**Reviewer’s report**

**Title:** Dealing with indeterminate outcomes in antimalarial drug efficacy trials: A comparison between complete case analysis, multiple imputation and inverse probability weighting

**Version:** 0  **Date:** 08 Aug 2018

**Reviewer:** Alexander Robitzsch

**Reviewer's report:**

The manuscript uses real data to compare complete case analysis, multiple imputation and inverse probability weighting. Admittedly, I had serious difficulties to understand the substantive background (and therefore also the methodological approach) because I do not work in medical statistics. I have fewer issues with reading papers like in "Statistics in Medicine" because papers in this journal come with a clear introduction of statistical models which are to be discussed. The present ms lacks such a part (in my view). I cannot judge whether this is an issue for the journal in which this ms is submitted.

As far as I understood, I think that the problem with real data simulations is that many factors are not under control. Of course, a data illustration is almost always helpful but I prefer clearly defined simulation designs. For example, distributional assumptions and strength of missing data mechanism are hard to evaluate in the present ms. Moreover, I think that the concrete form of the survival function does matter and it is not clear whether this can be handled with multiple imputation under general conditions. There is progress with some parametric hazard functions and it has been shown that one needs substantive model compatible imputation (Bartlett et al., 2015; Keogh & Morris, 2018). I am curious whether the issues are also related to the present ms.


**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?**

If not, please specify which controls are required in your comments to the authors.

Unable to assess
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Unable to assess

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 recommend additional statistical review

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

Acceptable

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