Reviewer's report

Title: Antimalarial drugs for preventing malaria during pregnancy and the risk of low birth weight (LBW): A systematic review and meta-analysis of randomized and quasi-randomized trials.

Version: 1 Date: 26 May 2015

Reviewer: Kassoum Kayentao

Reviewer's report:

General comments:

1. Please explain beneath of each forest plot, the meaning of different elements of the graphs (e.g. vertical line indicates..., black dots indicate....)

2. For each forest plot, please indicates the following points:
   a. A good label for study ID; the current contents under study ID does not reflect only study ID in any graph
   b. Display data counts (n/N) for each group
   c. Display the labels of the comparison groups
   d. Provide a label indicating the treatment effect to either side of the graph
   e. Can the authors display references similarly in all the graphs? There are figures with authors
   f. Also I would ask to provide reference numbers in superscript each time an author is cited in graphs

3. The authors made the hypotheses that gravidity and SP resistance influence the effect of treatment, and results were stratified based on these possible effect modifiers. One potential factor that could influence more the effect of treatment, which is HIV status, has been excluded since the selection process of the articles. As the prevalence of HIV is important in area of Africa where also SP resistance is higher, one can wonder if the overall findings can be applied to East, South and Central Africa. I would suggest to take this component in to account and do stratified analysis to look at its impact on the effect of treatment.

4. Through the manuscript, the term “impact of” is used; one can wonder if this term is appropriate, because this is not a causal association study. It is preferable to use association instead.

5. Please, use italic for Plasmodium falciparum in all the text

6. Also, indicate page number in the manuscript

Specific comments:
Title: I would suggest avoiding abbreviation “LBW” in here? As this is given in the text already

7. Introduction: last sentence of first paragraph. In the sentence “Previously, another.... LBW by 25%”. The reference cited does not show this reduction. Can the authors explain the origin of the 25% reduction from the article cited?

8. Method:

Data sources and search strategy: The authors excluded HIV positive pregnant women, but in two studies conducted in West Africa (Diakite et al, Valea et al) the status of HIV is unknown. How did the authors adjust for these?

Data extraction:

As transmission level and drug resistance level may vary in time, were these data collected at the time of study conduct?

It is not clear what transmission means. Better to use standard definitions of transmission such as holoendemic, mesoendemic, hyperholoendemic, seasonal, etc. .

Statistical analysis:

Random effect model was suggested for the analysis. However fixed effect was used in some results. Can the authors explain and justify why random effects models are used for some analysis and fixed-effects models for other?

9. Result:

a. Can the authors describe the results in to different section based on the objectives stated in the introduction?

b. Figure 1: Can the authors respect the structures and components of the PRISMA flow chart? This gives an easy reading to readers. Can the authors move the Hand search section box to the top of the graph? Also there is an arrow that needs to be deleted.

c. Figure 2: (Please refer to point 2 of general comments)

d. In Figure 3: As the number of the number of studies is limited in each subgroup, can the authors make conclusion about the impact of drug resistance on the overall effect of treatment?

To define subgroups, the authors used the prevalence of 10% to classify drug resistance as suggested by WHO for malaria treatment. However, for IPTp the threshold of 50% of DHPS 540 is suggested. It is more indicated that the authors use that threshold in place of the 10% in the subgroup analysis?

e. Figure S6: Is this figure about a sensitivity analysis or a subgroup analysis? Please clarify
f. Table 1: Please check very carefully the names of authors. There is a typographical error for names (eg, reference 28 is not well written). This applies also for figures containing this reference.

g. Can the authors add a figure on the Risk of bias assessment representing the authors’ judgements about each risk of bias item for included study across the domains?

10. For meta-regression it is recommended to have at least 10 observations (studies) for each characteristic modelled. The analysis conducted here does not much with this, as in any subgroup, the number of studies is less than 10. Could the authors please clarify this?

11. Discussion
a. 9th line from the bottom: the sentence of “Nevertheless....groups”. Can the authors provide explanation on the low power stated?

12. Summary:
   a. Can the authors suggest the public health implications of this study?

Quality of written English: Acceptable

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

Declaration of competing interests:

- Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this paper, either now or in the future? NO
- Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this paper, either now or in the future? NO
- Do you hold or are you currently applying for any patents relating to the content of the manuscript? NO. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript? NO
- Do you have any other financial competing interests? NO
- Do you have any non-financial competing interests in relation to this paper? NO

If you can answer no to all of the above, write “I declare that I have no competing interests.” Below. If your reply is yes to any, please give details below.

I have no competing interest