Reviewer's report

Title: Profiling the best-performing community medicine distributors for mass drug administration: a comprehensive, data-driven analysis of treatment for schistosomiasis, lymphatic filariasis, and soil-transmitted helminths in Uganda

Version: 0 Date: 26 Nov 2018

Reviewer: William Brieger

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1. do CMDs work on schisto in Uganda or is this school-based as in most countries. even if school, based, do the CMDs have a role - explain in detail. The authors seem to explain that Uganda started community-based schistosomiasis MDA before the more global effort started, so the implication is that this method is still being done - please state clearly what is the arrangement at the time of the study.

2. Studies on adherence with NTD regimens, which usually occur in annual MDAs, are usually measured over several years as one year may not be representative. Likewise I would expect CMD performance to vary from year to year, giving one a better picture if information is collected over several years, not just one distribution.

3. If there were 2 CMDs per village how is it possible to separate out the work performed by each and compare with that CMD's characteristics. Many MDAs are done at a central place (school, chief's house, market) on village chosen days, and at these events all CMDs for a village work together. alternatively some villages may choose door-to-door distribution or a combination of the 2. So what happened in the study villages and this the chosen arrangements allow the researchers to separate out the CMDs? So among the 31 villages, how did they chose to do their MDAs and how did the researchers distinguish the performance between the 2 CMDs in each village? When talking about the variables the authors do not clearly explain how the CMDs divided the workload (or whether in fact is was shared as noted above) and how they were able to get respondents to differentiate between the two CMDs.

4. We need to know more about the 31 villages - are they together in one district or sub-district? are they all the villages in a particular defined area. how were the area and the villages chosen. one assumes that there may have been some sort of training and oversight from a district team or staff at the nearby health facility - if this happened, all the villages form a cluster with the same
influence from supervisors/trainers. there may have been something slightly different that happened in setting up and running the MDAs in that particular area, so how is the reader sure that the villages and CMDs studied typical of the overall NTD program?

5. Was the instrument/scale referred to in reference 22 validated for work in LMICs?

6. was there variation in village size and compactness/ dispersal - this could influence lower or non-treatment of households is the CMDs were expected to go door-to-door - and even if people were expected to gather in a central place, though maybe less for this as for door-to-door.

7. did all villages have fishermen/mongers or only some - that is, were all located near a water source that was used for fishing. if the presence of such CMDs varied by village location then one wonders about analysis based on this characteristic if it may be possible that every village would have such people to select.

8. overall the findings appear to be helpful in terms of reinforcing such organizational factors as having villagers select their own CMD. The idea of CMDs involving 'friends' is important to document, but in reality MDA is supposed to be a village affair, not the work of individual CMDs, though the CMDs would guide activities. The authors have suggested some steps that could be taken to enhance program performance, and more of this is needed in the discussion. Caution is still needed in making broad conclusions as one suspects these 31 villages are not exactly similar to what one might find in other parts of Uganda and certainly not across the breadth of Africa.
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?
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Not applicable

Are the conclusions drawn adequately supported by the data shown?
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