Reviewer’s report

Title: High potentials of escalating HIV transmission in a low prevalence setting in rural Tanzania

Version: 2 Date: 17 November 2006

Reviewer: Dik Habbema

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General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The findings on risk factors are not compared to those elsewhere in Eastern Africa. Such a comparison should be made in order to place the local findings in a broader perspective. My guess is that risk-behaviour is not higher than elsewhere. <!--[endif]-->

The answer to the representativeness question of ANC-based surveillance appears to be that it is representative in the age category 20-39; but not in the younger age category 15-19. No information is available in the ANC for comparison in ages 40-49, contrary to what is suggested in the middle of page 9.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

- While point estimates for results are given with one digit, confidence intervals are given with 2 digits. This is not appropriate. Confidence intervals should also have 1 digit.

- There are a number of unclarities in definitions used. For example, does “remote rural” only relate to the presence of 3 or more general utility shops and an established health facility not being available in a village, or has it also to do with remote difficult terrain and the total absence of utility shops instead of 1 or 2 shops. It is unclear if, concerning the use of contraceptives, there are other categories than condom use or no condom use. What is meant with “use of contraceptives other than condoms”? is this a third category?

- Page 11, line 3: Africa should be changed in Eastern Africa, as in Sub Saharan Western Africa there are many areas with low HIV prevalence.

- It is not clear why data on “incentive sex” were not conclusive due to small numbers (page 13 below). The number of male residents is about 750. This denominator determines the precision of an estimate. Thus, if only a small number of men engage in “incentive sex “, it is conclusive that only a small number indeed engage in it. The same reasoning applies to women. Or did I understand this sentence wrong?

- This is a cross-sectional study. How can you draw the conclusion that the HIV epidemic is “apparently increasing”? for example page 2 below?

- Why is a design effect of 2 taken? Justify. Page 5, below.

- The background (page 4) starts with the remark that prevention efforts have not been given priority in low prevalence areas. This implicitly means that it has been given high priority in high prevalence areas. Is this true? The reasons for not given priority in the next lines do not depend on HIV prevalence.

- The authors suggests on a few places “contextual HIV prevention efforts” but it is not made clear how important it is for the area studied.

- Table 3 is only adjusted for age (and not for age and sex as stated on page 9, 7 lines from below).

- Is it necessary that all analyses are for men and women separately?
In table 3, the reference category for income is missing.

In tables 3 and 4, the categories for contraceptive use are unclear.

Discretionary Revisions (which the author can choose to ignore)