Reviewer’s report

Title: Long term virological, immunological and mortality outcomes in a cohort of HIV-infected female sex workers treated with highly active antiretroviral therapy in Africa

Version: 1 Date: 22 September 2010

Reviewer: Anne Buve

Reviewer’s report:

MAJOR COMPULSORY REVISIONS

I have several questions regarding the methods:

1. According to the discussion section the cohorts of the FSW and of the non-FSW were open cohorts (discussion section page 15, second paragraph). This is not very clear from the methods section. Please clarify from when to when women were recruited. I guess there was a limited time period during which the non-FSW were recruited because they were recruited for a trial. What about the FSW: were they also recruited during a limited time period?

2. I have serious concerns about the losses to follow-up. The authors only took into account loss to follow-up towards the end of the study period (page 9, last paragraph). What about earlier loss to follow-up?

3. Figure 3 is somewhat difficult to interpret. For instance in figure 3A at 12 months there was a CD4 count for 74% of the FSW and 81% of the non-FSW. It is not clear to me what percentage of the "gap" is due to loss to follow-up and what percentage is due to women being recruited in an open cohort and not yet having reached 18 months of treatment at the end of the study period.

Results section:

1. Were any data collected on alcohol abuse, a known risk factor for adherence?

2. Page 11. I found it striking that among the FSW adherence got better over time (from 83% at 6 months to 100% at 36 months). I would have thought that adherence would get worse. Can the authors please comment on this? I wonder whether there is not an important social desirability bias in these data. This would also put the apparent "discrepancy" between levels of adherence and rates of virological failure into perspective.

3. Page 11. The calculation of the overall mortality rate is not very relevant in this case. It would be better to present mortality rate in the first year only, where the highest risk is.

MINOR COMMENT
Please correct last sentence of the first paragraph on page 6.

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

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'