Reviewer’s report

Title: Risk factors for cervical precancerous lesions and determinants of screening attendances in Dar es Salaam, Tanzania

Version: 3 Date: 13 September 2012

Reviewer: Megan Smith

Reviewer’s report:

Thank you for the opportunity to re-review this interesting article. A number of the previously raised issues have been addressed. In some cases, however, I feel they were not fully addressed, and so some issues remain.

Minor Compulsory Revisions

1. Page 4, Methods, para 2 - There is still no reference given for national household survey, which was used to select the reference group. Without this reference, it is not possible to determine the methods and representativeness of that survey. Please provide a reference for the survey.

2. Page 5, Methods: Some additional information has been provided regarding the recruitment, however there is still no information re who interviewed the women (p5, para 1 in ‘Cervical cancer risk factors and screening attendance’ states that they were interviewed)? Also were all women screened from February to June 2008 invited to participate, or was some sort of sampling used? If all women were invited, what proportion agreed to participate?

3. Table 3 – the 95% CI for the adjusted OR in the third row appears to be reversed

4. Table 4 – for this table to be meaningful, I think age should be adjusted for, or the data stratified by age. I note that another reviewer also suggested this, but that the authors state that age was not a confounder in the multivariate analysis. I was unsure which multivariate analysis is being referred to? There is not additional text in the Results section saying that a multivariate analysis was done for Table 4, and age was significant in the multivariate analysis for which results are shown in Table 3. There is also an argument of face validity for accounting for age somehow in Table 4, as HPV prevalence generally does vary by age, and the authors have found that screening attendance also does. Providing age strata might also help to clarify why the screened population does not have a higher HR HPV prevalence than the unscreened - given that HIV positive women are over-represented in the screened group, this is what you would expect, after accounting for other things. Possibly because of their age, but Table 3 suggests that is not the whole explanation. Potentially the HIV negative women who are screened are a comparatively lower risk group of HIV negative women? Also, I found the layout of this table confusing in relation to the text. The table layout suggests that it is looking at the relationship between HIV status and screening
attendance (stratified by HPV status), but the text in the results section suggests something different – that it is looking at the relationship between HIV and HPV (stratified by screening attendance).

5. Page 7, Results, para 1 – the subpopulation of screened women who participated appear to have been younger compared to all screened women (and not younger, as the text here states)(Table 1).

6. Page 8, Discussion, para 1 – By using the word ‘additionally’, the second sentence implies that screening attendance was associated with all of the same factors as VIA (high age, low education, being widowed/ separated, married at younger age and higher parity) plus HIV positivity. But this is not true for parity, and marital status and age at marriage were not assessed in relation to screening attendance. Age at first intercourse may be similar to age at first marriage, as discussed by the authors later, but this is not significant either. Please reword the second sentence to clarify which factors were associated with screening attendance so this does not include parity, age at marriage or marital status.

7. Page 8, Discussion, para 1 – regarding the finding that screening appeared to be associated with age (and older women more likely than younger women to be screened) – Table 1 indicates that the sub-population of screened women who participated in this study were older than the full screened population. Therefore, it is possible that this finding might be due to the subsample of screened women who agreed to participate being biased towards being older (or in any case is a factor which limits its interpretation). This should be stated.

8. Page 8, Discussion, para 2 – in para 3 of the Background section of this article, the overall prevalence of HIV for women in Dar es Salaam is given as 6.8%. Here in the Discussion this is said to be in line with the HIV prevalence in the unscreened women in this study (8.8% of all unscreened women in the study, or 9.4% of the women for whom HIV status was available). This does not seem right – your unscreened group has a higher prevalence than the general population, but if anything it should perhaps be lower, since HIV positive women are more likely to be screened, and so less likely to be in the unscreened group.

9. Page 9, Discussion, para 4 – Younger age at marriage has been left out of the list of factors found in this study to be associated with VIA positivity.

10. Page 9, Discussion, para 4 – Some of the explanations for the associations involve other factors already accounted for in the model. For example, the explanation that the association with lower education levels might be due to younger age at marriage – but younger age at marriage is in the model; there appears to be an additional effect due to education. Similarly, that these are associated with higher parity – but parity is also accounted for in the model.

11. Page 10, Discussion, para 8 – “Women who were HR HPV positive were significantly more often infected with HIV…” As the study is cross-sectional, so could not determine whether the HPV or HIV was acquired first (or at the same
time), it would be better to describe the relationship as an association. The current wording suggests something more than that.

**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 that I have no competing interests