Reviewer's report

Title: Pattern of childhood Ocular Morbidity in Rural Eye Hospital, Central Ethiopia

Version: 2 Date: 19 March 2013

Reviewer: Phillippa Cumberland

Reviewer's report:

Major compulsory revisions

Methods

1. Paragraph 1: Case exclusions
   a. Repeated cases: this needs clarification as whether it is the repeat cases attending the OPD that are excluded, or cases within the study, has implications for the interpretation of the results.

   The first paragraph of the discussion indicates that the excluded cases are the repeat cases within the OPD, rather than just within the study. If so, this study reports on new incident cases of the first condition reported by a child within the 3 month period.

   b. Those presented for a medical check-up who had no ocular disease: are these previously treated children attending for follow-up checks? Clarification needed.

2. Paragraph 2: Visual acuity: Snellen acuity is reported but it is not clear what method of testing was used in children of different ages.

3. Paragraph 3: Statistical analysis

   From the results it is not clear what statistical testing was carried out (see comments below). Statistical methods used need to be described in this section.

Results

4. Paragraph 2: Visual acuity is presented in Table 1 by gender.

   This Table should present this data by age for males and females and report the proportion in each age group for whom it was not possible to test visual acuity.

5. Paragraph 2, first sentence: Visual impairment (UCVA <= 6/12 in the better eye) is reported to be found in 119 children (Table 1).

   From Table 1 it appears that 182 children have VA <=6/12. However, the table header indicates this is VA in the right eye, not the better eye. This should be clarified and VI (in the better eye) reported by gender and age with 95% confidence intervals.

6. Paragraph 3: Ocular disease (Table 2 needs clarification)

   Table 2 reports the frequency by gender and a 95% confidence interval and p value. It is not clear what the 95% CI and p value represent as the values given are not appropriate for the difference in proportion by gender. For example;
Stye (N = 46): difference in proportion = 2.7%. CI given as [1.46 – 1.75] and p value = 0.07
Active trachoma (N = 47): difference in proportion = 0.3%. CI given as [1.34 - 1.63] and p value = 0.07

7. Table 3: The total number of conditions reported in Table 3 is 735, the number of study participants. This would indicate a main eye condition has been reported for each child. However, it is likely that many children have more than one eye condition. The number of children with more than one eye condition should be reported.

Discussion
8. Paragraph 1: Limitations of the study have been discussed but not with regard to the study context and representativeness of the study sample e.g. how wide is the community served by this clinic?.
9. In the authors previous paper [ref 20] both the aspect of distance travelled to the clinic and the seasonality of presenting conditions was discussed and there is a need to address these points in the discussion.
10. Ophthalmic testing of young children is problematic. It would be useful to have results presented to support/expand discussion of this point (see comment on Table 1 above).
11. Discussion, paragraph 7: A discussion of the results in the context of other studies is presented.

The author has undertaken research, [ref 20] and this study, and the study area has had the SAFE health education and treatment programme which have reduced the prevalence of active trachoma. It would be interesting if the author could expand on how the results of this study could be used to inform future research and development of services and health education.

Minor essential revisions
1. Terms should be spelled out in full the first time an abbreviation is used.
2. Conventionally, in tables, n (%), is used to indicate a column with frequency and percentage.
3. Check the citing, numbering/duplication of the later references.

Discretionary revisions
Introduction
1. The introduction could be more concise with regard to paediatric eye disorders in the global/international context and could give more detail regarding the context and background to this study.

Results
2. Paragraph 1: Age distribution: It would be helpful to give the age/gender distribution by years of age or smaller age bands and summarise using the median and interquartile range (as the distribution is skewed towards the older
children).
3. Table 2 presents the distribution of childhood eye disease by gender. It would be easier to read if the eye conditions were ordered/grouped according to category e.g. infection, RE.
4. It would be interesting to report the number of children with congenital eye disease and the proportion of those with unilateral/bilateral eye trauma.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

'I declare that I have no competing interests'