Reviewer's report

Title: Social and cultural features of cholera and shigellosis in peri-urban and rural communities of Zanzibar: findings from a pre-vaccination survey

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Reviewer: Daniel Feikin

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General. This study examined perceptions and knowledge about cholera and shigellosis in peri-urban and rural Zanzibar prior to cholera vaccine introduction. The results presented are extensive and do show differences between the settings and between the diseases. What is less clear is how these findings will be applied to cholera vaccine introduction, which seems to be the impetus for this study. The paper could benefit from being more focused on this point, and shortened considerably.

Major comments.

Abstract. Results. Should give more quantitative results to show points being made. Give %, give p values, etc. Conclusions. Some of these conclusions don’t follow the results given. Not clear why woman and rural areas should be targeted with education. Is that education related to the disease or the vaccine or both. Also calling for more research is never a satisfying conclusion. The association between the data here and vaccine introduction should be more delineated here.

Introduction. General comments. The background does not clearly state why this study is important at this point in time. It is long on the background of the clinical and epidemiologic background of cholera and shigella, which is not so relevant for this paper. This part can be shortened. In contrast, it would be useful to get some context of why the cholera vaccine is being introduced in Zanzibar. Who will be targeted? When will it happen? IN addition, the connection between why KAP regarding cholera and shigella and impending vaccine introduction should be made stronger. This is discussed in page 7, but perhaps more specific examples of how KAP influenced vaccine introduction can be cited.

Page 7. Top. It is strange to put (and shigellosis) in brackets here as it makes it seem almost an afterthought. The inclusion of shigella vaccine is not well described throughout. Was it considered a “comparison” condition to cholera or is there a particular reason to include it vis-à-vis vaccine introduction. This should be further described to justify its inclusion with cholera in the survey.

Page 8 second paragraph. Not clear why the focus is on differences in perception with shigellosis in particular. Is there something about shigella, compared with other diarrhea agents, which makes it the most relevant or appropriate comparison with cholera?

Page 8. Last sentence of introduction. It should be stated here why this study is important now. What it specifically has to do with the timing and plans for cholera
vaccine introduction.

Methods. Page 8 bottom. In sentence on sample size calculation, it should be stated what variable is being compared and what were the expected prevalences in periurban and rural settings.

Page 9 bottom. What age is targeted for vaccination? Describe how the number of 100,000 doses was arrived at? Was it a donation?

Methods study design. It is not clearly described how the somatic symptoms were elicited. Were these symptoms the participant brought up as associated with the illness based on the vignette proposed?

Page 12. Participant selection. Were all households in areas enumerated and eligible for inclusion? It is not clear who households were selected in either periurban or rural areas. Was it a simple random sample after enumeration? Was it a systematic random sample?

Page 12. That only households where someone had enough time for the interview were included introduced a potential bias? People at home with time on their hands are different than those not at home? This limitation should be described in the discussion with potential biases introduced on results.

Page 13. Top. The wilcoxon rank sum test compares medians not means. Describe why it was chosen here and if it is comparing means another test should be used. Were variables non-parametric leading to decision to use WRS?

Page 15. First paragraph. It is not clear if the Swahili words given here are synonymous with cholera and shigellosis, or describe a clinical presentation consistent with the two diseases. This needs to be clarified. It seems self-evident that in the second vignette that describes diarrhea with blood, even using the word “blood” that most individuals would consider that “bloody diarrhea”.

Page 15 second paragraph. Not sure where percentages come from in last sentence as they seems different than those given earlier in same paragraph

Discussion. The discussion could be more focused. There seem to be some tangents that are followed that could be deleted (e.g. impact of handwashing, treatment data, etc). Keep the focus on how these results differ in the two sites and why, and how these results would have an impact on vaccine introduction.

Discussion. See earlier point on limitation of selection bias. The sampling scheme likely introduced selection bias by including only those adults at home and with enough time to participate in a lengthy interview.

Page 29 conclusion. Some of the issues being raised here are ones that should be brought out more clearly. The primary premise of the paper is how knowledge of cholera in the community might have an impact on vaccine introduction. This connection is never really explored in the paper. Were there specific questions related to this? how might this survey specifically lead to education or other forms of targeted communication when introducing the vaccine? Were the results of this survey actually used in the vaccine introduction campaign.

Discretionary.
Page 10. The two areas would best be contrasted in a table. The text is long and gets a bit confusing going back and forth between the two.

Page 22. Top. Did the survey specifically ask if an individual had one of these two conditions before? And did their responses vary based on whether they had it before?

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests.