Reviewer’s report

Title: "Confidence comes with frequent practice": Health professionals' perceptions of using manual vacuum aspiration after a training program

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Reviewer: Sarah Raifman

Reviewer’s report:

This paper examines provider perspectives on an MVA training program for Malawi post-abortion providers. 53 health personnel were trained and completed questionnaires before the training. Focus group discussions were conducted 1 year after the training with a subset of providers who received the training (33). This paper recommends improvements to the post-abortion care training program in Malawi and examines the multi-level factors that influence the type of post-abortion care treatment provided.

This paper focuses on an important and relevant topic. However, it would benefit from significant revision, including a clarification of the study aims, given the design of the study. I am unclear as to the research question and whether the study design enables the researchers to actually answer their research question. Currently the aims are not clearly stated in the abstract. In the background of the manuscript, the authors say the aims are to explore health workers perceptions about the use of MVA in PAC at 3 public hospitals one year following an educational intervention. But, the first line of the plain English summary explains that the paper examines knowledge and skills of health personnel before and after a training program. These two statements imply different aims - the former is exploratory and focuses on provider reactions to the training (which is feasible with the data available), but the latter implies a pre- and post-evaluation of a training, which I would argue is not feasible given that the methods and topics covered pre- and post-training are different (survey vs. FDGs).

Here are some additional more specific comments:

Line 97-98: Elaborate a little on why most patients are treated surgically "for fear of misuse of medical treatments that induce abortions"?

Line 113: Theories as to why D&C is on the rise? Is it possible providers are not being trained appropriately in MVA and are therefore less comfortable with it? Is that why you chose to focus on the MVA training in this study? If so this would be a good place to explain that.

In general, this background information is very useful, but it would help to link it more clearly to the research focus/question in this paper (line 118-119).

Line 116-117: why southern Malawi?
Line 126-127: How many providers were involved in the pre-test?

Methods: it seems odd that the pre and post assessment of knowledge and practice used two different data collection systems (questionnaires in the pre period and focus group discussions in the post period). Can you explain why you used this design in the methods, and how you are able to still compare the results pre and post?

138-140: Can you elaborate on what was included in the socio-ecological model, in terms of the primary influences (direct and indirect) that may be influencing the choice of treatment for incomplete abortions? This would help to establish the framework through which you analyse and interpret the results of this study (and could return to in the discussion).

Line 143-145: Can you explain how these sites were chosen for this study? Were these the only sites that offered MVA training in the country, or in southern Malawi? If not, how were these chosen? Was the focus explicitly on public facilities - if so why? Is MVA only offered at the tertiary level of the system (hence the focus on hospitals)?

Lines 150-159: Who conducted the trainings?

Line 158-159: explain how participants were followed up with 1 year later? It says "those available" participated. Were the others invited but declined? Or had they left the facility, etc?

Line 162-163: Just to clarify, do all providers (including nurses) receive MVA training in school? This line implies only medical school curricula includes MVA training. If nurses did not receive the training in school, then this should be noted. Also in the survey prior to the training, did you ask whether the participant had been trained in school on MVA? This would help to confirm the assumption of prior training referred to in line 163.

Line 179-180: It may help to clarify here the principal investigator's training (is he/she a gynaecologist?) and previous experience providing MVA trainings.

Line 184-187: Include here the topics covered in the questionnaire?

Line 193: why were clinical officers and nurses separated? Can you define what a clinical officer is earlier when you present the different types of respondents?

Data analysis lines 207-216: Again, how were results from the questionnaire and the FGDs compared, if at all? Since this is designed as a pre and post analysis of a training, I would assume there was an effort to compare pre and post results.

Line 222: The authors indicate that knowledge before the training was "good." How is this defined?

Lines 221-232: It may be useful to use actual proportions estimated from the tables in this paragraph, rather than general terms such as "the majority" or "common reasons".
Line 227: Preferred MVA to what? D&C?

Table 3: would be interesting to know what the "other" reasons were for why providers chose to use curettage

Table 5 simply shows the categories assessed and themes that emerged, rather than results. I think these themes may be better explained in text (in the results, or in the methods as questions/topic covered in FDGs) rather than in a table.

Line 258: which health personnel had more previous experience with MVA? Were you able to compare across different provider types, or were they all included in FGDs together?

Line 427: which findings show this? The FGDs or the questionnaire?

Line 447: quotations from FGDs should be in the results section not the discussion.

Line 469-471: I'm not sure how this reference to a Ghanaian study is relevant here. This paragraph seems to be more about getting support from the hospital leadership.

Throughout the methods section, I think the information presented could be more efficiently organized so that it is presented once rather than multiple times in different sections (study design, data collection etc). As is, the reader learns about the questionnaire and FGDs for example multiple times at the same degree of detail. I think these sections could be better organized so that they are less repetitive.

The paper should be proofread for missing words and grammatical edits.

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