Reviewer's report

Title: Sixty years trying to define the malaria burden in Africa: have we made any progress?

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Reviewer: Kathryn Maitland

Reviewer's report:

This is very readable article documenting the changing epidemiological patterns and international efforts to describe and document the (malaria) disease. It highlights lessons learned during this period and where in the past we had much better descriptions of the epidemiology of malaria in communities and something that could be put into practice in future as we witness the shrinkage of the malaria map through efforts towards eradication.

The following are suggestions for the authors to consider.

Major compulsory Revisions
None

Minor Essential Revisions
None

Discretionary

1/ For the non-specialist it may not be apparent that in order to gain immunity from malaria disease (and even infection) that annual exposure and multiple episodes of malaria are required –before achieving disease specific immunity ie no more febrile events and finally full immunity from malaria (anti-parasite) - if ever. And that this is different across each level of endemicity (exposure) and possibly poorly understood in populations experiencing an epidemiological transition. Hence the focus of the article - how to tease this out using existing data.

2/ I thought the section highlighting the use of disparate data to calculate predictions of disease burden for Swailand and Rwanda giving misleading results could go one step further. The authors may or may not want to expand on how this diverts funding to areas where the predictions are clearly not contemporaneous – and if possible give examples of this?

3/ The section on indirect morbidity, they may want to quote the recent systematic review of bacteraemia complicating severe malaria, which give a more accurate estimate published this year (2014) in BMC Medicine by, errrr ......., this reviewer!

4/ Conclusions- I was hoping that at the end there would be a summary ‘wish
list’/roadmap for future funding / epidemiological studies – but the authors don’t quite do this, despite hinting at it in the last line of the abstract. It would certainly invite comment if they went the extra mile?

Quality of written English: Acceptable

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

Declaration of competing interests:

I have no completing interested

I am based in Kenya at the KEMRI Wellcome Trust Programme (at the Kilifi unit, Coast), but do not work with or have not published with either Professor Snow or Dr Noor who are based in the Nairobi unit.