Reviewer’s report

Title: Acceptability, sustainability, reach, dose and fidelity of implementation of an educational intervention to improve hand washing in primary schools: process evaluation within a randomised controlled trial

Version: 1 Date: 15 March 2013

Reviewer: Matthew Freeman

Reviewer’s report:

It is critically important to consider intervention fidelity when conducting a randomized trial in a real-world setting, as the quality of delivery for the intervention plays an obvious role in the study results. I do feel that this paper might be more useful for reviewers once the trial data are published, though I understand that by publishing the study of fidelity first, it may help discuss the study findings.

Major compulsory revisions:

My main concern is for the generalizability of these findings beyond the specific intervention. It is true that process evaluations are important (as stated in the first sentence of the abstract), but what is the important take home message for the greater public health community?

Along the same lines, I think that it would be useful for the authors to couch the discussion of the different components of the intervention in the educational literature. The majority of the readers of this journal will have a background in public health, though they are likely to be involved in developing of school-based programs. In order to make this paper more interesting to the general audience (rather than just a report on this specific intervention), it would be useful for the authors to discuss the pedagogy of each promotional component. Are the findings consistent with current thinking of the educational sector?

Additional clarification of the methods for Table 3 need to be included, specifically, appropriate footnoting of the analysis conducted and whether these were fully adjusted models. Were these three separate models (intervention and control and overall), or one model with a sub-population statement? I expect that a sub-population analysis that utilized available covariance would be most appropriate.

Minor essential revisions:

- Periods usually go after the citations.

Discretionary:

Abstract:

Add that 37.8% of control schools “following intervention.” Otherwise, it is
confusing to the reader.

Background

- Rabie and Curtis published a nice review of the impact of hand hygiene on ARI (see citation 7).
- A number of more recent rigorous studies have assessed the impact of school-based hygiene promotion on absence and diarrhea (Citations 8 and 9) that could be referenced, including MC Freeman in Kenya, TMIH (2012); A Bowen in China, AJTMH (2007). A review of the literature was conducted by Birdthistle in 2010 and can be found here: http://www.3ieimpact.org/en/evidence/systematic-reviews/details/70/. A systematic review of waterless hand sanitizers (mostly in high income countries) was conducted by Meadows and Saux (2004)

Methods:
Discuss the data collected in ALL schools first to frame the discussion about data.
Mention the month in ln4 (before 2010).
Consider combining some of the methods sections that have only 1-2 sentences

Results:
p9: "non-delivery were unknown"...by whom?
p9: quote is really not very helpful as it is difficult to understand.
p10: same, not very useful
p11 quote #2: clarify "pack"
Overall, I did not find the use of quotes that useful for understanding the findings.

Level of interest: An article whose findings are important to those with closely related research interests

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