Author's response to reviews

Title: Evaluation of alternate outreach models for cataract services in rural Nepal

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Author's response to reviews: see over
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Editor-in-Chief
BioMedical Central Ophthalmology

Dear Sir/Madame

    re: Evaluation of alternate outreach models for cataract services in rural Nepal

Please consider the substantially revised manuscript submitted for publication by BioMedical Central Ophthalmology.

We greatly appreciate the thoughtful comments and suggestions provided by the reviewers of our manuscript.

Our responses to reviewers’ comments are provided item by item in red in the attached files.

We also greatly appreciate your tolerance and support for our publication efforts.

Yours truly,

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Reviewer's report
Title: Community ophthalmology in rural Nepal: a cost-effectiveness study
Version: 1 Date: 30 June 2009
Reviewer: Daniel Grima

Reviewer's report:
Overall, this is an interesting study that addresses practical issues in the provision of health care to rural areas.

Major issues:
1) Cost-effectiveness analyses seek to quantify the ratio of incremental costs over incremental benefits of one intervention versus another. Most health economic guidelines seek the use of a common effectiveness measure such as a QALY to allow comparisons between interventions. This study uses average cost effectiveness (not an incremental analysis) and a very specific effectiveness measurem, as such it differs from many guidelines. The study should clearly define the cost-effectiveness parameters, currently there use is inconsistent. The results provide cost per camp and cost per transported patient. But the methods report the efficacy measure as utilization of cataract services which implies the results should be cost per surgery performed. The methods should be revised to clarify the analyses being performed and these should be consistent with the methods.

Response: The revised paper avoids economic analysis terms such as cost-effectiveness, using instead the recommendations from #2 and #3 below. The paper more appropriately describes the study as a program evaluation, with some cost estimates.

2) The title should be revised to provide more information on the comparison being made. Possibly: Evaluation of alternative outreach models for cataract services in rural Nepal.

Response: Agreed. The proposed title has been used. Thank you.

3) The objective of the article is stated several times in different ways – intro paragraph 4, Discussion paragraph 1 and conclusion. I assume the objective was to compare the impact of the two program models on program costs, program utilization, hospital direct payments and patient equity. This should be stated clearly in the introduction and referred to in the discussion. Again the objectives should be answered by the cost-effectiveness results reported.

Response: The revised paper identifies program costs, program utilization, hospital direct payments and patient equity in the introduction, methods, results and conclusions in the same order.

4) The impact of the programs on patient equity is listed as a potential issue and
noted as unaffected in the conclusion. However, the authors note an apparent shift in age of cataract patients in table 1. This is a potential equity issue which deserves some discussion as to causes. Maybe fewer camps means patients have to travel farther and older patients are unable or unwilling to travel the extra distance. Does the increase in younger patients mean that demand exceeds capacity so that when older patients do not come to clinic their spaces are filled by other patients who would not otherwise be seen? The conclusion should state that the utilization of the camps was unaffected but an age shift may have occurred.

Response: This is the most significant substantive change in the document. The shift in age is now acknowledged and discussed. More details are provided on the DSTs and their location. Current and future plans are presented for dealing with this issue, including update data indicating the trend did not continue in the subsequent year.

5) On page 4 (intro) the list (procedure for DST camps and …) seems out of place and may be better positioned in the methods.

Response: moved to Methods

6) Page 4 (intro) – the second paragraph (The hospital philosophy…). The new program decreased repeat visits to sites which is in contrast to this stated philosophy.

Response: revised.

7) The second program used fewer, more concentrated and distant camps. The results report the number of camps but do not discuss average distance of camps from the hospital with the second system. So the reader cannot tell if more distant camps were used or the magnitude of the change. The proportion of camps in urban areas increased from 7 of 151 to 5 of 75, which would indicate close camps where retained. It would be useful to understand how much farther the new camps were or how the geographic distribution changed.

Response: more details provided regarding urban, rural, and distances.

8) Introduction: paragraph 2 lists advantages of the camp model over other options but does not describe the options (I assume no camps). This is confusing and not directly applicable to the article as both options assume DST camps are used.

Response: We have clarified that the DST model, with referral to hospital, contrast with a model in which the surgery is conducted in a transient setting. The justification is relevant to this audience.
9) The total in paragraph 6 of the discussion appears to be incorrect ($35 from paragraph 5 plus $12 from paragraph 6 for a total of $47 not $40)

Response: corrected

10) Table 4 – It is unclear what cost is referred to by per diem, please clarify.

Response: explained

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:
None
Summary
The authors have conducted a study of the cost-effectiveness of a change in methods for recruitment of patients for their cataract service. This is an excellent concept for a paper, however, there needs to be considerable clarification of the research question and some changes to the methods to improve the precision of estimate. More importantly, we are concerned that the accounting system of the provider of care may not provide the necessary data to conduct these analyses.

Major Issues
In conducting an economic evaluation (and that is what this is...) the investigator must begin by stating clearly the perspective of the analysis. The way in which the costs and benefits are estimated are determined by this perspective. Although not stated, it seems apparent that the perspective in these analyses was that of the provider of care (i.e., BGH). That being the case, the costs (and revenues) that were involved in the ophthalmology camp program must be fully inventoried from that perspective.

The next issue is what is the actual research question? Are we concerned with the impact of reducing the number of camps nearby? Or reducing the number of people from these camps who receive free cataract surgery? Certainly, the latter was the result of the policy change, but it certainly was not the change made. The policy change was to close the nearby camps...and thus not only reducing the number of surgeries performed, but also the volume of other services (i.e., simple vision correction, provision of glasses, etc.) along with the costs and benefit (revenue) of those services.

This being the case, the loss of these revenues (and reduction) in costs must be considered along with the reduced cost of obtaining cataract patients. This brings us to the second point. It is somewhat confusing to determine the proper data to be presented. Ideally, the cost-benefit analysis to be conducted is the net profit of the hospital from the baseline year to the intervention year. If that is higher in the current year from previous year, you can make the argument that the new program resulted in reduced costs that increased hospital profit. But before doing this, we must determine what services are truly impacted by camps. For instance, perhaps administrative departments would not be affected by the camps, therefore changes here would not be considered to be incremental costs,
and they should be removed from the calculation. But the authors basically tell us that the hospital does not have a cost-accounting system that allows such segmentation of costs and revenue. If that is the case, it must be considered whether this effort is even feasible (and unbiased). An example of the problems this creates is seen in Table 5. Here the authors provide revenue estimates all in round figures. Are we to believe that optical shop sales during the period were in fact exactly 1.4 million rupees? And that is this is a rounded figure, that estimates of less than 90,000 rupees are irrelevant? This hardly seems to be likely. More likely these estimates represent someone’s “best guess” of the revenues generated by these services, along with the profit margins. This being the case, we are deeply concerned about the feasibility of this effort.

Response:
The revised paper has clarified the issued raised by the second reviewer, in large part by taking account of the comments from the first reviewer. In short, the study is now characterised more accurately as a program study, as opposed to an economic analysis and the key parameters are now clarified in the methods, tables, and discussion. Table 5 was removed, and the summary estimates from it are now in the discussion, with an explanation.

Minor Issues
The authors make reference to using “incremental” versus “economic” costs. I am not sure what this means. Incremental costs in the context might refer to the costs that are specific to the camp operation, but there is not discussion in the article about how these were determined. I am not sure what “economic” costs refer to.

Response: term removed.

In Table 1, the authors detail here the ages of the people receiving cataract surgery. It seems clear to this observer that the new sample is considerably younger than the old one. This is not acknowledged in the body of the article---quite the contrary, the authors’ claim that the new sample is similar to the old one. What seems to have happened is that older people from nearby who cannot afford the surgery (or needed the free transportation to get to the hospital) choose not to receive it. The authors should conduct a statistical test to evaluate the significance of this change in distribution. If it does exist, they should acknowledge it, and discuss its importance in the community.

Response: substantial additional material has been added to acknowledge the change in age and explain why the study did not use statistical comparisons. Instead, this data will continue to be refined and utilized in a longitudinal, quality assurance program.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable
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'