Reviewer's report

**Title:** Predictors of Oral Rehydration Therapy use among under -five children in Eastern Ethiopia: A community based case control study

**Version:** 1  **Date:** 25 August 2012

**Reviewer:** Yigzaw Kebede Gete

**Reviewer's report:**

Review of the manuscript titled

“Predictors of Oral Rehydration Therapy use among under -five children in Eastern Ethiopia: A community based case control study”

Generally this piece of work is important since diarrhea is a common problem in developing countries in Ethiopia. The deployment of health extension workers in Ethiopia is expected to increase the utilization of ORT in the community when children are having diarrhea. But, still the utilization rate is not high. Assessing the predictors will help in designing appropriate interventions.

Assessment points

1. Is the question posed by the authors well defined?

What has been known in the past regarding the predictors is not described in the introduction

2. Are the methods appropriate and well described?

-“To reduce recall bias, children with persistent diarrhea were excluded from the study”. As far as these children were having diarrhea in the past 2 weeks, what is the worry about recall bias?

-“Cases and controls were identified by conducting a canvas survey of all the households in the demographic surveillance village. A sampling frame which enlists all the eligible study subjects was prepared for the controls. The study participants were all the cases and controls selected from the sampling frame using simple random sampling technique”. How many under-five children with diarrhea in the preceding two weeks who received ORT (Cases) and how many under-five children with diarrhoea in the preceding two weeks who did not receive ORT (controls) were found during the canvas survey?

-The sample size calculation should come before the sample selection

-When you calculated the sample size, the exposure variable considered was education. Why did you take this variable? In fact later on when you check for association, education didn’t show significant association

-What do you mean when you say “access to Oral rehydration solution (ORS)”?
To assess their knowledge, caretakers were asked to respond to five questions. These were ever hearing, preparation, initiation, and benefits of ORT including time to use the prepared ORS. The responses were given score of 1 for the correct and 0 for the incorrect. The values of the five variables were combined to get the total knowledge score about ORT. Based on their responses, the knowledge of the caretakers was categorized as ‘good’ if the total score was greater than the mean and ‘poor’ if it was less than or equal to the mean. Why do you prefer the mean as a cut off point to say the care giver is knowledgeable? Why not, for example, those who scored 3 points and above out of 5 are considered as having good knowledge?

3. Are the data sound?

-Table 1 is about socio-demographic and economic characteristics of cases and controls. It is good to remove the Crude OR from this table as the purpose of this table is to show the characteristics of the study subjects. If the purpose is to show associations, the title of the table shall be changed.

- Foot note of Table 3 says “Multiple responses were possible”. This means that the categories of each independent variable are not really independent. If they are not independent, then how can you assess association with the dependent variable. In fact the referent category for such variables is not shown!

-“In the final model, variables from the first and the second model were put together, along with one additional variable, access to ORS”. What was the reason for differently treating access to ORS that it was not considered in either of the 2 models?

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

More or less yes

5. Are the discussion and conclusions well balanced and adequately supported by the data?

“The presence of ORS socket at home during the onset of diarrhoea was not significant between cases 24(9.9%) and controls 17 (6.7%) (OR= 1.53, 95% CI= 0.80-2.93)”. Do you have any explanation for this? Normally if ORS is available they should have used it?

“We found out that seeking health care was significantly associated with ORT use. This finding is consistent with a study conducted in Kenya [23], where caretakers who seek care at the health facility were more likely to use ORT compared to their counterparts”. When you say “seeking health care” is this referring to general health seeking behaviour or seeking health care during the current episode of diarrhea. If you are referring to seeking health care during the current episode of diarrhea, is it surprising if those who visited health institutions used ORT more than those who remained at home?

6. Are limitations of the work clearly stated?
Is recall bias a major problem in this study?

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
   Yes

8. Do the title and abstract accurately convey what has been found?
   Yes

9. Is the writing acceptable?
   More or less yes

Category of the comments

All the comments above fall under the category of “Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)”

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

**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'