Reviewer's report

Title: Using targeted subsidies to improve access to skilled birth attendance for poor women: a case study of vouchers plus health equity funds in three rural health districts in Cambodia

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Reviewer: Peter Leslie Annear

Reviewer's report:

Firstly, my apologies for writing such a long and detailed review. The main points in my review are included in the following few paragraphs, and the remainder of the review looks in detail at the sort of amendments I think would make the article stronger.

I regard the comments here as essential revisions that need to be made before the article is published, and that the authors can be trusted to make these revisions before re-submitting.

The article discusses the impact of a range of supply-side and demand-side health financing interventions on access to maternal care for poor women in rural Cambodia. It is based on work carried out for an important international study of poverty and illness (the POVILL study) and makes a valuable contribution to our knowledge of pro-poor health funding schemes and access to maternal care in Cambodia, with lessons for other countries.

However, the article does not, as the title suggests, assess the particular impact of voucher schemes and health equity funds, and the data are not available to isolate the specific effect of these from the other interventions.

For this reason, referring in the title of the article simply to “targeted subsidies” is sufficient and – given the complex arrangement of health financing interventions – the reference to “vouchers plus health equity funds” could be removed.

Some weaknesses in the analysis could be overcome and the presentation of the article made stronger by a number of amendments. These amendments relate to two main areas:

1. The structure of the article and the development of the logical argument it presents.
2. The introduction of an analytical framework that addresses the need to compare and contrast the influence of the various health financing interventions.

Alternatively, the authors may choose to keep the structure as it is and simply attend to the corrections and contradictions identified below.

As it is, the analysis does not lead to conclusive findings on the role of vouchers and health equity funds in providing access to maternal care but raises a number
of valid questions that require further investigation, and the conclusions could be re-drafted to reflect this outcome.

Issues related to the structure of the article:

The information and content that is needed for a clear analysis is presented already in the article, but the presentation and structure could be rearranged in order to develop a clearer analysis.

The “Background” section could be presented in two parts: first an introduction that includes the research question (this introduction should include reference to the POVILL study, rather than later in the article); and, second, a “situation analysis” that gathers all the information on Kampong Cham province, the three BTC ODs, and the interventions that have been made there.

The section titled “Methods” – including “Study Setting” and “Conceptual Framework” – are really a description of the context within which the research was conducted and do not at all adequately describe either research methods or a conceptual framework. In these sections – which should be combined within the “situation analysis” – a clear description is needed first of the Kampong Cham New Deal project and the supply-side interventions that it introduced. This could be followed by the description of the public health system in the nine rural districts.

p.7 – Box 1 is unnecessary and the definition of HEF could be included briefly in the text, which could also be abbreviated (using citations to published work, such as the ITM publication “Health and Social Protection Experiences from Cambodia, China and Lao PDR”)

p.8 – Figure 1 should not appear here but should be moved to “Analytical Framework” (see below).

p.9 – The long description of the voucher scheme (and of HEF too) could be largely abbreviated.

p.9 – Figure 2 is not necessary and adds little to the analysis. The purpose of the article is not to describe the voucher scheme but to investigate access to maternal care for the poor.

What is currently headed “Conceptual Framework” (which is not the correct name, and no conceptual framework is actually presented) confuses the supply-side and demand-side interventions implemented under the New Deal. These two areas need to be clearly separated and described.

It should be clearly stated that HEF covers the poor for all services and only at district referral hospitals while the voucher scheme was introduced only at health centers specifically to address ANC, safe deliveries and PNC. It would be interesting to know why BTC introduced vouchers at health centers instead of extending the HEF scheme.

The first sentence on page 8 is a conclusion and should be removed, and instead
replaced by a “problem statement”, that is: 1. supply-side interventions were implemented but failed to increase access to maternal services sufficiently; 2. a demand-side scheme was introduced at the district hospitals to provide free access for the poor, but still the problem of access for maternal care remained; 3. specifically to improve access to safe deliveries and maternal care at health centers a voucher scheme was introduced.

On page 8, the reference to the Government’s mid-wife incentive payment poses an analytical problem: that is, how to separate the impact of the incentive payment from the impact of the HEF and voucher schemes. Clearly, incentives are a supply-side intervention and need to be analyzed as such along with the supply-side interventions of the New Deal.

Analytical Framework:

In general, the methodology and the analysis fail to separate clearly the impact of the subsidies for the poor from the supply-side interventions made through the New Deal project implemented in the targeted districts by Belgium Technical Cooperation, the midwife incentives and other programs.

This could be amended by developing a clear “Analytical Framework” to account for the complex range of issues evident in these districts. The analytical framework needs first to assess the supply-side interventions independently, to clearly distinguish between the poor (eligible for vouchers and HEF) and the non-poor (using fee-for-service payments), and to isolate the impact of subsidies for the poor from all other interventions.

The framework could be included under a single “Methods” section using the following sub-heads: “1. Analytical Approach”, “2. Comparative Analysis” and “3. Data Collection”.

The three parts of the “Analytical Approach” of analysis could be:
(i) Identify the barriers to access for the poor
(ii) Contrast the supply-side and demand-side interventions (Figure 1)
(iii) Identify the interventions designed to reduce barriers.

Figure 1 illustrating SUPPLY-SIDE and DEMAND-SIDE issues should be included here under point 2 and should also include other elements on the supply-side that have increased the quality of care (supported by either the MOH or by BTC).

The “Comparative Analysis” could be used to compare and contrast the 9 rural districts in three groups: 1. The 3 BTC districts; 2. The 2 districts with HSSP support; and 3. The remaining 4 districts. [Incidentally, one of the remaining four districts includes support from UNFPA and this should be accounted for in the analysis.] The nature of support in each group should be clearly explained.

A table that lists the 9 different rural districts and the supply-side and demand-side interventions in each would be useful.
The section on data collection should deal clearly with “sample selection” [no sample of ODs is drawn, of course, but a clear description of why the 9 ODs were put into three groups would help to clarify the argument]. The section could then deal with the three methods of data collection, what the precise role of each was, and how respondents were chosen for the qualitative methods.

Methods of data collection:

It should be made clear that the three districts chosen for the study were supported by the BTC New Deal project, which is implemented in these districts and Kampong Cham town but not in the remaining six districts.

All references to the methods of data collection and analysis should be collected in a single section and described more logically and precisely:
- How and why the target districts were selected
- How the control districts were selected and what they represent
- What is the nature of the control districts (including supply-side and demand-side interventions)
- How HIS and VHW routine data were collected and used
- What the purpose was of the FGDs
- How participants were selected for the FGDs and how the groups were organized
- What the purpose was of the KII and how informants were selected
- What triangulation of the data, if any, was used.

One question that remains unclear is the role of pre-identification of HEF beneficiaries. The data for the analysis were collected from records for 2006-2008, but pre-identification was introduced only at the end of this period in 2008. Therefore, pre-identification could not have had any impact on the results and should not be mentioned in the article. Perhaps there is evidence that once it was introduced, pre-identification improved access for the poor through HEF and vouchers. If this is true it should be clearly presented and argued, but this is not done. These issues should be dealt with in the “Discussion”.

In the second paragraph on page 12 it is argued that data collected through VMA reports were unreliable, but that data from the “health information system” were not used for the study. This appears to be contradictory and illogical and needs to be clarified.

The section headed “Operational Analysis of vouchers” adds nothing to the argument presented in the article, and it could be removed. The comments made in this section could be used in the “Data Collection” section and under the “Discussion”.

Issues related to data analysis and interpretation:
The section headed “Results” beginning on page 15 should be confined to presenting the findings of the different methods of data collection without any reference to reasons for the observed outcomes, discussion or conclusions. The discussion and conclusions should be moved to the following sections.

As it is, the results section is not clearly linked to the methods of data collection and analysis, and it introduces new approaches – like the operational analysis – not well explained in the methodology. It is therefore confusing.

In general, there is too much emphasis and too much information on the voucher scheme, which causes an imbalance in the presentation. This needs to be summarized in one place without losing what is essential to the analysis.

The findings could be organized in clear sections that reflect the methods used:
- The findings from key informants on the operation of the various schemes
- The findings from the comparison of utilization rates
- The findings from the FGD on the reasons for non-attendance.
And then the issue of triangulation could be addressed.

This section should not include speculation about the impact of the various schemes or the possible reasons for certain observed outcomes, which should be presented in the subsequent section on “Discussion”.

For example, the conclusion in the first paragraph on page 17, that “This suggests that the total effect of the incentive scheme is limited ….”, seems unwarranted and reflects the failure to account separately for the impact of each of the demand-side and supply-side interventions, and should not appear in any case in a section headed “Results”.

The numbers presented in Table 1 (a breakdown of voucher distribution by Quarter and by services provided) are not relevant to the argument, and the disaggregated numbers are not interpreted in the text. Presenting the aggregates is sufficient and the table could be removed.

Most importantly (this is perhaps the main weakness in the current analytical approach), in the presentation of the data on facility utilization, the article should first analyze Figure 4, the comparison between the three different groups of ODs. This should come before Figure 3, which looks in detail at the 3 districts supported by BTC. The analytical method should be to work from the general to the specific. More careful interpretation and explanation of the results presented in Figures 4 and 3 are needed. In the presentation of the results, care should be taken, especially on page 17, to remove all elements of discussion of the results and their possible meaning and place these in the “Discussion” section.

A critical question to address is why self-paid deliveries increased so dramatically. It appears from the data that the single main reason for increased facility births is the midwife incentive. Another key issue could be the intervention of BTC itself. There are many different issues affecting these 3 ODs (as well as
the comparison districts) and the article does not sort them out well enough.

Why the four ODs with delivery incentives only perform so poorly is a question for further research. And why the voucher and HEF schemes contribute relatively little to the increased utilization in the three BTC ODs need further explanation (of course, they cater only for the poor, but still seem to have too little impact on utilization). Extreme care must be taken here to separate the impact of the PBC and midwife incentives from the HEF and voucher schemes and avoid any contradictions in describing the impact of each.

The data in Figure 5 (which really should be called “Table 2”) are not well interpreted. The first part on Health Centre Selection could be moved to “sample selection”. The importance of the table relates to the results on health centre utilization by voucher holders, and the main findings could be more clearly identified. For example, less than half of poor women holding vouchers actually used them for deliveries, it is important to know why this was so.

The information on the costing of the vouchers is not relevant to the argument on access for the poor to MCH services and seems to have no useful role in the analysis. Costs would become important if a cost-benefit analysis of the various schemes was attempted.

Discussion:

The Discussion section needs to be reconsidered in light of the approach and the comments made above. In the Discussion section, a logical argument about the impact of the various schemes needs to be built up based on the findings of the data analysis. Because there are many competing factors in determining impact – both numerous demand-side and numerous supply-side issues – the argument must work logically through all of these to assess the impact of the voucher and HEF schemes separately.

The discussion section could be structured in the same way as the Analytical Framework. First, it could look at the various supply-side issues (including the New Deal and the midwife incentives); then it could look at the various demand-side issues. This could be done in a way that accounts for the impact of each intervention, and as a consequence the impact of the voucher and HEF schemes could then be clearly revealed.

Conclusions:

The section is too short and does not make a convincing case that vouchers and HEF alone have a significant effect on improving access to MCH services. The conclusion based on the analysis as presented could in fact be the opposite: that removing the financial barriers for the poor (even if the vouchers and HEF can be shown to achieve this) is not sufficient and the issues related to staff incentives and quality of care are more important. These two conclusions actually appear in the same concluding paragraph without any attempt to sort out the contradiction between them.
The conclusions need to be expanded and should be based on the analytical approach developed above and on the data collected in the survey. Any further speculation about possible causes of the patterns observed (that is, those issues not directly supported by the data) should be presented as suggestions for further research.

Other corrections:

In general:
The correct use of skilled birth “attendants” is needed and not “attendance”. “Attendants” are the people (midwives) who assist women in delivery. “Attendance” is the act of being at the place and does not refer to people as such.

The use of “%” and “percent” needs to be consistent and a single format should be used throughout the article.

Annex 1 on the “Questionnaire and eligibility criteria for HEF” is unnecessary and should be removed.

p.6 - Should be 12.3% of “births” not “women”
p.7 - Pre and post ID. If pre-ID was introduced only in late 2008 it could not have had any impact on the data collected in 2006-2008 and should not be mentioned.
p.12 - HIS data and VMA reports: which data were used and which were not?
p.13 – Reference to “perception of voucher recipients” is unnecessary and inaccurate. In fact the FGD looked for reasons to explain observed behaviours.

Final remarks:

I have made here extensive comments on the article – perhaps too extensive – solely with the purpose of assisting the authors to strengthen the analysis and presentation of the case they wish to make. The principle concerns are with the consistency of the logical argument and can be addressed by looking at the structure and the analytical approach presented in the article. The authors may choose to follow my suggestions or simply to deal with the main concerns in their own way.

I consent to the posting of this peer review on the BMC website along with the article should it be accepted.

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Level of interest: An article of importance in its field
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.