Reviewer’s report

Title: Single low-dose primaquine for blocking transmission of Plasmodium falciparum malaria - a proposed model-derived age-based regimen for sub-Saharan Africa

Version: 0 Date: 03 Oct 2017

Reviewer: Edward Wenger

Reviewer's report:

This paper is a well-written review and analysis of considerations for age-dependent primaquine dosing.

Much of the value of this work comes from the comprehensive review of the existing literature of safety and efficacy in different contexts.

Additionally, the very large anthropometric database allows careful consideration of rare over- and under-dosing frequencies.

I have a few mostly minor comments on the text:

P5/L11 (and throughout): "et al" -> "et al."

P5/L44: "PQ is generally a well-tolerated and very safe drug." This sentence is somewhat subjective depending on what one thinks "generally" means.

P6/L6 (and similar pattern throughout): "~6 (7/110) and ~5.5 (6/110)" -> "6.4% (7/110) and 5.5% (6/110)" (i.e. move percent symbols after numbers that are percentages)

P6/L28-31: The logic could be clearer here. Is metHb concentration not a clinical concern because post-treatment values are typically in the range of mean levels?

P8/L45: spacing is inconsistent between "4 g/dL" and "5g/dL"

P9/L14: "...should be less compared [to] areas..."

P10/L41: The difference between 27% and 3.3% under-dosing depending on expected threshold of impact is an important point.

P10/L45-57: The wording in these paragraphs is pretty awkward in describing the 1-year age bins with significant under dosing. Consider rephrasing.

P11/L37-40: Consider rephrasing this long and awkward sentence.
P11/L46: Consider breaking up this long and difficult-to-digest sentence.

P11/L61: "...is very small: <1.4%..."

P12/L14: This statement of "potentially massive" usage in vivax-elimination scenarios could use more quantification and context.

P12/L29: A bit more discussion would be appreciated on how problematic the non-overlapping ACT dosing categories might be, depending on the distribution context: clinic, community, campaign, etc.

Figure 1: Please move legend entries (e.g. "1-survey data") to above each facet title replacing the numbers.

Figure 2/3: Relabel y-axis "Proportion (%)" or "Percentage"

**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.

Unable to assess

**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?**
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I am able to assess the statistics

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