Reviewer’s report

Title: Effect of Transmission Intensity on Hotspots and Micro-Epidemiology of Malaria in sub-Saharan Africa

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Reviewer: Alejandro Llanos-Cuentas

Reviewer’s report:

The heterogeneity of malaria transmission for both P. falciparum and P. vivax and the importance of micro geography are new insights that are influencing the concepts of malaria control. Implications are changes in control interventions with specific actions according to specific scenarios.

The authors of this study make an important contribution in this context. They report "Geographical micro-variation at sites with a variety of transmission intensities across Sub-Saharan Africa". In addition, they find (i) the microvariation is greater in areas of low transmission settings and (ii) temporary instability of hotspots. One of the questions is that if the temporal instability of hotspots was skewed because they have only included cases of malaria with demonstration by optical microscopy (symptomatic or asymptomatic) ignoring the large mass of subpatent malaria. The authors in 12/19 studies included only included symptomatic malaria with parasitemia > 2,500/μl. The exclusion of minor parasitemia could have influenced the stability of hotspots?

It is likely that the true value of hotspots will be in the elimination of residual malaria and for this purpose molecular and / or serological diagnostic methods are needed for endemic villages. It is very difficult for teams currently struggling against the large mass of symptomatic malaria in Africa to take into account the strategy of hotspots at this time. Possibly it will be of great importance when they are in the elimination stage of subpatent malaria or residual malaria.

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?
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Yes
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I am able to assess the statistics

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