Reviewer's report

Title: Point-of-care testing (POCT) for HIV/STI among MSM in regional Australia at community 'beat' locations

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Reviewer: Aryan Esmaeili

Reviewer's report:

The manuscript with the title of "Point-of-care testing (POCT) for HIV/STI among MSM in regional Australia at community 'beat' locations". The authors proposed the following objective:

1) Evaluate the acceptability and feasibility of a mobile clinic van intervention as a method to engage MSM in regional Queensland with anonymous HIV/STI POCT; 2) Describe characteristics of early adopters of this service; and 3) Describe facilitators and barriers to implementation of this timelimited program. In-depth qualitative analyses of peer-tester field notes provide rich insights regarding the challenges faced.

However there are some critic in the design of this pilot study and writing the manuscript. My main concern is if this study design is poised to support the objective and the conclusions drawn by the authors who propose a "The acceptability of the mobile van clinic intervention was high among 'early adopters'. It was expected that recruitment would be slow initially while building trust within the community". This is, however, yet to be demonstrated. The following comments may improve the manuscript:

1- The authors didn't estimate the population size of MSM in that area. We know that only 18 MSM (including one heterosexual) have been tested for HIV or syphilis and they have been assessed for the acceptability and feasibility of a mobile clinic van intervention. But we don't know how many MSM live in that area. So, the conclusion would be misleading. This is strong statement to say "Overall, the data from the post-testing questionnaire (response rate 95%) indicated high satisfaction and acceptability of the service". Because we don't have the actual denominator for that.

2- The screening and eligibility process is not clear. Also, it is not clear how many people were assessed for the study by the Peer-testers.

3- The association between selected regional town (community 'beat' locations) and the study population (MSM) is not clear. We need more evidence to see why they chose the beat area for their study. Higher rate of HIV and syphilis prevalence is not good enough for selecting this
area. The geo-social networking applications and websites (Grindr and Squirt) would be better instrument to find more appropriate location. We could prevent most of the study limitation (eg. Personal safety of peer-testers), by identifying and pre specified targeting of MSM and their living area (usually the MSM live in safer area). Then we may have better result.

4- The recruitment process is not clear and if there is any prespecified inclusion and exclusion criteria (the results generalized to MSM but there is a female and heterosexual in their result). Also, we don't have any information about the participants last HIV test, and the interval between testing.

5- The authors have strong conclusion in their study "Consistent with expectations, testing increased over time along with increased community trust.". There is no information regards this statement. In their design, there is no comparison group and it is not clear how other setting work (eg. permanent health care facility, and community culture). Also, asking the question about the acceptability and feasibility of a mobile clinic van intervention (by questionnaire), is not strong evidence to confirm this method as a POCT. This pilot study is conducted to assess the proof of concept.

6- The result for Table 1 could mislead us (simple descriptive is misleading). we want to know the association between different questions. (eg. if the people who want to do the HIV test at home, also want to pay for the test?). Based on the table 1, 100% of participants agreed with the question "Community HIV testing from a mobile clinic van is an acceptable HIV testing method". In contrast majority of then want to do the test anonymously, use a HIV home testing kit, and redo the test at home. So the reliability and validity of this questionnaire is not clear. The expected correlation of two questions that measure the same construct should be evaluated (the Cronbach's alpha test would be helpful).

7- The qualitative analysis of peer-tester field notes is not focused based on the study population and objective (MSM). I would rather to have two different section for qualitative analysis (1- a general inquiry and 2- MSM focused)

8- The process for recruiting the Peer-testers and their characteristics is not clear. We don't know why the authors conclude that "Recruiting MSM via geosocial apps in a regional area was found to be acceptable and feasible". The process for recruiting the MSM is not clear too. It is not clear how Peer-testers identify and approach to MSM.

9- Some of the authors recommendation (page 20 line 20) were not assessed and supported by the result of this study (eg. sustainable and cost-effective over time, and dispersed regional populations).
10- The scientific writing of this manuscript should be re-evaluate: 1- there are some abbreviation that not addressed (NGOs, GP, …) and "Recommendations for the future" would be better to move to discussion section (not in result section).

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
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No

**Are the conclusions drawn adequately supported by the data shown?**
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No

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Not relevant to this manuscript

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