Reviewer's report

Title: Associations Between Open Drain Flooding and Pediatric Enteric Infections in the MAL-ED Cohort in a Low-Income, Urban Neighborhood in Vellore, India

Version: 1 Date: 12 May 2019

Reviewer: Haochu Li

Reviewer's report:

Thank you for the opportunity to review the manuscript "Associations Between Open Drain Flooding and Pediatric Enteric Infections in the MAL-ED Cohort in a Low-Income, Urban Neighborhood in Vellore, India". Overall, most of the comments from the previous reviewer have been addressed. However, some concerns remained. My comments are the following:

1. Temperature is also a determinant of enteric infections, especially bacterial ones, and so should be included as a confounder.

We appreciate the reviewer's comment and agree that temperature is an important driver of enteric infections when examined in more general models aiming to estimate more 'upstream' effects of climate on incidence of enteric infection. However, given the environmental exposure pathway being examined—rainfall causing overflowing/flooding of open drains with feces in them, and associated exposures—it would appear that temperature would be an 'upstream' driver of rainfall (e.g. acting through rainfall) in this directed acyclic graph, and thus controlling for temperature would be duplicative of testing our main effects (e.g. detrimental to testing associations with rainfall/drain flooding) rather than accounting for residual confounding.

References are needed to support the statement "it would appear that temperature would be an 'upstream' driver of rainfall (e.g. acting through rainfall) ".

2. Overall, the lack of consideration of other exposure routes and key risk factors makes the results very difficult to interpret. The use and description of the weather (not climate) factors is also not appropriate and impossible to interpret.

I don't think this comment has been addressed properly.
3. The household flood exposure data (based on self-reported assessments) is not useful unless linked in time to the illness event. In some cases, the flood may have occurred after the illness? This comment is not addressed properly.

4. What is the highest frequency of contact?

5. It is tricky that the measurement of exposures took place after outcome measurement. Also, this subanalysis is based on complex data from more than one study. A much better and clearer description of data collection, preparation, management, or utilization for this analysis are needed.

6. Household selection needs clearer explanation. Why 25 households were selected based on a hygiene survey, but the left 75 households were selected from the other?

7. Additional careful edit is needed indeed.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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