Reviewer's report

Title: Monitoring HIV prevalence: moving towards improved validity and resource saving by replacing antenatal HIV surveillance estimates with prevention of mother-to-child HIV transmission programme estimates

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Reviewer's report:

The manuscript presents an interesting and actual subject of discussion in the field of HIV surveillance and estimates for the African region. Here are some comments and suggestions. These are major compulsory revisions

Background:
The authors should use standard and well-accepted terminology like ANC; HIV sentinel surveillance and no AHS.

There is very limited review of literature and publications, Here is a link that presents the issues and relevant references to this issue

The rational can be improved, as it is not the lack of funds but also the ethical principles of informing Pregnant women of HIV results.

The authors affirmed that because budget cuts, ANC surveillance needs to be changed, and yet Ethiopia is one of the biggest recipients of funds by GFATM and PEPFAR, so it is not completely correct.

One of the major methodological issue is not the external validity but the bias in both ANC and PMTCT surveillance. One issue for instance not mention is the ANC coverage in the country, what is about 30% and bigger in urban areas but will affect both results.

The authors mention the DHS survey results as the golden standards. I will recommend to read the following paper about that and to refer to the issues raised also with DHS

In last paragraph, it is said that ..funding reimbursement has dropped by 10%....This is is not clear, what t means exactly?
Methods:
There is nothing there about the different HIV strategies used for PMCT (diagnosis) vs, surveillance for ANC and DHS and the evolution of resting technologies that can affect results and comparability as well.

The authors said that there were 565 months PMTCT reports from 2004 to 2009 for all 10 clinics. Are these 5 or 6 years ?, how many reports were collected from the total ?, 120*6= 720 or 120*6= 600 ?.

How was the data collected ?., The PMTCT reports are monthly log books but the ANC are individual basis . Were the data for ANC collected and revised the original or from the yearly FMOH reports ? There were reports for all the ANC clinics ?, were these the same clinics than PMTCT data ?.

What about the data quality for PMTCT ?
The survey data : were these facilities the same than the PMTCT and ANC or were very different ?, in fact among them there are 3 private ones.

Results
Were any comparison on the demographic and age back ground of the 3 different populations ?, standardization of these 3 different populations by age, would improve the comparability of results.

It is possible to compare not only overall HIV prevalence, but also for different age groups for 5 years breaks ?

Discussion
The discussion is weak and the conclusions and assertions are done quite lightly only based in the overall brut results.

The whole issue of quality of data, potential bias for PMTCT as well and the row and cons of phasing out ANC surveillance could be discussed. The authors made very easy conclusions without investigating more deeply on the problem,

The references I sent should illustrate the complexity of the problem.

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:

no to all