Author’s response to reviews

Title: Caretakers' Understanding of Malaria, Use of Insecticide Treated Net and Care Seeking-Behavior for Febrile Illness of their Children in Ethiopia

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Point by point response to reviewers’ comments

Reviewer 1

Comment 1: This manuscript has potential and, with further work, could be suitable for publication in an international scientific journal. However, I do not believe it is suitable for publication in BMC Infectious Diseases in its current form. My major concern with this manuscript is that the data presented are narrow in scope (primarily pertaining to knowledge) and, therefore, are likely to be of interest to only a very limited audience. While understanding caretaker's malaria 'knowledge' has some value, the appeal of the study would have been substantially increased if the authors had also included some 'practice' measures in the survey as well. For example, questions exploring caretakers (and/or their child's) use of insecticide treated mosquito nets and their treatment seeking behaviour in response to febrile illness would have allowed a more meaningful analysis of the association (if any) between malaria knowledge and practice. If the authors did include practice-related questions in the survey, then I would strongly recommend revising the manuscript as a new submission (with practice data included). If practice data are not available, then I believe the current manuscript should be substantially reduced in length and resubmitted as a form of brief report.

Response:
Thank you very much for suggesting addition of practice related data to the manuscript. Initially, we excluded the practice related data believing that the volume of the manuscript may be large and cannot be handled in a single manuscript. Now, we included key practice data in the analysis. In this way, we included insecticide treated net use (by children) and caretakers’ care seeking behavior for children’s in response to febrile illness. And we assessed the relationship between caretakers’ knowledge and use of insecticide treated and care seeking practice. In order to accommodate the practice data, some of the analysis on knowledge (in previous manuscript) has omitted in the revised version. Eg association between knowledge and some background factors and generally, the knowledge related findings are shortened as we included more data on practices. Since many changes are made to the manuscript, we could not able to indicate every change using track changes. However, separately uploaded the manuscript with track change and the cleaned one. In fact, we used highlighted color in the cleaned manuscript to indicate some major changes made to the manuscript. Comment: My other major concern with this manuscript is the standard of written English is far below what I would consider acceptable for an international, English language journal. Substantially shortening the manuscript may help in this regard as...
well. Response: Thank you for the comment. In order to ensure clarity and language standards, the manuscript has been reviewed critically, to the best of authors’ knowledge. And reviewed by English language specialist. The authors may wish to consider the following recommendations in any subsequent revision:

**Title:** The manuscript title is too lengthy and poorly worded. A briefer, 'catchier' title is required.

Response: The comment is considered. The title of the manuscript is revised and shortened as practice related data were included in the manuscript.

**Background:** Given the narrow focus of the manuscript, and relatively basis level of data analysis, I would limit the background section to 2-3 paragraphs maximum.

Response: Thank you for the comment. We tried to shorten the background section accordingly. Even though practice related data were included, the background section is shortened and focused in the present manuscript.

**Comment (Method):** The study was largely, but not exclusively, based in sentinel surveillance sites (so the title is incorrect). Is it possible that, as a result of sentinel surveillance activities, the study population may have greater knowledge of malaria relative to other populations in the area? Might need to comment on in limitations.

Response: In order to reflect the content of the study, the title is modified and the “phrase that contains surveillance site” is omitted from the title of the manuscript.

With regard to the impact of surveillance activity on knowledge level, the surveillance system did not have components of community education. The system simply serves for timely collection of routine data from patients visiting health facilities and mostly focusing on monitoring and reporting system. Even the level of knowledge was low compared to earlier studies conducted outside the surveillance center (discussed in the manuscript). So, it less likely that the surveillance activities were contributed to knowledge acquisitions.

**Comment:** As the manuscript presents data from only four questions, it might be possible to include the questions in the method section? This would help with interpretation. The description of the knowledge composite score is not that clear. Was the maximum score 4 (=100%)?

Response: Since we included practice related data along with its measurement methods, we preferred not to include the questionnaires in the method section rather described the nature of the questionnaire used to gather data on knowledge, insecticide treated net use and care seeking practices. For measurement of knowledge, we used four major questions and it contained nine specific knowledge items. Thus, as it may create confusion to readers we stated that nine knowledge related items were used to assess knowledge. Then, the score out of nine that converted to 100% for the purpose of analysis (page 7-8-measurement section).

**Comment (Results):** I'm not convinced there is much value in presenting data disaggregated by sentinel surveillance site. I would either just present overall data or disaggregate according to the three altitude measures (low-, mid- and high).

Response: accepted and most of the analysis were revised, data were mainly presented by altitude instead of by study sites.

**Comment: 'Chilling' should be revised to 'chills' throughout.**

Response: Accepted.

**Comment: Signs and symptoms - perhaps report the % of participants that correctly identified the three most common symptoms (chills, fever, and headache) (page 10 line 38-51).**

Response: accepted, proportions of caretakers who knew the three classical symptoms of malaria are indicated.

**Comment: Section on cause of malaria is quite limited. Did any participant specifically state 'night biting mosquito' 'female, night biting mosquito' which would be most accurate.**

Response: No respondent mentioned such type of responses. Participants “just mosquito bite” without mentioning the timing of bite.

**Comment: Table 1: the 'caretakers’ occupation' heading needs to be aligned with 'farmer'**

Response: accepted

**Comment: Table 2: swelling of spleen noted twice underneath Table Response: accepted**

**Comment: Table 3: Change title - self-reported methods of**