Reviewer’s report

Title: Cervical cancer screening in Dar es Salaam, Tanzania - A situational analysis

Version: 1 Date: 1 June 2012

Reviewer: Megan Smith

Reviewer’s report:

Major Compulsory Revisions

1. Subjects and methods section, paragraph 2: I understand that there may be a parallel manuscript in preparation describing the recruitment of the reference group in more detail (given the reference “(Kahesa et al forthcoming)”), however as that is not available, I feel that some more details are required here about the study. For example: over which time period were participants recruited? How were they approached (eg via a home visit, via telephone, some other method?)? Where did they need to attend to have samples collected for HPV / HIV testing? How were they interviewed (eg face to face, by phone) and by whom (eg study personnel, nurse)? Why were the three municipals chosen? It mentions that the reference group was chosen using a national household survey, but there is no reference given for the survey, and so it is not possible to determine the methods and representativeness of that survey. Some of these questions relate to the sub-group of screened women also – for example were all women screened from February to June 2008 invited to participate, or was some sort of sampling used?

2. Discussion – The discussion does not really examine either the strengths or the weaknesses of this study. In particular, it does not discuss potential biases in the study. I think for example that there would need to be some discussion regarding how representative the sub-population of women from the screened group may be of screened in women generally, and likewise the representativeness of the reference group of unscreened women. For example, the unscreened women are from three municipalities within Dar es Salaam, but it is unclear where the screened women lived.

3. A table comparing the characteristics of the overall group of screened women with the subgroup of screened women who were interviewed etc would be very valuable. It would give some idea, for example, of how representative the subgroup is of the larger population of screened women.

4. The authors state in the abstract and the results section that there was no significant association between HR-HPV infection and screening attendance, but that there was for HIV infection. However given that HIV+ women are over-represented in the screened group (for reasons explained by the authors) and there was a strong association between HIV positivity and HR-HPV positivity, this seems surprising. You would expect a group with an over-representation of women who were HIV+ to also have a higher proportion of
women who were HR-HPV+ (after adjusting for age, which the authors did). It seems very likely that HIV is a potential confounder when attempting to examine the relationship between HR-HPV and screening attendance, since it is associated with both of these factors. In order to make a conclusion about whether there is or is not an association between HR-HPV and screening attendance, I think that HIV status should be adjusted for. Then you could get an idea if, among HIV negative women, those who attended screening were more or less likely to be HR-HPV+. Note that while the information in Table 3 shows the relationship between HIV, HR-HPV and screening attendance, this is insufficient to address this point because (unlike in Table 2), age has not been adjusted for.

5. Following on from item 4, couldn’t a multiple logistic regression analysis have been done in such a way that all variables were used in the same model, or tried and an explanation of which were left out and why (rather than adjusting for age only)? This would have dealt with queries in the readers’ minds such as the potential for confounding between HIV and HR-HPV, which adjusting for age only has not.

Minor Essential Revisions

6. Introduction, paragraph 1 – The comments regarding the rates of cervical cancer in Australia and New Zealand are not consistent with the best available data from those countries. The sentence claims that age-standardised incidence in both of these settings (as well as in the North America) is “less than 6 per 100,000.” I assume that these would have been standardised using the WHO population? In that case, the most recent rate for New Zealand (for 2008) is 7.1 per 100,000 women, and rates have been over 6 per 100,000 women since at least as far back as 1995 (presumably longer, as rates have been dropping since then due to screening). In Australia, age-standardised incidence for the most recent year available (also 2008) is 6.0 per 100,000 women. In some recent years incidence has fallen below 6 per 100,000, but the data suggest that it has been reasonably stable at around 6 per 100,000 since around 2001. So I think in neither of these cases would it be really accurate to say rates were “less than 6.0…”

7. Introduction, paragraph 3: Could more information be provided about the reach of the screening service offered at ORCI – for example is it national, regional, or just within Dar es Salaam? If it is not limited to women in dare s Salaam, Is there any information on what approximate proportion of women would be from outside Dar es Salaam use this service? It would be informative to compare this with where women in the reference group were from.

8. Table 3: There appears to be an error in the first row of column labels – both are labelled as those who participated in the screening program; it appears that the right column should be the 845 women who did not participate, and that this is where the ** footnote should go.

Discretionary Revisions

1. Introduction, paragraph 3: Does the routine screening service at ORCI (ie that
offered after the initial project ended 2005) include both VIA and VILI (as in the initial phase) or VIA only? It would be good to clarify this point.

2. Methods, VIA status and socioeconomic and reproductive characteristics sub-section, paragraph 1: Similar to the previous point – were women screened by VIA and VILI, or by VIA only? The text as it stands could mean either of these things, so please clarify this point.

3. Methods, Cervical risk factors and screening attendance sub-section, paragraph 4: It would be useful to explain very briefly the rationale for re-testing samples which were positive on the Trinity Biotech’s Uni-Gold Recombigen test using Abbott determine HIV-1/2.

4. Results, paragraph 1: For greater clarity re which group of screened women is being referred to, I would suggest changing “7%...of the screened women were found...” to “7%...of the women screened during the period 2002-2008 were found...”

5. Table 2: It seems that uptake of the voluntary HIV test was quite high in both groups (>=90%) – this could potentially be highlighted as a strength.

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

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