Author's response to reviews

**Title:** Systematic review of the effectiveness of antimicrobial rinse-free hand sanitizers for prevention of illness-related absenteeism in elementary school children

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**Author's response to reviews:** see over
To Whom It May Concern:

We would like you to consider the revisions to the following manuscript
474483622218396 entitled “Systematic review of the effectiveness of antimicrobial rinse-free hand sanitizers for prevention of illness-related absenteeism in elementary school children” for publication in BMC Public Health.

This letter serves to inform you of the changes made to the originally submitted manuscript, MS 4744836222183296, and our reasons for submitting this manuscript to the BMC Public Health.

Reviewers’ comments and changes made to the original submission included:

Reviewer: Helen Worthington

1. Use of rates as measure of association

   Data was extracted as found in the eligible manuscripts, thus as two studies reported person-time rate ratios as their measure of association this was extracted and reported in this manuscript. The authors attempted to clarify this point in the ‘Methods’ section under the sub-heading ‘Data Analysis’, and in the ‘Results’ section, sub-heading ‘Primary Outcome’.

2. Methods of extracting data from cross-over studies

   The article cited by this reviewer, Elbourne DR et al. was taken into consideration and data was extracted for both arms of the included cross-over trial. The manuscript was changed to include the two arms by amending Table 4 to include both arms of the cross-over study, and the ‘Methods’ section was changed to indicate this point.

3. Clustering

   In response, no trials included in this review took clustering into consideration when completing the analysis. I’ve amended the manuscript to include this point in both Table 2, and in the ‘Results’ section, under the sub-heading ‘Methodological Quality’.
4. Exclusion of non-English trials

As no non-English trials were found during the search whose titles and abstracts lead the authors to believe that these citations should be included, this was not deemed to be a problem. A note was made in the ‘Results’ section, under the sub-heading ‘Description of Studies’.

5. Hand searching

Hand searching was completed and noted in the search strategy, however, this was changed to emphasize this point. (Conference proceedings for the American Journal of Infection Control, and this key journal were hand searched).

6. Kappa statistic

When the sample size was deemed large enough (no zero cells) the kappa statistic was calculated and presented along with percent agreement. The kappa statistic was calculated when determining study eligibility (see ‘Results’, ‘Description of Studies’). Additionally, percent agreement was given for each quality item, as suggested. This can be found in the ‘Results’ section, under the sub-heading ‘Methodological Quality’. Kappa statistics were not calculated for quality items as the sample size was insufficient (this comment was also added to the manuscript).

Reviewer: Manfred Rotter

1. 211 citations

The phrase ‘201 citations’ was changed to 211 citations in Figure 1.

2. Additional files

As suggested, ‘Additional files’ was changed to ‘Appendix’ terminology.

3. Table headings

As suggested, attempts were made to clarify the headings for Tables 3 and 4, i.e. person-time association measures, and cumulative incidence association measures.

Additional changes:

1. Since the time between receiving the reviewers’ comments and making the appropriate changes, two articles were identified as eligible for inclusion in this review. These two articles were included in all phases of the review and all sections were updated with this information.

2. The ‘Search Strategy’ sub-heading in the ‘Methods’ section was changed to include update electronic and hand searching.
3. An additional table was added, Table 5, which included the results of these two recently found citations.

4. Changes were made to the ‘Background’ section as to update this section to include citations not previously found in the original manuscript.

5. Changes were made to the ‘Discussion’ section to update references, and improve the flow of the discussion.

6. Thus, as new citations were included, the bibliography was changed to reflect the new order of references cited during the body of the manuscript.

Based on our examination of the evidence, and the importance of proper hand hygiene in the school environment, we propose that a well-designed trial needs to be conducted in this environment- emphasizing the outmost attention to design and implementation.

As absenteeism due to communicable illness is a major problem encountered in the school environment with both public health and economic implications, the authors deem both the results and the subject area to be of great interest to the broad readership of BMC Public Health.

Finally, the authors would like to state the manuscript is original and has not been published or submitted for publication elsewhere.

Sincerely,

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