Reviewer's report

Title: Prevalence and pattern of HIV-related malnutrition among women in sub-Saharan Africa: a meta-analysis and meta-regression analysis of demographic health surveys

Version: 2 Date: 26 December 2007

Reviewer: Haroon Saloojee

Reviewer's report:

Major Compulsory Revisions

1. Grammar and spelling requires attention throughout text (too many mistakes to individually highlight each).
2. The application of the study findings need to be better explained. What is the value of knowing that 10.3% of HIV-infected women are malnourished in these 11 countries? The author offers general advice â malnutrition should be prevented, detected, monitored, and treated from early stages of HIV infection before wasting syndrome develops.â, but does highlight the contribution of the study adequately.
3. Generalisability- offer comment about the relevance (generalisability) of these findings to other sub-Saharan countries.
4. Need to provide more detail in the Methods section about the construction, and classification used, of the wealth index, standard-of-living score and occupational status. Alternatively, cite references to previous work validating the method used.
5. The categorisation of age and marital status as performed in the study needs to be justified.
6. Report number of women who were malnourished.
7. Indicate if differences between, for example, richest and poorest women were statistically significant.
8. Reliability of data in Figure 5 questionable. E.g. why are prevalence rates higher than the average for all marital status categories? Similarly parity?
9. The Reference section is fraught with errors- make this section Vancouver-compliant.

Minor Essential Revisions

1. Abstract
   a) â The worldâs highest HIV infection rates are found in southern Africaâ inappropriate to refer to southern Africa at outset when review is about SSA.
   b) â Based on national data in the sub-Saharan Africa (SSA)â change to â Based on national data from 11 countries in sub-Saharan Africa (SSA)â
c) Remove â##comprehensiveâ##
d) â##using the random-and fixed-effects modelsâ## â##remove â##theâ##
e) â##Thus, providing more information about population subgroups in particular 
need.â## â## incomplete sentence
f) Conclusion inappropriate- does not reflect study findings.

2. Methods
a) Explain why these 11 countries selected. How many other country DHS 
databases were available? Did only the selected countries collect maternal 
nutritional status and HIV test data in their national surveys, or was this about 
adequacy of data?
b) Why were standard-of-living scores calculated?
c) Detail provided of fixed- and random-effects models appears superfluous. 
Similarly, Cochranâ##s Q test.
d) Prefer â##participantsâ## to â##subjectsâ##
e) Was ethical clearance to perform study necessary, and if so, was it obtained?

3. Results
a) Reference to Figures 1 and 2 not found in text. Not convinced that they add 
value in a paper such as this.
b) While Figure 3 is â##prettyâ##, the difference in colours is difficult to 
distinguish and the data is better presented as a table.
c) â##In addition, the selected countries typify rapid urbanization amidst declining 
economies.â## Evidence presented does not validate this statement.
d) â##Figure 2 graphs the prevalence estimates and 95% CIs from the individual 
countries and pooled results.â## Is this Figure 4?
e) â##indicating that the degree of variability between countries was consistent 
with what would be expected to occur by chance alone.â## Incorrect 
interpretation of Cochran Q test
f) All table headings need better description, particularly Table 3.
g) Table 1-
a. could you include number of HIV positive women and number of malnourished 
women as columns?
b. Malawi spelt wrongly
h) â##Table 3- Large tables are attached as separate files but should still be 
described here.â## â## do not understand this.
i) Figure 4 â## what determines weight? Is it the relative proportion of all 
HIV-infected malnourished women?
j) Figure 5-
a. Would be useful to have number of participants in each category
b. Why could data from all 11 studies not be used for age data?
c. Why are prevalence rates higher than the average for all marital status categories? Similarly parity?

4. Discussion
a) First paragraph is merely a repetition of results- summarise more effectively
b) Who were the participants in Hong’s study, i.e. were any HIV-infected?
c) However, there is also some likelihood of underestimation: even though BMIs of 11.0-13.0 are compatible with survival, there is increased risk of mortality at extremely low BMIs [15, 43]. Do not understand this. Why is there a risk of underestimation?
d) Note comments about generalisability and application of study findings under major compulsory revisions

5. Conclusion
a) As stated in criticism of abstract- the last two sentences do not reflect study findings. More direct benefits of the study findings need to be presented.

Discretionary revisions

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

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