Reviewer's report

Title: The Role of Institutions in the Effectiveness of Treatment in the Ghanaian Health Sector

Version: 3  Date: 28 March 2014

Reviewer: Beth Rachlis

Reviewer's report:

Major Revisions
In general, this paper needs a serious revision. There are numerous points that are not well described and the methods should be reworked. Specific concerns are outlined below:

Introduction: describe Ghanaian context: i.e., population, key health concerns, most prevalent diseases etc. What diseases are prioritized? A sentence on malaria burden.

References needed in first paragraph- cite all previous work

End of introduction- focus is suddenly on malaria but is not discussed anywhere up to this point. It is confusing the reader. The focus on malaria needs to be introduced earlier in the introduction- particularly when describing Ghana context. Malaria prevalence and burden should be described then.

Methods: Start with description of facilities and Ghana health context

Empirical Specification- not sure this is needed if the focus of the paper is not on the modelling aspect. Can describe sample, facilities, provide rationale for variable selection and define outcome. Analyses can describe the ordinal logistic regression highlighting the outcome and primary predictors/variables of interest.

Description of y=the variable has whole integers...please describe as a categorical variable

Describe malaria outpatients in separate section entitled sample

Include references in rationale for variable selection-i.e., older age, education...

Where did the data come from? This needs to be explicitly stated and described. Otherwise it is not clear why some variables are not available, e.g., income. The source of data needs to be described in its own section.

Coefficients- why not convert to Odds Ratios- these are generally easier to interpret

Minor Revisions
Abstract: The important question is to “what extent” not ‘extend’ in Background. Also should be question mark at end of sentence.
Move the quality indicator used into the methodology section.
Second sentence of introduction: what kinds of resources are dedicated?

Second paragraph of introduction: So structural quality of care refers to resources needed for QUALITY care? Or simply to be able to provide any level of services? Please clarify.

Add discussion around institutional relationship prior to the objective. Place rationale and objective at very end of background.

Methods: Move definition of decentralization up- define around first use (rather than in second paragraph)

Analyses: what software was used? What was considered significant? Were ORs and 95%CI reported?

Ethics/Any approvals needed

Data Description- this should be moved to the methods.

Were sample size and power calculations conducted? Currently, it is not clear where the sample size is currently coming from.

Report proportion women in text and proportion in each type of facility.

Only report findings as part results and discussion. All descriptions of where data come from and how it was organized and analysed should be in the methods.

Remove Regression Results heading- findings from modelling should be integrated throughout the results and discussion section although a clear indication of what was significantly associated should be explicitly stated in results.

A limitation section is needed- this could include the fact that number of health workers represents health facilities and not just outpatients. Unmeasured confounders, limitations of analyses, generalizability etc should all be described.

Table 1: provide absolute values in addition to percentages

Suggest describing patients as they vary across facilities (e.g., number included from each facility)

Table 2: title should include what 1 and 7 means. And again provide absolute values in addition to percentages.

Table 3: provide Odds Ratios and provide 95% CI, don’t need to provide constant.

Suggest categorize variables based on how they are defined in the model: e.g., demographics, facility factors, institutional factors etc...

Discretionary Revisions

Abstract: in Conclusions, talk about study versus paper

If authors have room, could differentiate between different decentralization approaches: ie. why was a social capital approach or public administration approach not be relevant or appropriate for answering the study question.

‘moot solutions’- unclear (pg 4, first paragraph)

Remove heading: previous studies. This should be highlighted in brief in
introduction and described in relation to results in discussion section (it is not meant to be a literature review)
What is table on page 9- it s not coming out clearly (remove)
What are thresholds? Don’t have value here and remove.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**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