Reviewer's report

Title: Associations between gestational anthropometry, maternal HIV, and fetal and early infancy growth in a prospective rural/semi-rural Tanzanian cohort, 2012-13

Version: 3

Date: 21 July 2015

Reviewer: Kathleen Powis

Reviewer's report:

Summary: The authors have addressed the vast majority of concerns outlined in the second review of this paper. The only remaining issues are as follows:

1. In response to a question raised about the use of infant prophylactic Nevirapine, the authors responded that “This study was not designed to investigate the impact of antiretrovirals on growth among HIV-exposed infants and nevirapine adherence was not ascertained; therefore, we are unable to speculate on this”. This very sentence should be included in the DISCUSSION section of the paper under limitations and could even conclude with a suggestion for a future research question, is ARV infant prophylaxis associated with growth differential and is this growth differential helpful or harmful for the HEU infant.

2. In the original manuscript, the authors indicated that women had to be less than 34 weeks gestational age. When questioned about the accuracy of that eligibility criteria based on reported mean gestational age at enrollment in Table 1 with standard deviation, the authors indicated in there 1st response to reviewer comments that this was an error and should have been 36 weeks. Yet, there were still disparate data and the accuracy of the 36 weeks gestational age as an eligibility criteria was question in the 2nd review. We now learn that there was no gestational age eligibility criteria. While there is nothing to alter in the manuscript, it is a bit worrisome that it took two iterations for the authors to accurately describe study eligibility criteria and this causes one to worry about what other inaccuracies exist in this manuscript.

3. The authors have partially followed a recommendation to specify the unit change in MUAC and the related impact on WAZ and LAZ. However, the request was not fully accommodated and the manuscript remains a bit challenging to understand. Instead of saying “MUAC modeled as a continuous variable was also significantly associated with overall infant WAZ (for each 1 cm increase in maternal MUAC; #=0.11, P <0.001) and LAZ (#=0.11, P=0.001), it might make more sense to the reader to say “MUAC, modeled as a continuous variable, was also significantly associated with infant WAZ and LAZ, with each 1 cm increase in maternal MUAC associated with a +0.11 (p<0.001) increase in infant WAZ, as well as a +0.11 (p=0.001) increase in infant LAZ.

4. In the prior review, the authors had been challenged to marry, within the text,
the fact that the poorer growth outcomes observed in the cohort of HIV-exposed infants occurred despite the fact that their HIV-infected mother sought antenatal care earlier and the HIV-exposed infants had a longer period of breastfeeding, albeit both groups of infants breast fed for a period significantly shorter than recommended by the World Health Organization. To provide the reader with the fact that the longer period of breastfeeding was woefully short relative to WHO recommendations over 60 lines later requires the reader to make a connection. The short period of breastfeeding needs to be stated up front in the discussion which starts on line 302 and can be readdressed at line 367 in a discussion of the study’s limitations.

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

**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.