Reviewer's report

Title: HIV care and treatment factors associated with improved survival during TB treatment in Thailand: an observational study

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Reviewer: Neil Martinson

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This is a great manuscript and particularly important in view of firstly, the high mortality rate in TB patients and secondly, the recent early stopping of the delayed arm of a large randomised trial of the timing of HAART in HIV-infected TB patients.

Major Compulsory Revisions

1. Describe the facilities that were included in the study (how many out-patient how many hospitals?)and if any were omitted and why.

2. Regarding Table 1: There are repeated items: Delay in HIV diagnosis and CD4 count <200 at enrollment are the same measure. Instead of lists of absolute numbers and percentages consider including median CD4 count with IQRs median BMI and IQRs, Median VL, Hb etc etc. Also the list of characteristics in Table 1 is too long. Select important ones for inclusion. It would be nice to see differences between those who survived v those who died (possibly add a p-value column). For the TB outcomes, consider N/A or --instead of zeros for those whose outcome was death.

3. Although this paper is about survival only one unadjusted statistic - the proportion who died is reported. Consider adding a table of person time mortality rates (95%CIs) and rate ratios; this is especially important for reporting stratified mortality rates for HAART or cotrimox use, hospital admissions, CD4 strata etc etc prior to reporting the proportional hazards. Likewise for table 3’s adverse events. An important conclusion of this paper is that early HAART (and fluconazole use) reduces mortality. Can you show this using unadjusted person time based rates?

4. To reflect CD4 count heterogeneity, instead of using it as a binary variable, include it either as a continuous variable (possibly divided by 100) or stratified into commonly used strata. Furthermore, are the same variables being used in the model if HIV diagnostic delay (CD4 based), HAART use - the initiation thereof is also CD4 count based - and severe HIV disease are included?

Minor Essential Revisions

1. Is it necessary to include the sentence on composite wealth index and psych support score? As far as I can see it is not used in the analysis.

2. How was self reported weight loss of >10% assessed?
3. Add deaths as an adverse event to table 3.
4. Reformat Figure 3 highlighting 1 as the magnitude of the early protective effect of HAART on mortality is not well shown (maybe try a log scale). Also, the key should be better explained (expon bac?).
5. Should the survival plots (Fig 2) be out to 800 days when first time TB treatment is for 180-240 days? Or justify why there is follow up time to 800 days.
6. Add a sentence about the power of your sample to detect differences in EFV v NVP regimens.

Discretionary Revisions
Justify your choice of definitions of severe HIV and delays in HIV diagnosis.
Shorten the tables - make them more clinically relevant.
Refer to the stopping of the CAPRISA SAPIT trial in Durban in September 2008.
Refer to studies from Cape Town assessing outcomes in HAART-treated adults with TB.

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 I have no competing interests