Reviewer's report

Title: Adherence to antiretroviral therapy in young children in Cape Town, South Africa, measured by medication return and caregiver self-report: a prospective cohort study.

Version: 1 Date: 10 March 2008

Reviewer: Catherine Orrell

Reviewer's report:

Thank you for allowing me to review this study. The authors are addressing a topic, adherence to antiretroviral therapy in children, which is under-reported for resource poor settings, including Africa. The questions they pose are well-defined. The methods they used to measure adherence are methods commonly used in both resource-rich and -poor antiretroviral clinics and the shortcomings of the methods are addressed e.g. by “capping” at 100% for syrup returns. The study is prospective observational cohort study, with no comparator group.

The data collected appears to be sound. The data is largely clearly represented – I will outline below what I feel might be improved - and the discussion and conclusion are based on the work presented. I understand the statistics to be appropriate, but I am not a statistician and this section should perhaps be reviewed by someone with more knowledge. The limitations of the study are clearly described.

In general this is a very well written study, addressing an area where information is lacking. I have major compulsory revisions to request.

I would like to suggest some discretionary revisions:

• Abstract – without reading the paper it is not clear why, if medication is returned for 115/122 children, only 98 have completed questionnaires. It appears as though 20% of the cohort were lost in the first 3 months. Can this be clarified within space constraints?

• Methods, paragraph 5, second last sentence – More medication is given to cover for a few eventualities including being “a few days late” for the next appointment. This is understandable. However, the next sentence implies that being a few days late will result in more than 100% adherence being recorded. This should not be the case if the dates of the visits are taken into account. Only additional doses used or spillage should result in more drug being used than prescribed. Could this be clarified, please.

• Results, paragraph 2: The conclusions about figure 3 need to be modified. The proportion of children with good adherence may well be increasing because of improved adherence, but may also be artificially improved as those with poor adherence have been lost to follow up or have died. This should be discussed. It
would not be surprising if those LTFU were also poorly adherent.

• Results, paragraph 2: The last sentence is difficult to read with all the “nots” and I think is counter-intuitive. My reading of it as it stands is that people who always bring back their medication are less likely to be adherent (>90%). Is this correct/

Minor essential revisions:
• Methods, 1st paragraph, 5th sentence. The reference number should be at the end of the sentence.

I would recommend publication of this article.

What next?: Accept after discretionary revisions

Level of interest: An article of importance in its field

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.