Author's response to reviews

Title: Access to Essential Technologies for Safe Childbirth: A Survey of Health Workers in Africa and Asia

Authors:

Jonathan M Spector (jspector@partners.org)
Jonathan Reisman (reisman.jonathan@gmail.com)
Stuart Lipsitz (slipsitz@partners.org)
Priya Desai (priyadesai81@gmail.com)
Atul A Gawande (agawande@partners.org)

Version: 2 Date: 29 November 2012

Author's response to reviews: see over
November 28, 2012

Jonathan Reisman, MD
Departments of Internal Medicine & Pediatrics
Massachusetts General Hospital
Boston, Massachusetts, USA
Phone: (201) 403-6307
Email: Reisman.jonathan@gmail.com

BioMed Central Editorial Office

To the Editors at BioMed Central:

Thank you for your kind review of the manuscript, “Access to Essential Technologies for Safe Childbirth: A Survey of Health Workers in Africa and Asia” (Manuscript ID 4416603817402726). We are delighted for the opportunity to have further strengthened the paper with the suggested revisions. Please find the revised manuscript enclosed.

The following revisions were requested:

Editor’s Comments

(1) Copyediting: After reading through your manuscript, we feel that the quality of written English needs to be improved before the manuscript can be considered further. We advise you to seek the assistance of a fluent English speaking colleague.

Fluent English-speaking co-authors have worked diligently to improve the quality of written English throughout the entire manuscript.

(2) Please provide a copy of the questionnaire which was administered to the study participants. This may be included as an extra file in the submission system. If you used a questionnaire which has been previously published, please update your manuscript to include a reference to the published questionnaire.

Please find a copy of the questionnaire as part of the revised submission package. This was not a previously published questionnaire. As requested, this document is being uploaded in the submission system as an extra file.

Reviewer 1 Comments

There are multiple terms used apparently meaning the same thing, i.e "Health Technologies". The authors need to correct the manuscript to use one term or repeatedly define them (which is suboptimal). Remove, modify or define the terms childbirth technologies, childbirth resources, childbirth equipment, essential techniques etc.

We appreciate the concern of the reviewer and have extensively revised the language throughout the manuscript in order to maintain clarity and consistency. We have maintained consistency with the language “health technologies” throughout.
BACKGROUND Paragraph 1
The first sentence needs to be moved as its subject is not defined. It is probably best placed at the end of the first paragraph, with a definition (e.g. the one used in the abstract)

The modification has been made as per the reviewer’s suggestion. The content of the first sentence has been moved to the second paragraph of the Background section.

BACKGROUND Paragraph two: citation needed for mortality or merge and edit sentence one and two assuming safety and mortality are considered the same thing here.

The modification has been made as per the reviewer’s suggestion. The two sentences have been merged.

METHODS sentence 1
Be consistent with terminology, it should probably read “healthcare technologies” see comment 1 above.

The modification has been made as per the reviewer’s suggestion. As explained in the point above, we have modified text throughout the manuscript to maintain consistency with respect to “health technologies.”

METHODS 3rd paragraph last sentence.
Essential technologies is not defined. Need to introduce the idea of essential technologies in this paragraph and then go from there...

The modification has been made as per the reviewer’s suggestion. We have clarified the definition of “essential technologies,” both in the final paragraph of the Background section and in the first paragraph of the Methods section.

RESULTS first sentence:
This implies that something was NOT available. So either state the denominator or remove the term “available”

As per the reviewer’s suggestion the term “available” has been removed.

RESULTS paragraph 4
Remove second half of first sentence as it's redundant if you defined this term earlier.

The modification has been made as per the reviewer’s suggestion.

RESULTS sentence 2
Define "capacity for operative delivery"

As per the reviewer’s suggestion the text has been modified in order provide increased clarity. We specifically now refer to “cesarean delivery” in the manuscript.

DISCUSSION first sentence define what these are. You might add the words defined as... at the end of this sentence.
The modification has been made as per the reviewer’s suggestion.

DISCUSSION paragraph 1 sentence 2
Do not split infinitive. should read "reliable technologies were available..."

The modification has been made as per the reviewer’s suggestion.

DISCUSSION paragraph 2
Much of this material is not discussion and would be better placed in the background section.

A modification has been made as per the reviewer’s suggestion. The following text has been moved to the introduction section: “Poor availability of technologies in centers with lower birth volumes (generally “sub-centers” or “primary health centers”) may compel patient referral to higher level facilities (for example, district-level hospitals) with attendant risks in delay of care, despite the fact that patients may have been managed appropriately if resources were otherwise present.”

Discretionary Revisions

By the end of the paper the concept of essential technologies (or whatever term you choose to consistently use) needs to be defined, so it is possible for the reader to appreciate how the absence of said technologies leads to an increase in morbidity and mortality. With this in mind the aper as a whole needs to be reengineered for this to be clear to the reader (and reviewer).

We have reengineered language in each of the Background, Methods, and Discussion sections in order to make the definition of “essential” health technologies more clear to the reader.

The authors also need to edit the paper for content to ensure the methods have only methods. results only results etc.

As per the reviewer’s suggestions we have modified language in the Methods and Results sections to ensure that only appropriate language exists in these sections.

Reviewer 2 Comments

Page 3, 1st sentence under Methods: “the major causes of maternal mortality (i.e., postpartum hemorrhage, infection, obstructed labor, and hypertensive-related disorders)” As the authors know the fifth major cause is ‘unsafe abortion’ - this is perhaps distinct from the immediate concerns of the study regarding childbirth - but nonetheless the fifth major cause should perhaps be mentioned and then excluded as a consideration (regarding technology for childbirth) here in this study and this article.

As per the reviewer’s suggestions, the manuscript has been revised. Specifically, we have inserted the following statement in the first paragraph of the Methods section: “Note that unsafe abortion is a fifth major cause of maternal mortality
globally but health technologies relating to this condition were not assessed since this study focused exclusively on equipment, medicines, and consumable supplies required for safe childbirth.”

Page 4: the authors state that ‘Only a single entry from each birth facility was allowed’. Perhaps this could be briefly clarified- was this done in hindsight removal of duplicates? While they may have just invited one per facility, there is a possibility that more than one per facility was completed.

As per the reviewer’s suggestions, the manuscript has been revised. Specifically, we have inserted the following statement in the second paragraph of the Methods section: “Surveys were screened to ensure that only a single entry from each center was included in the analysis.” We then discuss in the Results section that “no duplicate entries (i.e., multiple surveys from the same center) were received.”

TABLE 1- In columns 4-6 state these as ANNUAL birth volume, though that is mentioned in the text.

The modification has been made as per the reviewer’s suggestion. The new Table legend reads as the following: “Geographic location of survey participants. The list of countries is stratified by gross national income (GNI) per capita. The number of births shown corresponds to annual birth volume per facility.”

Discretionary revisions

Page 4: first para under Results: it is stated that ‘World Bank classification by gross national income (GNI) per capita’ was used to categorise countries – can this be briefly justified as the most appropriate classification/measure to use?

As per the reviewer’s suggestion we have modified the fourth paragraph of the Methods section to explain to the reader that GNI is the World Bank’s main criterion for classifying economies; a reference is also provided.

Page 4: first para under Results: regarding ‘low volume’ <100 births annually is really very low- e.g. 2 per week - can this be considered a birth centre/facility- I understand that is births are taking place at all then essential technologies should be there, but perhaps further justification of cut-offs could be used.

We agree entirely with the reviewer that <100 births annually is extremely low; yet more than 10% of facilities surveyed using an internet-based survey methodology reported having this number of annual births. This evidence confirms that birth centers with these annual birth volumes in Africa and Asia do exist. It is one of the main points of this paper (addressed in the Discussion section) that lower volume birth centers are associated with poorer availability of essential childbirth-related health technologies; the implication is that health technology supply chains in these low-level facilities must be augmented or, perhaps better, these low-level birth facilities should simply be phased out in favor of shifting place of delivery to higher level birth centers.

Also in Table 1, 16 of the 18 countries are in the ‘sub-Saharan’ region of Africa- researchers might find it useful to provide data grouped in ways other than/ or as well as
country income level - researchers, clinicians and policy-makers might be interested in that (pertaining to their context). Personally I would be interested in country level data (where there is more than one facility reported on in particular), but I appreciate that this is perhaps not permitted in order to maintain anonymity of facilities. As it stands, the income-related groupings are valuable and of interest.

We appreciate the reviewer’s comment and share an interest in assessing country-level data that describes availability of essential childbirth-related health technologies. For the current study, however, the relatively low number of birth facilities surveyed within each country would preclude a meaningful assessment of country level data. We appreciate the reviewer’s perspective that the presented income-related groupings are valuable and of interest.

We hope that these modifications meet with your approval. Please let us know if additional modifications are requested.

Thank you, again, for the opportunity to publish with BioMed Central. We are pleased to be working with you in this way.

Sincerely,

Jonathan Reisman, MD, and co-authors