Author's response to reviews

Title: Which health care facilities do adult Malawian antiretroviral therapy patients utilize during intercurrent illness? A cross sectional study

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Which health care facilities do adult Malawian antiretroviral therapy patients utilize during intercurrent illness? A cross sectional study.

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Response of the authors to reviewers’ comments

Reviewer 1

General comments

This paper is very well written. Unfortunately it has serious methodological flaws which is even acknowledged by the authors. These include selection of sample size, sampling etc. These major issues affect the integrity of the paper. Unless they are addressed, this paper cannot be published in its present form.

Major compulsory revisions

1. QECH has 12,000 patients on register, 7000 retained and sees 250 patients a day. What is the basis of selecting only 346 patients?

There were no data in literature to base a formal sample size on, nor did we have any local data on health care utilization of ART patients. We therefore took a convenience sample based on the maximum enrolment capacity of the study team during the study period. We managed to sample 5% of our clinic population. This is a conventional sample percentage and compares well to other studies of large populations. For instance, WHO took a 0.04% sample of the general Malawi population in the 2009 STEPS survey (PLoS One 2011). The sample size allowed expression of our main outcome with a narrow 95%-confidence interval (see minor essential revision point 3).

2. Selecting first 10 patients per session will lead to a strong bias and even affect the validity of the results. Being early or late in the clinic may be a function of distance to the clinic and may actually affect utilization during intercurrent illness

We agree that selecting the first 10 patients per session could have led to bias in favor of including patients who live closer to the clinic. We acknowledge this as a limitation in the discussion. But, since patients who live closer to the clinic are more likely to visit the clinic during intercurrent illness, any resulting bias would have led to an underestimation of our main outcome, namely that health care utilization of other clinics than the own ART clinic during intercurrent illness occurs frequently. This potential bias is therefore does not invalidate our results.
3. Utilization of services in particular health facilities depends on the severity of illness and the nearby health facilities. Smaller facilities will be unable to handle complex cases and may affect pattern. Unfortunately the tools were not designed to address this.

We did address the issue that reviewer 1 mentions in our study by including self reported severity as a variable in the analysis of factors associated with utilization of other clinics (table 2).

Very few studies of health care utilization of ART patients in Africa exist. Our study is one of the first and still leaves open many gaps in knowledge. We hope that other studies can build on our experience and address several unresolved issues.

Minor Essential Revisions

1. Page 4- Intro Write out QECH in full here. It is first spelt out under the methods

We have done as advised and adapted the text of the penultimate paragraph of the background section.

2. Methods: Any specific reason why p value of <0.10) was used but 95% CI?

We only used a threshold of <0.10 for p-values obtained from univariable analyses when selecting variables for inclusion in the multivariable model. Otherwise we used the conventional p-value threshold of <0.05 for determining statistical significance.

3. Results: Choice of facility for utilization 57.9% utilizing QECH vs 42.1% using other facilities. Was it statistically significant?

Of all participants (100%), 57.9% used QECH, 42.1% used other clinics. A statistical test for significance does not apply in this situation, but we added 95% confidence intervals.

4. Tables: Table 2 should be Table 1 because gives the baseline characteristics

Table 2 gives the results of univariable and multivariable analyses of factors associated with health care utilization during intercurrent illness. The table numbering is determined by the order of presentation in the text, which we believe is logical as it is.

Reviewer 2

1. Generally the authors address a very important topic looking at where patients on ART go with their intercurrent illnesses in Blantyre, Malawi. This is a cross sectional study and the authors have clearly described the study methodology. The results have been clearly articulated and the discussion and conclusion have been well balanced supported by valid data. The authors have clearly acknowledged the limitations of the study eg the fact that the characteristics of patients who were interviewed at the ART clinic may be different with the ones who did not come back to the clinic. Despite this study being cross sectional by design, the lessons learnt can lead to effective management of patients at an ART clinic including comprehensive patient education for services offered at the ART Clinic.
Thank you for these comments.

2. A minor point of accuracy is that the authors state that years if primary school in Malawi is 7. I think the authors should review this as this is generally 8 years. It is only a few private schools that have 6 or 7.

We changed this in the text as advised (methods, page 5, first paragraph)

Reviewer 3.

This is an interesting study that contributes to understanding health seeking behavior of PLWA on antiretroviral treatment. It is of interest for those working in HIV care and treatment in developing countries.
1. Is the question posed by the authors well defined? Yes
2. Are the methods appropriate and well described? Yes
3. Are the data sound? Yes
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes
5. Are the discussion and conclusions well balanced and adequately supported by the data? In general yes. I have some minor comments.
6. Are limitations of the work clearly stated? Yes
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes
8. Do the title and abstract accurately convey what has been found? Yes
9. Is the writing acceptable? Yes

Minor Revisions (which are recommendations for improvement but which the author can be trusted to make)

Page 2 (background) ‘overcrowding and shortages of ART staff’ may affect patients’ choices, but as these overcrowding and shortages of staff are not further discussed in the paper I suggest using other examples.

These are potentially important reasons for not utilizing the own clinic that we considered when we designed the study and are reflected in quality of care, waiting time and privacy that were mentioned by patients (tables 1 and 3). We therefore did not change the text in the background section, but adapted the text of the first paragraph of the abstract.

Page 3 (second paragraph). One of the reasons often mentioned in relation to access to health services is the distance to the clinic and the related costs (travel and time off work). Did the authors consider this as a possible reason for decision where to seek health care?

We did study this and reported results in table 1 (distance to clinic and cost of accessing care) and in table 2 (travel time residence to clinic).

Page 4 (second paragraph). The several disadvantages mentioned in the paragraph seem logic, but are merely assumptions. Do the authors have any experiences of sub-optimal treatment outcomes due to the utilization of other than their own clinic? If this is the case, it would strengthen the paper.

A good point, these are indeed theoretical possibilities and we have no data to support them, neither did we find any information in literature. We therefore changed the first sentence of the second paragraph on page 4: “Theoretically, it can have several disadvantages....QECH.”
Page 6 (health care utilization). There was no significant difference in frequency of reporting illness episodes between males and females (55.3 vs 38.0%; p=0.21). I am not a statistician, but I was surprised that this is not significant. Is there a typing error? Of the whole group 58% reported to have had at least one illness in the past 6 months. It does not seem plausible that both males and females report lower frequencies.

Thank you for spotting this mistake, we had taken the wrong number from a two-by-two table as numerator! It should be 62.0% instead of 38.0% and we have changed this in the text.

Page 6 (health care utilization). ‘In univariable analysis ... longer duration of travel ...were associated with ...’ does not tally with table 2, where a p-value of 0.094 is given for ‘travel time to clinic’.

Thank you for pointing this out. We have changed it in the text.