Author's response to reviews

Title: Picking up the bill - improving healthcare utilisation in the Democratic Republic of Congo through user fee subsidisation. A before and after study.

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Author's response to reviews: see over
Dear Mr Meessen,

**MS: 1383962147102710 – Picking up the bill – improving healthcare utilisation in the Democratic Republic of Congo through user fee subsidisation. A before and after study.**

Thank you very much for your email dated 11th April 2014. We have been through the associate editor’s comments and suggestions carefully and have revised our paper accordingly.

Please find for your kind consideration the following:

1) A “point by point” response to the comments and suggestions of the associate editor (below pages 2-9).

2) A new revised version of the manuscript marked R2.

We hope that these changes meet with your favourable consideration, and in the meantime please do not hesitate to get in touch if you require any further information.

Yours Sincerely,

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RESPONSE TO THE ASSOCIATE EDITOR’S COMMENTS

We thank the associate editor for his useful and helpful comments and suggestions. We have tried to revise the manuscript in line with the same.

The specific changes and response to the different points raised include:

Structure:

Any article begins with an introduction. The introduction introduces the reader to the topic, shows that there is a gap of knowledge and that the paper contributes to filling this gap and eventually introduces the structure of the paper. The rest should be put elsewhere in the paper, for instance in a background section which provides the specific background of the country.

Please adapt accordingly.

- The article now begins with an introduction (lines 40-90). The Background section (lines 95-180) now provides detail on the DRC and the Access to health-care programme.

Introduction

Prefer “Introduction” as a title.

- This has now been amended (see line 40).

Background should be used for the second section (see below).

- This has now been amended (see line 95)

Content on the Bamako Initiative: Please, be fairer with history!


- This section has now been revised in lines 41-54 and references the source above.

Lines 43-44: please recognize the fact that most developing countries were experiencing severe macroeconomic / budgetary crises and their development model was failing. High-income countries were also experiencing a major economic crisis.

- Lines 41-44 now add detail on the context within which the initiative was introduced.

Line 46: which aimed at securing the continuation of the delivery of basic services through generating funds...

- This has now been amended in lines 46-47 as specified above.

Lines 49-50: prefer “hoped” than “believed” – the proponents were not naïve or idiot, they were looking for a solution in front of major constraints.
The debt cancellation initiative, the reinvestment of donors in the health sector and the strong economic growth and the Millennium Development Goals have created a new context. Once seen as a solution, user fees are growingly seen as part of the problem.

Then indeed you can move to some of the recent findings on user fee removal. At this level, it would help the reader that you better define what you mean by user fee subsidization... as opposed to direct government funding (see also comments below). You can use part of the material you provide under lines 82-93, but there is no point to mention the countries. You just have to provide evidence that your research question is relevant.

User fee subsidization is now defined in lines 63-65. The findings in the literature on user fee removal are discussed in lines 59-79 and the countries are not mentioned.

Make sure that your research question is clearly stated + the objective of the paper (You can use some of the material at lines 103-111).

The research question is now stated in lines 84-85 and the objectives are stated in lines 86-88 (at the end of the introduction section).

Background

I would structure this section in two parts: DRC and the Access to Health Care program

Here you can provide info on DRC, its economy, the health situation, the health care financing policy... (your material at lines 63-78 + lines 95...)

Background information on the DRC is now given in lines 96-118.

Then you can provide information on the intervention + the study site.

Background information on the intervention is now given in lines 120-180.

I would first give a general introduction to the intervention, then move to the study sites and explain that they were not the same either in terms of timing of the different components of the intervention or availability of data. I would then make a link to the table I propose below.

For the intervention, it is only by reading your answer to the reviewer #2 that I understood that what you call ‘subsidization’ is the running cost subsidy. The extra information you brought shows that the intervention was much broader. As analysts, you are struggling with the lack of synchronicity between the different components, but as a matter of fact, the intervention was broader than the subsidy for the running costs.
Be aware that your readers (just like the two reviewers and myself) will be critical on the actual content of your intervention: they will be looking for in-depth information on the bundle of actions; any information in this respect will be helpful. Here are some suggestions.

First, you have to provide some more financial information. It would be good to give some information of the distribution of the economic value of the monthly running cost subsidy, salary supplements and drug supply for a health centre, at least averages (and $ per capita?). If there was variation across zones (or the 2 projects), provide a table.

- More financial information has now been supplied. Running costs are given in lines 138-139, costs for drug provision in line 146, and costs of salary supplements in line 161. The overall cost per capita is given in line 135.

Second, I suggest that you develop a table giving for each health zone, their date status as for the drug / salary supplement / user fee subsidisation / user fee removal. This could be an electronic annex to the paper. This table would capture part of the information currently provided at lines 300-305.

- This has now been provided in table 1 and captures the information previously provided in lines 300-305 regarding the number of health zones with data points.

Noteworthy, you will introduce this table for the first time under the background section, but you will come back to it when you introduce the datasets and the equation and even later in the findings section. Ideally, this table should follow the same structure than your current tables 1 and 2 (which you could maybe merge into a single table 2, as your table 1 specifies under which equation the specific health zone falls).

<table>
<thead>
<tr>
<th>Drug supply for free by the project to the health centres</th>
<th>Salary supplement paid to the staff</th>
<th>User fee subsidization for the running costs</th>
<th>User fee removal in place</th>
<th>First month of the dataset</th>
<th>Last month of the dataset</th>
<th>Regression equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punia</td>
<td>Date</td>
<td>Date</td>
<td>Date</td>
<td>Date</td>
<td>Date</td>
<td>1, 2 or 3</td>
</tr>
</tbody>
</table>

- The table above has now been included in the manuscript as it is referred to several times by the authors. The original table 1 has now been merged with the original table 2 (see table 2).

It will be helpful to use this table to explain how you organize your interrupted time series cut-off point for each health zone, but also for the aggregated model.
• More detail on the cut-offs for the interrupted time series analysis for individual health zones is given in lines 202-204 and in table one. Information on the cut-offs for the aggregated model is given in lines 219-223.

Obviously, some of your readers will be familiar with DRC and raised questions such as the one by reviewer 1. I therefore suggest that you bring in your text, at least part of your answer to reviewer 1’s point 7. Try to say enough in the article to remove misunderstanding.

• In lines 178-180, the authors have now added that there were no other health systems strengthening programmes financed by external partners operating in the same health zones.

I am not sure that you have fully addressed the question related to the incentive set up by the intervention. Is there no incentive for the health facilities to over-report patients? For instance, in order to be able to increase the request for the free drugs? At lines 185-189, you mention some spot checks. Could you provide more info on the nature of these spot checks?

• Measures to discourage the over-reporting of patients and drug consumption are now further explained in lines 147-153. The discussion in lines 427-430 also acknowledges that over-reporting may still have occurred. More information on spot checks is given in lines 195-200.

Method

I suggest that you transfer all the info on the intervention to the background section. This will allow you to focus this section on empirical methods only. You could organize in three subsections: data set, statistical analysis, ethics (not sure that you need to give them a title each – check other papers published in the journal to know the standard practiced by the journal).

• Information on the intervention which was previously in the methods section has now been moved to the background section. Previous papers in the journal have included subsections data collection, data analysis and ethical approval; the article now organizes the methods into these three subsections.

Explain that you have used two econometric models and then introduce each of them (around your current line 204-205). Give them also a name: equation 1, equation 2, equation 3.

• This has now been amended in the text (see lines 225-226, 230, 256-258 and 268-270).

Equation 1: I would not put the symbols in a box. Just write a paragraph with this info.

• This has now been amended in the text (see lines 232-242).

For the moment, you do not provide info on the variable ‘time’ (or you have to replace ‘t’ by time, line 213). It starts from 0, 1? Explain a bit.

• Further explanation on the time variable is now provided in the text (see lines 232-234).
I do not understand what you mean with ‘indicator variable’. Do you mean a dummy variable (0 and 1)?

- Dummy variable is a clearer term – this has now been amended in the text (see lines 225 and 250).

prefer salary supplement (instead of prime, please be consistent and correct elsewhere in the article, including in the heading of your table 1). What kind of value take the variable ‘salary supplement and drugs’ in equation 2; and ‘salary supplements’ and ‘drugs’ in equation 3? (0,1)?

- The term prime has now been completely removed from the text and salary supplement has been consistently used. An explanation of the values for the variables in equations 2 and 3 is now given in lines 259-263 and lines 272-275.

Lines 251-252: a reference?

- Two references have now been provided in line 278.

Lines 269-271: reformulate a bit – the formula ‘between zones which included drugs and salary supplements in the regression model’ sounds a bit awkward. You mean that you use different regression models for different zones according to their status in respect to drug and salary subsidy, no?

- This has now been reworded in lines 281-283.

Lines 273-278: I understand that this is a reorganization of the data carried out before the aggregate analysis. This should be better explained. If it is something, it should come earlier in the section (before the regression equations).

- The method used to aggregate the data is now explained further and now appears earlier in the methods section in lines 219-223.

Results

Your lines 289-305 are not ‘findings’. They are related to your dataset. They should come in the previous sections (see above).

- This data is now captured in lines 202-204 and table 1.

The logic of the presentation of your findings is not obvious to the reader. Could you start the section by explaining the structure. First, we will present... Then we will detail... Eventually, we report...

- An explanation of the structure of the results is now given in lines 312-316.
Your information on the status of the 20 health zones is a bit confused. I hope you can build any needed explanation on the new electronic annex table 1 I proposed (cf above).

The presentation of the findings should try to follow your electronic annex table 2.

- The results section has now been modified significantly so that it now more closely follows the order of the statistical method section. Sub-headings have also been used to aid the reader to follow the structure. Table 1 is integrated into the manuscript and referred to in lines 336 in order to aid understanding.

**Line 335: remove the “ after subsidies**

- This mistake has now been removed at line 340.

**Figure 2: there is a mistake in the legend, no? for the one below the bisector line: “health zones below the bisector”**

- This mistake has now been rectified in the figure – which is now figure 3 following the reorganisation of the presentation of the results section.

**Line 345: avoid acronyms which do not come back often. Replace IQR by interquartile range.**

- This has been amended in lines 367 and 370. Acronyms such as WHO and SNIS have been removed and written in full in the text (see lines 45 and 191).

**Lines 351-353: As argued above, the intervention is much broader than just ‘user fee subsidiation’(lines 143-170); there is a difference across ZS in terms of timing of some subcomponents of the intervention (drug provision and salary supplement). May be you should say: This seems to indicate that the timing of the provision of drugs and salary supplements did not significantly affect ...**

- This has been amended as suggested in line 347-349.

**Personally, I miss also a bit some information on the econometrics (estimators,...). Other papers using the interrupted time series strategy should provide you useful guidance in this respect.**

- Having consulted other papers on interrupted time series analysis, generally only the coefficients and p values are reported but full regression outputs are given in a table (which was requested by reviewer 2). Further interpretation of the coefficients has now been added to the results section (lines 339-361). The reporting in this article follows a similar style as the following paper: Lagarde M, Barroy H, Palmer N: Assessing the effects of removing user fees in Zambia and Niger. J Health Serv Res Policy 2012, 17(1):30-6.

**Discussion**

**Line 372 – what are the others?**

- References to other studies are now given in line 377.
Line 377 – I would not use this reference as evidence of this relationship. Find something better or reformulate your statement.

- Another reference has been used to support this statement in line 379.

Line 382-384: sentence “However,...” – this is an important finding which deserves more attention.

- More interpretation of this finding is now given in lines 385-388.

Personally, I would organize my discussion in a different way. Our research brings mixed findings on the effectiveness of the user fee subsidization as a strategy to increase the utilization of services... On one hand, it shows... However, on the other hand, it also seems that...

- The discussion is now structured as suggested above (see lines 381-388).

Lines 398-405: see my comment about lines 351-353. It is the timing which does not appear to modify the effect. It seems to me that your explanation 402-405 is correct.

- Lines 398-399 now states the timing of these interventions does not modify the effect.

Lines 410-413: I have not found the 6.7% figure in Pearson’s report. Can you give me the page? If it is the table 2 in annex, there is a small mistake with the figure and the denominator is not the same. In general, your paper would be stronger if you refer to scientific empirical/original papers, instead of grey literature citing someone else. More fundamentally, these are very old data – the argument does not seem very consistent with the fact that the proportion of out-of-pocket expenditure is very high in several of these countries. I recommend you to drop this argument (also used at lines 415-417).

- This argument has now been dropped as recommended.

Lines 419-420: I would not call them ‘important’ strengths. Keep in mind that this is a before-after research design without a control group. Be more modest and cautious. Lines 431-434: I would not overstate the fact that you control these components.

- The word “important” has now been dropped from line 407. In line 418-420, the authors now state they attempted to control for salary supplements and drugs.

Lines 505-514. To my knowledge, there is no list of acronyms foreseen in a journal article. Introduce the acronym in the text, the first time you use it. If an acronym is not used several times, drop it (e.g. SNIS?).

- There is no longer a list of acronyms at the end of the article. All acronyms in the text are introduced the first time they are used. The acronym for the SNIS has now been dropped in line 191.

We hope these changes will meet with your favourable consideration.

Yours Sincerely,

Rishma Maini