Reviewer's report

Title: Criteria for priority setting of HIV/AIDS interventions in Thailand: A discrete choice experiment

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Reviewer: Lehana Thabane

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This is a report of discrete choice experimental survey and conjoint analysis to determine the key factors of HIV/AIDS intervention strategies which are found to be important by different stakeholders in Thailand. The results of this study are intended to inform policy on priority setting in HIV/AIDS programmes in the country.

This is a statistical review of the report focusing primarily on the design, methods, analysis, reporting and interpretation of the results.

Overall, the objective of the study is important, but the study is poorly designed, executed, analyzed and reported.

Major Comments

1. One the most important aspects of conjoint survey development is the identification of the attributes and their levels. The final list of attributes is assumed to comprise of key attributes that would drive the decision process. In general, these are supposed to be important, actionable, relatively independent attributes, while their levels need to be logically compatible, simple and consistent. It is unclear how all these key features are addressed in the identification process.

2. The design is based on 16 scenarios created from fractional factorial design of a full factorial design of 114 possible combinations. It is unclear how this fractional design was chosen such that an appreciable level of orthogonality is maintained to avoid confounding. This is perhaps one of the greatest weaknesses of the study. In fact, we have no measure of the orthogonality of the fractional design used in the study.

3. What software was used to generate the fractional design?

4. How were the scenarios chosen so as to ensure that the main effects were estimable? What about possible interaction effects?

5. There is no information about how the sample size was determined to ensure the stability of the models. This is another greatest deficiency which is directly linked to the credibility of the results.

6. How were the results validated?

7. How were model assumptions assessed?
8. What software (and version) was used for analysis?

9. The reporting of the results requires some improvement. The results should include not only the estimates of model coefficients, but corresponding standard errors or confidence intervals along with associated p-values.

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

**Quality of written English:** Acceptable

**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'