Reviewer's report

Title: The risk of morbidity and mortality following recurrent malaria in Papua, Indonesia: a retrospective cohort study

Version: 0 Date: 22 Oct 2019

Reviewer: Michael White

Reviewer's report:

This well executed study presents important information on the comparable morbidity and mortality of P. vivax and P. falciparum. The statistical analysis appears solid and well thought.

1. Abstract (line 36): "Within 12 months of the first four malaria episodes"

This is quite ambiguous.

2. I think it would read more clearly if "representation" were written "re-presentation".

3. The model diagram in Figure 1 is very helpful, however I think an additional table summarizing the data flows (perhaps in the Supplementary Information) would be very helpful. For example, in Model (1) we have 18,875 re-presentations representing outpatient visits and 7,607 admission of inpatients (if I understand correctly). Whereas, in Model (2) we have 23,109 re-presentations of outpatients and inpatients. It would be easier to see how the data adds up if it were tabulated.

4. Could the authors please comment on whether all deaths are recorded within the hospital's data system. In particular, is it possible that there were deaths that occurred away from the hospital?

5. In Figure 3, it was unclear to me whether the transitions represent (for example) Pf -> Pf; Pf -> all species; or all species -> Pf.

6. If Figure 6 part d, are the plots left censored at day 14? In the first panel, the first part of the curve has a positive slope, whereas the subsequent panels have zero slope. Could the authors comment why.

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.

Not applicable

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
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