Reviewer's report

Title: Identifying Priority Technical and Context-Specific Issues in Improving the Conduct, Reporting and Use of Health Economic Evaluation in Low- and Middle-Income Countries

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Reviewer: Ryan Li

Reviewer's report:

This study sets out to explore the main reasons why health economic evaluation studies from low and middle-income countries (LMICs) tend to be of poor quality versus those from high-income settings, and potential solutions. The authors cite reviews that have identified a wide range of "methodological issues" (defined by the authors as "challenges, barriers and flaws that affect methodological quality of economic evaluation") in the reporting and conduct of LMIC economic evaluations; they also highlight the lack of guidance over which issues should be addressed as a priority. The implicit motivation of the study is that with so many "methodological issues" to be addressed, it makes sense to prioritise so that academic partners and development partners/initiatives such as the WHO and iDSI could invest their limited R&D and capacity-building resources into areas with the greatest need and/or potential benefit. In my view, the subject matter is worthy of investigation.

The novelty of the current study is that authors sampled the opinions of LMIC health economic researchers using an electronic survey, asking them to rank the importance of pre-determined issues, propose any additional issues as well as potential solutions. This provides an additional perspective to that of existing literature and high-income country expert opinion. Respondents are expected to have experience of conducting LMIC economic evaluations, and thus could be considered as end users with better contextual understanding of the "methodological issues" encountered, and possibly greater insight into the usefulness and feasibility of potential solutions.

In general, I have no major criticisms of the specific survey methods employed, the representativeness, validity or interpretation of the key findings. I am in fact least concerned about the reportedly low response rate highlighted in the Limitations; with email surveys, low response rates are always going to be a major limiting factor. The 19% initial response rate seems reasonable to me especially considering all WHO regions were captured within the 110 eligible respondents.

The Discussion is in my view the strongest part of the paper - despite a rather thin Limitations section which doesn't capture some critical conceptual issues (see below) - the case for more targeted methodological research and development as well as capacity building efforts is well argued, the conclusions very much policy-relevant and useful for guiding next steps by academic and international partners.

My reservations about the paper are more fundamental ones: what research question(s) does the study set out to ask, and what questions are actually asked of respondents in the survey? I feel
that the conceptual clarity and specificity is missing upfront and throughout the paper, perhaps until the Discussion section. Principally, "methodological issues" appears to confound a range of things, some of which neither appear to relate strictly to methodology, nor do they necessarily warrant a methodological solution.

* For instance, the highest ranking technical issue was "lack of high quality local clinical data". I would however argue that the lack of high-quality local data may make a study's findings and conclusions less useful, but this does not necessarily mean the study would be methodologically poor. To use an analogy: if I were to conduct a systematic review of a treatment's efficacy but found zero relevant RCTs, it would make my review not very useful but that doesn't mean that I used poor methods for my systematic search.

* Among the context-specific issues, most if not all of these relate to issues around "lack of capacity" to generate or use relevant evidence for policymaking (see Li et al 2017). Indeed even within the technical issues, some of the issues appear to relate to (lack of) technical capacity. E.g. "Inappropriate choice of comparator(s)" seems to reflect a lack of awareness or understanding, on the part of health economic researchers, of fundamental methodological principles in health economic evaluation. As the authors point out in the Discussion, a solution may not be in terms of methodological advancement; rather capacity building and awareness raising / knowledge translation might play a more important role.

* The divide between "technical issues" and "context-specific issues". Again the authors themselves acknowledge that the latter are "not easily changed with adjustment in the methodology or the conduct of the study" (p5, line 58), so why include them in a survey aimed at understanding "methodological" issues in the first place? The authors later observe that "context specific issues were considered the bigger barrier which impede the use of economic evaluations" (p17, line 15-16) - so we are no longer (only) talking about the methodology or conduct of economic evaluations, instead we're talking about their usefulness and use in policy - which is a wholly different issue with potentially different solutions.

* Is the study asking "What reasons, in your view, negatively affect the quality of LMIC health economic evaluations (as a whole)?", or "What factors have you found hindered your own experience of conducting and reporting LMIC health economic evaluations?" (or both)? The two are slightly different questions - even disregarding the aforementioned distinction between evidence generation and use - and again the questionnaire as described in the manuscript appears to fail to make this distinction, instead asking about "issues" in a generic way. The specific question(s) asked should be clearly spelled out in the Methods section, and any limitations acknowledged in the Discussion section as necessary.

I appreciate the thrust of the paper is inherent in the first line of the Abstract ("The use of economic evaluation... might be promoted through the improvement of methodological quality of the studies") - the assumption being that if studies are better, then they will are more likely to be used. This assumption is questionable, as the authors find from the results of their survey; and in the Discussion they go on to articulate a convincing case that there are in fact a range of technical and non-technical constraints, but importantly methodological innovation (including adaptation of methods to LMIC contexts) could help to address many of those. Yet in the same Discussion, the authors readily point to non-methodological solutions (capacity building in the broadest sense - see Li et al. 2017). In all, I feel that the framing of the study around
"methodological" quality rather undersells the evident importance of the non-methodological factors, and adds confusion rather than conceptual clarity.

My advice would be to move away from the terminology "methodological issues" throughout the paper (even if such wording was already used in the survey and couldn't be changed, I would include this as a Limitation). Rather, I would much prefer that the authors spell out the distinctions between: evidence generation and evidence use in policy; technical and non-technical issues; problems/solutions that are methodology-related versus those that are capacity related. To help the reader appreciate the importance of the study, such conceptual clarity really needs to be set out from the beginning; i.e. the distinctions made upfront in the Abstract and the Introduction, rather than left till the end of the paper in the Discussion section.

Finally, I would also suggest the following title for the paper which attempts to capture some of the above distinctions: "Identifying priority technical and context-specific issues in improving the conduct, reporting and use of health economic evaluation in low- and middle-income countries".

References

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