Reviewer’s report

Title: One size does not fit all: HIV prevalence and correlates of risk for men who have sex with men, transgender women in multiple cities in Papua New Guinea

Version: 2 Date: 18 Mar 2019

Reviewer: David MacLaren

Reviewer's report:

Thank you for the opportunity to review this manuscript.

This study is very important. The study provides essential evidence about HIV prevalence and correlates of HIV for men who have sex with men and transgender women in PNG. Conducting such research in this setting is extremely challenging. The authors are to be commended for successfully completing the study. The authors have produced a comprehensive and well-written manuscript, which describes their study, presents the results and discusses the implications for HIV transmission and HIV prevention in PNG.

My assessment is that this manuscript should be published. However, there are a few places throughout the manuscript that are cumbersome/unclear and require relatively simple re-wording and/or clarification prior to publication. I list these below:

* Line 74. "less than half of MSM/TGW has tested for HIV given time frame" is unclear. Consider re-wording.
* Line 234. Insert the words 'ever tested' into sentence for clarity and to reflect the wording in the table.
* Line 235 - 236. Need to be explicate that the HIV prevalence results stated in line 236 are from the HIV tests conducted as part of the study, not from the previous testing referred to in the previous sentence.
* Lines 284 - 285. This sentence states that the low proportion of travelling outside Port Moresby is a protective factor for HIV, when the HIV prevalence is highest in this study in Port Moresby. Authors need to explain this point further or re-word this sentence.
* Line 300. This sentence states that the study was able to reach MSM and TGW that were not engaged in HIV services, however the study results state that between 25 - 40% of study participants had previously tested for HIV. Consider re-wording/clarifying this sentence.
* Line 304. Consider changing "uptake of HIV services" to "uptake of routine HIV services".
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?
6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal