Reviewer’s report

**Title:** Trends in bednet ownership and usage, and the effect of bednets on malaria hospitalization in the Kilifi Health and Demographic Surveillance System (KHDSS): 2008-2015

**Version:** 0 **Date:** 16 Jun 2017

**Reviewer:** Sandra Alba

**Reviewer’s report:**

This is an interesting and topical article on bed net ownership and malaria incidence and deaths. The very rich and high quality data and appropriate analyses provide strong insights into the issues. I only have some comments which could help clarify some aspects of the analyses presented and their interpretation.

**Methods**

* Description of sero-study: what was the time lapse between the routine DSS enumeration rounds and the sero-study interviews? Could some of the differences between bed net reported ownership and observations be attributed to timing of the interviews?

* Description of survival analyses: I assume exposure (bednet use/ownership) is in effect reported use and ownership, independently of observation data derived from the sero-study. If so, can that be made more explicit in text and Table 3 to avoid confusion?

**Results**

* "Overall, there was a strong association between reported bednet ownership and usage between 2008 and 2015; overall 63% on bednet ownership and 62% on bednet usage." This statement is not clear. Which statistic was calculated? On the association between which two variables?

* Data validation: "A total of 1,986/3,053 (65%) children aged 0-15 years agreed to participate in the sero-survey study." Presumably, the guardians/caretakers agreed?

* Table 1: what is meant by agreement? How was this calculated? How does this differ from the proportion column in the same table or Gwet's AC1? Can the authors interpret and discuss these results briefly in the text, as well as their implications for analyses conducted subsequently?

**Discussion**
* Is there any data on access to treatment and IPTi? Were any vaccine trials conducted in the area? This seems to also be relevant information when interpreting deaths due to malaria and thus extrapolation of the study results to other settings.

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

Yes

**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 am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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