Reviewer's report

Title: Thirty years after Alma-Ata: A systematic review of the impact of community health workers delivering interventions against malaria, pneumonia and diarrhoea on child mortality and morbidity in Sub-Saharan Africa.

Version: 1 Date: 11 February 2011

Reviewer: George Pariyo

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Reviewer report by Dr George Pariyo

Manuscript Title: 'Thirty years after Alma-Ata: A systematic review of the impact of community health workers delivering interventions against malaria, pneumonia and diarrhoea on child mortality and morbidity in Sub-Saharan Africa.'

Authors: Jason B Christopher, Alex Le May, Simon Lewin and David A Ross

Journal: Human Resources for Health

Category: Research

General Comments

1. Is the question posed by the authors new and well defined? - I agree with the authors that good quality evidence on the effectiveness of CHWs on child mortality is rather scarce in Sub-Saharan Africa. The review question is clear and well formulated. The decision by the authors to include evidence from non-randomised studies is correct and they provide adequate justification and references for doing so.

2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work? - The methods are appropriate and well described with sufficient detail.

3. Are the data sound and well controlled? - I agree with the authors' decision not to do a meta-analysis.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition? - The data are generally reported correctly and supplementary files provided.

5. Are the discussion and conclusions well balanced and adequately supported by the data? - The discussion is generally well balanced and based on the data presented. The conclusion is generally appropriate.

6. Do the title and abstract accurately convey what has been found? - The title
conveys the contents found, abstract not seen.

7. Is the writing acceptable? - The writing is acceptable.

Major Compulsory Revisions
There is no major compulsory revision.

Minor Essential Revisions
1. In conclusion section, the last statement "Large RCTs are now urgently needed to provide policy makers, with more evidence on the effectiveness of CHW programmes on child mortality" may be controversial and come across as 'researchers calling for more research'. It may not be welcome by policy makers who are looking for solutions today. RCTs, especially large ones involving CHWs, are likely to be complex and expensive to set up, take a long time to produce results, and findings are not necessarily replicable as RCTs often involve levels of resources such as funding and technical expertise unlikely to be available in real life settings. I think the case for more evidence can be made without appearing to suggest that more evidence necessarily means doing more large RCTs.

Discretionary Revisions
2. In the methods section, the authors might want to consider providing a little more justification for only including CHW programmes with curative interventions as many CHW programmes place a lot of emphasis on preventive activities. What is provided is understandable to people familiar with design of systematic reviews but a non-specialist audience may be left wondering why CHW programmes with only preventive interventions were left out.

3. For table 1, I did not find the 87% (27, 178) reported for the Navrongo study of Pence et al 2005 in the original source, I may have missed it. Please clarify source.

4. In the section on "Impacts";
"A national programme of CHWs and traditional birth attendants (TBAs) delivering basic treatments, ITNs and health education in the Gambia achieved a 63% reduction in mortality among 1-4 year olds [27]. When the same CHW programme delivered anti-malarial chemoprophylaxis (instead of ITNs), 1-4 year old mortality was reduced by 36% and the prevalence of children with fever and parasitaemia was reduced by 84% [26]. The impacts reported in the other five studies were less certain because of the biases described above. With the exception of the Navrongo study [28], these data suggest that such programmes reduced 1-4 year old mortality, and that the effect was larger when these programmes provided prophylaxis against malaria". I suggest to review the language used and the data reported for consistency and clarity.
**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