Reviewer's report

Title: Association between fertility and HIV status: what implications for sentinel serosurveillance?

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Reviewer: Jesus M Garcia Calleja

Reviewer's report:

The paper is interesting as it touches some of the issues in relation to HIV estimates and some of its assumptions. However there are several issues that need to be address.

First of all the title needs to be changed, the title does nor reflect the discussion, as the implications are not for HIV serosurveillance but rather for HIV estimates.

Second : some specific comments

Introduction:

The issues discussed are relevant mostly to HIV estimates in generalized epidemics not all developing countries, in act about 40 countries out of 152 low and middle income fall under the generalized epidemic category.

The authors used old, references regarding HIV estimates and assumptions, it needs to be revised in the light of the last publication in STI journal Improved methods and tools for HIV/AIDS estimates and projections June 2006 Volume 82, Supplement 3 http://sti.bmj.com/content/vol82/suppl_3/

There are other several bias that are not mentioned in the introduction regarding ANC like the level of contraception use in the country and coverage of ANC services

Methods : OK

Discussion:

The findings seems to be consistent with other international but the authors seems to miss the point of the use of this result on HIV estimates.

The reference 20 is incorrect, there is not such information in 2003 HIV sentinel surveillance report. The methods proposed by the authors and the use of this information are referred to very old papers references 26 and 27 (1996 and 1999). The authors have not checked how this information is used in the new assumptions for HIV estimates, see Stover J et all in the STI journal or the document produced in Cameroon "DOCUMENT DES ESTIMATIONS ET PROJECTIONS EN MATIERE DE VIH/SIDA : 1990 - 2020 by CNLS - MINSANTE CAMEROUN ". where fertility issues are considered in the estimations and projections
More comparisons should be made with other African countries. Comparisons with European countries where fertility, contraception use are very different.

thord: The authors will need to revise their conclusion on the light of new readings

**Level of interest:** An article of importance in its field

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

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'