Reviewer's report

Title: HIV Surveillance in a Large, Community-Based Study: Results from the Pilot Study of Project Accept (HIV Prevention Trials Network 043)

Version: 2 Date: 4 July 2011

Reviewer: Eline Op de Coul

Reviewer's report:

Dear Editor,

Herewith I sent you my comments on the paper ‘HIV surveillance in a large, community-based study: results from the pilot study of project accept (HIV prevention trials network 043)’

This is a large community based surveillance study including a validation of two rapid HIV tests (under local circumstances) and seroprevalence calculations in various countries. One of the strengths of the study is the community based sampling. Most studies in developing countries focus on HIV testing in pregnant women which may underestimate the true population prevalence. Studies including community based sampling are valuable; therefore, the study includes useful data. Also the context of the study is clear and the paper is well written. I suggest the following revisions:

Major compulsory revisions:

- I have a methodological note on the prevalence calculations. The authors describe community randomized cluster sampling based on households. However, it seems that the authors did not correct for the fact that persons from the same households were included in the prevalence estimate. This cluster-based sampling should be taken into account since it influences the overall population prevalence. In SAS one could used ‘proc survey freq’ in stead of ‘proc freq’ to correct for that; other statistical programs have similar options. Furthermore, if community sizes vary to a great extent, especially when participation rates differ between communities (the paper does not provide information on numbers and sizes of communities per country) the authors may also need to include ‘weighting’ factors. Statistical advice might be needed. The methodology of the HIV prevalence calculations should be added to the methodology section and the results should be presented in Table 2.

- Although the authors show promising results of two rapid HIV tests (with low false- positive and -negative results), I missed a clear conclusion on the use of these rapid tests for individual diagnostics in developing countries. Also many questions remained unanswered. Can they be applied on large scale (always combined or also separately?). Can the same tests be used on finger pricks? (if not, why not?). The benefit of rapid testing is that test results can be
reported back right away. In this study, the participants were informed on how to access their test results, but this process is not described in detail. How were the circumstances? (discretion guaranteed?). Was there any active follow-up (since most participants did not seek their results!), and if not: why not? If people did collect their test results and test results were positive: did they receive any treatment? Are these rapid tests also reliable in low prevalence settings? (0.1-0.2%). Also in pregnant women? Perhaps these questions were addressed in other papers of project Accept, but it should be more clear to the reader without having to collect these others papers.

Minor essential revision:
- Please include 95% CI for all key figures

Discretionary revisions:
- Was there any information collected on reasons or characteristics of persons who refused to participate? What were the reasons for the lower % of eligible participants in Thailand and Tanzania compared to South-African sites?
- Discussion: a more in-depth comparison with other studies using the same rapid tests would be interesting (similarities/differences?).

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests