Reviewer's report

Title: Are hygiene interventions likely to improve outcomes for Australian Aboriginal children living in remote communities: systematic review of the literature?

Version: 1 Date: 12 December 2007

Reviewer: Lorna L Fewtrell

Reviewer's report:

Major compulsory revisions

The thing that distinguishes this review from a number of others is, principally, the inclusion of non-diarrhoeal health outcomes, but then these are barely considered in terms of the discussion and conclusions - so it is simply an exercise in describing the reports. This needs to be addressed.

I am surprised by the lack of meta-analysis for some of the categories - e.g. handwashing with soap. The reasons given include the heterogeneity of the interventions (true as a whole, not not for some of the individual categories) and the generally poor quality of the studies. You are, however, prepared to conclude that the studies describe substantial benefits associated with interventions targeting handwashing and soap - which doesn't seem appropriate in light of your reasons for not conducting meta-analysis. I am also disturbed by your conclusion in the abstract that multifaceted interventions are likely to provide the greatest opportunity to improve child health outcomes ..., you haven't presented evidence for this from your review of the literature.

I would like to see more information (and evidence) for the conditions currently experienced by the Australian Aboriginal children.

The purpose of the review was to inform the development of hygiene improvement programs aiming to reduce the incidence of skin, diarrhoeal and respiratory disease ...and a number of outcome measures were assessed there needs to be something in the discussion that a number of these weren't covered and why they might (or might not ) be beneficial to examine. The review is of hygiene interventions, some unusual (in terms of what is normally considered to be hygiene) interventions have been included (e.g. building of latrines, which is usually considered to be a sanitation intervention) - this is fine, but I feel warrants at least some discussion.

You note that your review found similar results to an earlier one on trachoma and face washing - is that because the studies examined were the same - this needs some explanation and discussion.

What evidence do you have that half-measures have been adopted in Australia (p 13)- given that earlier on you state that the current conditions are unsanitary?
This could be cleared up by more details on the measures that have been implemented and a detailed description of current conditions. On page 15 you note that most remote Indigenous communities have relatively functional water and sanitation systems - so just why are conditions unsanitary?

When discussing the study by Luby [22] p 15 - it is not clear (at least to me) - why it is unlikely that the same good effect could be achieved in the same timeframe -- simply the cost?

You state that effectiveness is an important criterion with which to choose hygiene interventions - but it shouldn't be the only measure. As this is currently written this seems to suggest that it is OK to pick ineffective ones - which is not (I think) what you mean! What are current hygiene practices in terms of the Aboriginal context?

Minor/discretionary revisions

I would amend the title slightly: Are hygiene and public health interventions likely to improve ...? A systematic review of the literature.

I think many of the Tables would be improved if presented as figures - showing (at least some) of the data as RR value and 95% CI - the visual approach would be more informative.

References: 22 - what is the comment?

23 and 37 - need formatting correctly and duplicate material removing

Tables:

I would use the same order for the interventions for Table 2 and 3 - and probably combine the two.

Table 4 - Antibiotic should be in full.

Table 5 The reference for Tonon should be [27] and not [7]

Table 8 The outcome for study 2 needs realigning with the study reference

Table 9 would be better shown as a figure - just using the random effect data

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

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