Reviewer's report

Title: Improved antiretroviral treatment outcome assisted by an adherence supporter in a rural African setting is associated with cART initiation at higher CD4 cell counts and better general health condition

Version: 1 Date: 10 November 2010

Reviewer: Harriet Mayanja

Reviewer's report:

1. Is the question posed by the authors well defined?
The authors aimed at assessing response to cART in a rural treatment center and risk factors for loss or death. This part was well addressed by the study. The authors also mentioned the assistance of an adherence supporter. However although this aspect seemed to be the most exciting part of the title, it is not the major feature of the study.

In fact the study does not look at the impact of this adherence supporter on outcome as I initially expected from the title. It seems all patients had a supporter, so this is not a key factor to assess in the results or conclusion and so should not be included in the title. MAJOR

2. Are the methods appropriate and well described?
The methods section is well described in detail and generally well written.

The authors pointed out, that first line stavudine based regimen was stopped in December 2006. However overall they do not indicate how many patients were started on stavudine based regimen. Since this has now been revised, it makes the study of less relevance today. Also as neuropathy was one of the commonest side effects, it would have been useful knowing how this related to stavudine. The same is true of anemia. What drugs was it related to. Was it mainly AZT, a drug which was not part of the first line regimen, or other drug.

Data on numbers on different 1st and 2nd line cART regimens could have been shown and related to adverse effects. MINOR

3. Are the data sound?
This is a descriptive study. Table 1 does not really show any new information.

There is a lot of missing data in this table. Thus although the study has a big sample size, this is weakened by the large amount of missing data. Also authors should indicate if this was baseline data, which I assume it is, classified by 12 month outcome. MAJOR

Table 2 show poor outcome with low baseline CD4 and BMI.

This information has been shown in a number of studies before. Figure 1 information is already indicated in table 2, so it looks like repetition. This is a
MINOR revision.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes it does. The data is well presented.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
Yes, the authors did a good job in reviewing the published data and comparing it with this study outcome.

6. Are limitations of the work clearly stated?
The authors note the limitations of missing data and large loss to followup. However most countries have moved away from stavudine based regimens, making the paper of less significance today. Also most of the findings have already been reported in other papers, and the paper does not really add much new information to the subject of cART. Also adherence is unknown in this study despite the adherence supporter. This is mentioned in discussion under “Risk factors for poor survival. However it is a limitation of the study and should be pointed out.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
This has been well brought out in the discussion

8. Do the title and abstract accurately convey what has been found?
No. the title makes a reader believe that impact of a treatment adherence supporter is the main focus of the paper.

9. Is the writing acceptable?
Yes. The manuscript is very well written with hardly any errors.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**
'I declare that I have no competing interests'