity to the African context.

8. Section 2.1 Models of Change relate to the strategies detailed above whereas by writing it as a separate section there is an inference that they are separate issues. I think the fundamental sociological, psychological and organisational issues overlap. At the end of this section, the quotes on systems thinking are absolutely key and would do well to be followed by some inferences about how to deal with this within the African context.
9. Section 2.3 Theory Guided Intervention – This section provides some useful detailed review of research regarding behaviour change and starts to relate this to some of the key issues of change required within the African context but this could be expanded upon. Perhaps more importantly, there needs to be a piece of writing which brings together the behaviour change literature and the organisational systems thinking literature which has much more in the way of positive and negative feedback loops and interactions compared to the more linear behaviour change theories.

10. The multi-step behaviour change diagram is important but possibly looks too uniform and dense making it hard to navigate. There does not appear to be a behaviour change for senior managers.

11. Intervention Design and Evaluation – The issue of evaluation is not fully enough dealt with and should probably be considered within the discussion. As discussed above, the results, I believe, should include far more detail about what would be in the intervention and why rather than expecting the reader to do all the work by reading Tables 2 and 3 and examining figures.

12. Regarding cluster design, one very important issue that needs to be addressed is the ‘red-line’ between the part of the intervention that is clustered and randomised and those elements which might need to be fostered across all sites in order to provide a receptive context. The latter might be those components for example that are being implemented across the area where the trial exists, and perhaps some senior leadership work which cannot be clustered.

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

**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 have no competing interests