Author's response to reviews

Title: Active Trachoma Two Years After Three Rounds of Azithromycin Mass Treatment in Cheha District, Gurage Zone, Southern Ethiopia

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Author's response to reviews: see over
Response to Reviewer Comments

To: Editorial Manager to BMC Pediatrics

Article title: Active Trachoma Two Years After Three Rounds of Azithromycin Mass Treatment in Cheha District, Gurage Zone, Southern Ethiopia

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Authors : Fisseha Admassu, Samson Bayu, Abebe Bejiga and Bemnet Amare

Dear sir/madam

All in YELLWS SHADOW color represents our responses to the respective reviewers. All corrections made were based on reviewers’ recommendations and the additional formatting requested.

Response

Reviewer: Jonathan King

1. The conclusion that the interventions have resulted in >40% decrease in trachoma is not justified as presented. The authors must present the data and methods from the baseline survey that would allow the reader to come to the same conclusion. The baseline data was from a pilot study done before administration of azithromycin in the district and projected to the general population. This was unpublished observation we got from the district health bureau. We have accommodated your comment and modified the statement accordingly.

2. The sampling, sample size calculations, protocol and definitions of indicators must be clearly stated. Specifically: target age-group upon which the sample size was determined, primary sampling unit, process for random selection of clusters, households, and individuals. The current sampling methods as stated are somewhat ambiguous and conflicting (see more specific questions in pdf).

The details of the sampling methods are included from the original document.

3. How was the quality (reliability) of the trachoma grading ensured if more than trachoma grader was utilized?
Grading was done by the PI who was familiar with WHO trachoma grading guidelines and had a three years experience in clinical management of trachoma. This statement is now in the document

4. Confidence limits around point estimates of all indicators should be presented and adjusted for clustering.
   Comment accepted and addressed accordingly

5. Antibiotic coverage estimates must account for the number of possible times the child could have taken the antibiotic. As presented, these results are not informative.
   Azithromycin coverage was estimates of the number of time each child in the study received in the past. But we used only the data for children aged 3 years or more to calculate the association between the number of past azithromycin treatment and active trachoma

6. How do the authors explain a mean age of almost 7 years when the target was 1-9 years of age? How might this affect the estimate of active trachoma observed if active trachoma was significantly higher in the 2-5 year age group? Currently, as presented in table 1, the chi-square does not show statistical significance between groups of children (i.e. 2-5 versus others). If the authors did additional statistical tests, please present these results.
   The mean age was seven years according to the data. We employed a compact segment sampling technique where we started randomly in one household and continue to next household till we got the required amount of children in a cluster. We did not show any preference of age during the study. This finding might have caused under estimation of the prevalence.

7. Since there was no testing for C. trachomatis infection, the authors must revise their conclusions about infection.
   Comment accepted and statement is modified

8. The age-specific prevalence of trachoma clinical signs (TF, TI, TS, and TT) could be presented and would be interesting, even in the absence of baseline data.
   We used TF as a sign of active trachoma in this survey as recommended by WHO to avoid inclusion of other types conjunctivitis (bacterial, vial...) that may mimic TI. TS and TT were not included as they are not in the interest of this study
9. The authors should discuss the uniquely high prevalence of scarring among children observed in the study. Were these advanced scars, subtle scarring? Are there any photos to document?

*We agree with the prevalence of TS being too high. It was mainly a subtle scaring with no case of severe trichiasis. This show how high was the prevalence of active trachoma in the community. We left it without discussion as it is beyond the objectives of this study. To give more information, during our survey, there were children in their teen with TT that needed surgery.*

10. The authors should explain what they mean about exposure to dirt increased risk.

*Exposure to dust that makes them unclean attracting more flies to them (added in the document)*

11. The authors must discuss the study limitations.

*Limitations has been discussed*

Reviewer 2: Olinda C Luiz

Minor essential revisions

1. *The methods are now described in details*

2. *Limitations are now discussed*