Reviewer's report

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

Version: 2 Date: 1 August 2013

Reviewer: Jonathan King

Reviewer's report:

The authors have made improvements to the manuscript. Some of the previous issues highlighted have been addressed. However, there are still major factors that should be addressed before publication.

Major revisions:

The importance of this paper revolves around the change in TF prevalence since baseline. However, without the baseline data being presented and only the brief description provided is not sufficient for making such conclusions. If possible obtain the data from the Woreda Health Office and present in this paper. Otherwise, the best comparison is the data from the national blindness survey which I think was incorporated in the discussion reference 12. The authors should at minimum report the 95% CI of that published estimate for SNNPR. Also, the word "significantly" is not justified if no statistical test is conducted between baseline and evaluation estimates. If the baseline data is no longer available, the authors must include in the limitations that the actual statistical comparison of baseline and evaluation estimates was not possible.

The authors report high coverage in each round of antibiotic distribution >90%. Please indicate how those estimates were derived and then discuss reasons that the coverage assessed during the survey was much lower than these reported by the program. Only 65% of the children had reported taking azithromycin 3 times. (assuming the authors adjusted the denominator to children 3 years of age and up - my previous point 5.)

It is not clear that the authors adjusted the denominator to 3yrs and above because children 0-2 are still presented in the figure of %children taking antibiotics. Also, concerning the authors' conclusion about time taken antibiotics and active trachoma are not supported by the data presented. There was no measure of association presented in the results.

the authors need to check reference numbering to make sure the intended reference was correctly cited (ref 16 where I think was meant to be 17).

The method of how the household latrines were described needs to be clarified in the method (more than just looking in the back yard). Because the authors use the subjective words like "scary" for children. Were these characteristics quantified? If so they should be presented.
How did the authors adjust the confidence limits for clustering?

In the authors response to comments they state that compact segment design was used by starting from a random household and surveying the neighboring households until the sample size was obtained. This is not compact segmentation and thus needs to be taken out of the methods. Compact segmentation involves segmenting the selected cluster into segments of equal numbers of households, then randomly selecting one segment and surveying all households in the segment regardless of whether the sample size had been met. What the authors did is take a more EPI-like approach and take a random starting house and survey households along a transect through the cluster and then used a stopping rule to stop at the household where the 60th child was examined. While this former method is preferred and provides an equal probability of selection to all households in a cluster, the latter does not, but is still frequently used. The sampling method employed should be clearly distinguished in the methods and then the fact that equal probability sampling wasn't employed at the cluster level might be introduced in the limitations section.

Minor:

Given a major focus of Orbis is TT surgery and a major focus of this journal is pediatrics, the presentation of age-specific prevalence of TT would be fitting. In the response to reviewers comments the authors mention TT in adolescents. This would be additive data to increase reader interest of the current manuscript.

the authors should describe what activities are involved in the fly control program.

the authors should review the manuscript for typos and grammatical errors

the author should revise the current sentence fragment in the discussion where reference 16 is cited.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests