Reviewer's report

Title: Parasite threshold associated with clinical malaria in areas of different transmission intensities in north eastern Tanzania

Version: 1 Date: 12 May 2009

Reviewer: Lawrence Ndekeleni Kazembe

Reviewer's report:

I have considered the paper by Mmbando et al on Parasite threshold associated with clinical malaria in areas of different transmission intensities in north eastern Tanzania. The paper describes and compares two methods of estimating parasite thresholds that may be used to describe the relationship of malaria fever and parasite density. The technique may be useful in assessment of interventions in clinical trials. The techniques are applied to simulated and real data. An the conclusion offered is able to summarize the appropriate model to consider.

The paper is well written with minimum mathematical treatise. The introduction provides a good background and justification for the study. The methodology can be replicated and the paper is of interest to those within this area of study.

The paper should be accepted after the authors have revised some small typos and discretionary revisions, as indicated below:

Abstract
i) Akaike should have a capital A
ii) Results subsection: the authors use the phrase "... mean age squared by 1". I don't understand what they mean.

Introduction
i) page 3, first para, last sentence which states that "some vaccines ..." needs rephrasing.

Methods
i) page 7: some connecting sentence is missing to introduce eqn (8).
ii) page 7: Reference for Box-Tidwell methods would be beneficial.
iii) page 7: last line. I dont understand the notation $p_i=\text{expit}(\alpha)$. expit is not clear to me. Same on page 8 first line.
iv) page 8: small $w$ on "where" immediately after the MSE equations.

Results
i) page 9: line 7 from top: repeat of "parasite".
Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests