Reviewer’s report

Title: Adherence to Highly Active Antiretroviral Therapy and Its Correlates among HIV Infected Pediatric Patients in Addis Ababa, Ethiopia.

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Reviewer: Marcelo Soares

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The manuscript by Biadgilign and colleagues describes the analysis of potential determinants to the adherence to ARV therapy among HIV-infected children from five hospitals in Addis Ababa, Ethiopia, in the first semester of 2008. After enrolling 390 children and collecting socio-demographic and clinical data through structured interview, the authors found some factors associated with adherence, such as payment for child treatment, the provision of nutritional support for children, the co-administration of co-trimoxazole, and the awareness of the caregiver’s health problem. The authors report a high adherence rate compared to other countries.

The study provides important information about adherence in a resource-limited setting, which is rare and contributes with information to the field. However, a number of important issues should be taken into consideration by the authors to ensure sufficient adequacy for publication, as follows:

Major Compulsory Revisions

1. Table 1 should have data on both groups (adherent and non-adherent) instead of the total dataset. In addition, statistical comparison of all parameters for both groups should be performed, and significant differences pointed out.

2. The authors describe at the end of page 6 (Results section) the characteristic of household income from the caregivers, and cite Table 1. However, Table 1 does not have information on household income. It should be included in the Table.

3. Finally, Table 1 should also include data on the time of exposure of each group. Authors state that the inclusion criteria of the study had children that were on ARV therapy at least for 12 weeks prior to the survey. However, it is not clear whether differences were observed in total time of treatment between the adherent and the non-adherent groups. This is very important since the authors discuss the effect of time of ARV treatment on adherence in the Discussion section.

4. Table 2 contains data on provider’s estimate of adherence, which makes much more sense to be in Table 1. Table 2 depicts only clinical markers of the study.

5. The parameters in Table 2 should be statistically tested for differences between the two groups analyzed (adherent X non-adherent).
6. One of the parameters evaluated in the study was the attitude of the caregivers toward the administration of ARV to children. This was classified as “favorable” or “unfavorable”. However, the definition of these values for the variable is not described anywhere in text. It should be included in the Methods section.

7. A better categorization of adherence levels could be performed, for example the number of doses taken. Authors could use the categories 100%, 100-75% and less than 75%.

8. Was there any difference observed among the four drug schemes utilized? Particularly between the use of NVP X EFV?

9. Authors should discuss the issue of the caregivers’ belief in the benefits of drug treatment to their children, since 10% of them did not believe in the drugs. This appears to be a major issue for future intervention in public programs of population awareness.

10. Authors should also discuss the fact that NNRTI-containing regimens are more prone to adherence than other HAART regimens. This is widely evidenced in the literature.

Minor Essential Revisions

11. English and typographical errors should be revised throughout the manuscript. English is poor and there are multiple typographical and lexical errors in the text, and also inappropriately capitalized words.

12. Several abbreviations are not explained in the text, such as “FA” (page 8) and “PLHIVs” (page 10). Please provide terms in full, especially since they are not used more than once in the text.

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

**Quality of written English:** Not suitable for publication unless extensively edited

**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.