Reviewer's report

Title: Exclusive Breastfeeding among Women Taking HAART for PMTCT of HIV-1 in the Kisumu Breastfeeding Study

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Reviewer: Nigel Rollins

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General comments

The manuscript reports exclusive breastfeeding rates among HIV positive mothers who participated in a study examining peripartum and postnatal HIV transmission rates when mothers received antiretroviral drugs. The findings presented relate to breastfeeding rates and determinants of infant feeding practices in this population. It is a well-written paper with generally clear messages.

However, there are several methodological points and limitation that are not adequately described that could significantly influence the results. These should be clarified and addressed in a revised manuscript. The results though are probably still significant and warrant publication.

More thought is needed in terms of their implications for HIV and MNCH programmes today.

Major points

1. Methods. The authors should describe the ARVs provided for preventing transmission (they are described in a table later) and the criteria applied for lifelong treatment.

2. Data collection. The way in which the timing of clinic and home visits were conducted is confusing. The authors state the timing of visits as the number of weeks ‘pre-weaning’ and ‘post-weaning’. However, it is not possible to know with certainty when any one woman will wean her child and therefore schedule a visit accordingly. It would be better to describe the planned visit schedules according to the age of the infant or gestation of the mother’s pregnancy.

3. Data collection. The authors should provide more detail re. how questions were asked regarding infant feeding practices especially over what period prior to the visit were feeding practices assessed i.e. did questions capture feeding practices over the preceding 24 hours / 2 days / week / or since the last visit. There may be significant recall bias with longer durations that may affect the quality of the feeding data and interpretation of results.

4. Methods. The authors should provide more details on how they defined the different infant feeding practices and the statistical analyses / algorithms that they
used to create feeding categories for the analysis. For example, if a mother said that she gave a small amount of water on one occasion only but otherwise only ever gave breastmilk, was this still regarded as exclusive breastfeeding or not. Was there a certain frequency of ‘non-adherence’ to only breastfeeding before a mother was considered to be mixed feeding. How did the authors deal with missing data – how much missing data was needed before data was censored or was there any imputation if data was missing for only one visit? How was data handled if the feeding practices after a missed visit was the same or different from the feeding practice before the missed visit? Did the analysis have cumulative/continuous data so as to be able to consider every day over the entire period of breastfeeding (see question 3 above) or did the authors essentially analyse a series of snapshots related to feeding practices in the preceding 24 hours.

5. Results. It is surprising that the authors did not perform a logistic regression analysis of factors associated with exclusive breastfeeding. Perhaps this was because there was relatively little variability in feeding practices. While the authors state that there was no association between breastfeeding adherence and a number of factors that they anticipated being influential, the data is not presented in such a way for readers to see this for themselves. It would be of interest to know if EBF adherence was similar if mothers were on lifetime ARVs or just prophylaxis, baseline CD4 counts and according to adherence to ARVs.

6. Results. Also, was there was any relationship between number of actual visits of mothers to the clinics, or home visits successfully conducted by the research staff, and EBF rates? Was EBF non-adherence higher among those who did not attend clinics, who lived further from clinics or among those who did not receive as many scheduled home visits as the others?

7. Results. One of the main confounders for feeding practice may be infant morbidity. The authors likely have these data and they should provide some analysis of whether there was any relationship between continued feeding practice or change in feeding practice following a morbidity event i.e. was there any reverse causality.

8. Results. The authors state that by 9 and 12 months, 35 and 23 mothers continued to breastfeed and of these 15 and 12 infants were HIV-infected. What happened to the 3 infants between 9 and 2 months - ? lost to follow-up? It is hard to interpret these data without knowing the timing of infection. If these infants were infected peripartum then this would have been entirely appropriate (WHO guidelines). What was adherence to ARVs among these mothers? As written the statements are not helpful and readers are left wondering how to interpret these sentences.

9. Discussion. The authors do not discuss how study methods, especially how data were collected and analysed might influence their findings.

10. Discussion. The counselling and support by the research team was intensive and quite atypical from normal support provided by the health system. This is
understandable given the nature of the study. The authors conclude though that strategies to promote EBF should be incorporated in routine services but do not discuss the feasibility with respect to staff time and other workload and whether a lower level of support compared to that provided by the study would likely to effective. The implications for programmes and general recommendations are not substantially discussed.

Minor points

11. Introduction. The first sentence refers to a current WHO recommendation that is incomplete. The WHO recommendation recommends exclusive breastfeeding and ARVs. As it reads presently, the text refers to an old recommendation from 2006 that was current at the time when the study was undertaken. The authors should either include text to indicate that the current WHO also recommends ARVs (as per the reference cited), or indicate that the sentence refers to an old recommendation.

12. Introduction. First paragraph, last sentence. I think this refers to successes in ‘promoting’ exclusive breastfeeding. As it reads, it seems that there is limited data on the efficacy of exclusive breastfeeding on improving health and survival which is incorrect.

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests