Author’s response to reviews

Title: Community-Owned Resource Persons for malaria vector control: enabling factors and challenges in an operational programme in Dar es Salaam, Tanzania

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Version: 2 Date: 18 May 2011

Author’s response to reviews: see over
Dear Editors,

Please refer to the attached revised manuscript; No: 1619558089437161

The following are our point by point reply to Reviewer 2 comments to the manuscript

**Title: Community-Owned Resource Persons for malaria vector control: enabling factors and challenges in an operational programme in Dar es Salaam, Tanzania**

We have tried to our best to address all the comments raised, as they appear in the following paragraphs below:

- Reviewers comment appears un-highlighted text
- The texts highlighted with green- those are our responses
- The texts highlighted with yellow- those are the changes we have implemented and incorporated into the main manuscript

1-The background section is extremely long. First paragraph in page 3 could be shortened much by focusing on community related activities to malaria and other vector born control and relate to the community behaviour in Tanzania urban settings. This is already discussed in page 5 (paragraph 2).

We are not completely convinced of this point. While much of this might be obvious to a specialist in health systems research, we feel that this particular paragraph is crucial to ensuring smooth flow and full clarity of the subject matter, particularly for non-social science or health systems specialists involved in malaria vector control. Therefore, only two sentences could be shortened:

“In short, the participation of communities in vector-borne disease control is context dependent, and reflects the prevailing interactions between the human population, vector population and ecological settings, as well as social, economic and political contexts”

has been changed to

“The participation of communities in vector-borne disease control is context dependent.”

And

“This paper characterises the strengths and weaknesses of a recent effort to reinstate larval source management in Dar es Salaam where the Urban Malaria Control Program (UMCP) delegates responsibility for routine mosquito control and surveillance to community members, referred to as Community-Owned Resource Persons (CORPs)”.
Has been changed to

“This paper characterises the strengths and weaknesses of a recent effort to reinstate larval source management in Dar es Salaam implemented by community members through UMCP.”

2-In page 6, (Par 3), include type of larviciding applied, types of chemicals used if any, parameters used to decide to apply larviciding, who does the larviciding, how often they apply larvicides once a breeding site is detected, seasonality?

Accepted

The following sentences have been added to the manuscript:

The UMCP implements weekly application of microbial larvicides (\textit{Bacillus thuringiensis} var. \textit{israelensis} (Bti) and \textit{B. sphaericus} (Bs) to all potential breeding habitats, and delegates responsibility for these routine mosquito control and surveillance to community members, referred to as Community-Owned Resource Persons (CORPs) [Fillinger, 2008 #4707].

3.1 The method section is too long and fails to give clear understanding of the main messages. Study area and qualitative preliminary assessment could be shortened.

We disagree on the basis that we think we have presented the minimum amount of essential information that the reader would need to understand the context of the study. However, we added one sentence in order to clarify the mixed method nature of the study.

Added sentence: “This study used a mixed method research design, combining qualitative and quantitative approaches \{Creswell, 2003 #14622; Tashakkori, 2003 #14621\}.”

3.2. Explain clearly the gold standard used to determine the detection sensitivity of CORPs and how comparisons were done.

Accepted – the respective paragraph has been rephrased and now reads as follows:

The investigator conducted a comprehensive search of each plot for potential breeding habitats and then searched each of those for mosquito larvae following standard operating procedures [Fillinger, 2008 #4707]. First, the larval survey data sheet filled by the CORP on the previous day was examined. Then the presence of every reported wet habitat was verified, and each one was re-examined for the presence of larvae or pupae. Then any additional habitats that had not been detected by the surveillance CORPs were identified and examined for the presence of
larvae. All data for the follow-up survey of the investigator recorded using standardized forms adapted from those provided to the larval surveillance CORPs (Chaki, 2009 #9236; Fillinger, 2008 #4707). The proportion of wet habitats reported by CORPs was compared to the total number of all potential habitats by the investigator to establish the detection coverage, whereas detection sensitivity was established by comparing the proportion of habitats which contained larvae that were reported by the CORP with that reported from the investigator’s survey.

3.3. Explain how would the investigator control the ward supervisor from informing the CORPs that the person visiting is the investigator.

Accepted - the following sentence has been added to the result section:

It cannot be fully ascertained that the role of the investigator was successfully withheld from the CORPs in all cases and their supervisors probably represent the most likely source of such knowledge. This may have influenced their working practices while with the investigator so the practices reported here may well be positively biased to some degree.

3-Findings:
3.1 Contextual determinants of detection coverage identified through the guided walks. This section is not worthy for publication at all. It is long and can not be considered as evidence. It reports on personal opinions and grievances from individual respondents. A reader would not conclude anything from this section. Suggestion: Categorize determinants and quantify as frequency of respondent. Examples of satisfaction indexes for categories: supervision, feedback and response, payment adequacy, workload, other incentives, leave days, community acceptance (opening houses or fences), etc.

We do not agree. The reviewer is criticizing qualitative research approaches as such. However, our study was using a mixed method approach, which is well established, documented in literature, and which has been used by numerous researchers and in numerous peer/reviewed publications. Mixed method research is defined broadly as "research designs employing both qualitative and quantitative data collection and analysis techniques in either parallel or sequential phases" (Tashakkori & Teddlie 2003, p. 11). This approach is believed to be powerful for example in strengthening validity by triangulation, clarify results from one method with results of another method, uncover unanticipated aspects, and suggest areas for further analysis (Tashakkori & Teddlie 2003, Creswell 2003).

In order to clarify the approach that we used, we added the following sentence in the methods section:

This study used a mixed method research design, combining qualitative and quantitative approaches (Creswell, 2003 #14622; Tashakkori, 2003 #14621).
II. Minor Essential revisions:
Abstract: Methods: Describe the gold standard against which the detection sensitivity or capacity) was used.

Accepted-the following sentence has been added to the methods part of thee abstract:

Detection coverage was estimated as the proportion of wet habitats found by the investigator which had been reported by CORP. Detection sensitivity was estimated as the proportion of wet habitats found by the CORPS which the investigator found to contain Anopheles larvae that were also reported to be occupied by the CORP.

Results: Although, the aim of the study is to generate better understanding of the role that the CORPs play within the programme, you results mainly emphasize on comparisons of detection coverage of CORPs recruited through programme admin vs local government officials. Therefore, you have to either revise the aim of th estudy to reflect the results or provide more results that reflect the roles of of the CORPs to the UMCP programme.

We disagree and still strongly feel that the objective of our study remains to understand the role of CORPs within the program. The comparisons we have made and the factors that we have examined are just the means to understand the underlying factors underlying CORPs involvement and how those influence individual and program performance.

Page 9: The second last sentence: replace the word "reacted" to "related" and "in sufficient" as one word to "insufficient" as follows: .. ........late-stage (3rd or 4th instar) mosquito larve, could be related to insufficient time....

Accepted and implemented by editing the sentence as follows to remove the ambiguity:

By doing so, indicators of operational shortcoming, such as the presence of late-stage (3rd or 4th instar) mosquito larvae, could be reported and reacted to fast enough to prevent emergence of adult mosquitoes.

We hope you will find this manuscript appropriate and of interest to your journal. Thank you in advance.

Best regards,

Prosper Pius Chaki