## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (see an example) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

## ARTICLE DETAILS

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| **TITLE (PROVISIONAL)** | A Survey of Essential Surgical Capacity in Somalia |
| **AUTHORS** | Elkheir, Natalie ; Sharma, Akshay; Cherian, M; Saleh, Omar; Everard, Marthe; Popal, Ghulam; Ibrahim, Abdi |

## VERSION 1 - REVIEW

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| **REVIEWER** | Sarah Macfarlane PhD<br>University of California San Francisco, USA<br><br>I have worked with one author, Meena Cherian. |
| **REVIEW RETURNED** | 02-Dec-2013 |

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| **GENERAL COMMENTS** | 2) Is the abstract accurate, balanced and complete? The abstract needs editing for grammar; several key words are missing. The objective is not well represented and the abstract as a whole is rather repetitive.<br>4) Are the methods described sufficiently to allow the study to be repeated? The WHO situational analysis tool is widely available and so can be, and is, used repeatedly. But, the authors do not explain the process by which the tool was used. The authors say that the tool was distributed to the 20 first referral-level health facilities “and was completed by 14”; then they say that the data were obtained during site visits ….. and that the survey was extended to regional medical officers and facility administrators. I find this very confusing. Additionally, it seems the data were collected over a fairly long period of time (2011 and 2012 (best to give months)) and that various different people helped to collect them. Without being trained as enumerators, these people could have very different interpretations of the questions leading to inconsistencies between facilities. Availability of equipment is fairly objective (although we need to know what “sometimes” means) but I do not know how the ability of the health facilities to provide the interventions was assessed. So I would like to know exactly how the data were collected together with some assessment of their quality. I also need to know which six facilities did not take part, why they opted out and how much bias their opting out is likely to have introduced.<br>5) Are research ethics (e.g. participant consent, ethics approval) addressed appropriately? There is no mention of ethical considerations in the paper.<br>8) Are the references up-to-date and appropriate? There is no mention of papers of other similar studies conducted by the same group in, for example, Tanzania, Liberia, Mongolia Afghanistan, Ghana etc<br>10) Are they presented clearly? Table 1 lists the 14 facilities in the survey. It would be helpful to provide more information about each facility, for example, type of facility, population served, number of beds, number of operating theatres, and number of human resources. Some of this information is summarized under the |

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| | heading “health facility characteristics”. It would be useful to list all 20 facilities so that we get an idea of those that were omitted. It would be more interesting if Table 2 differentiated between items that were specific to surgery and items that represent the general situation of the facility eg running water, electricity source etc. It would be easier to have just one column either representing “always” or “not available”; with so few facilities, actual numbers would be as informative as percentages. Tables 3 and 4 are far too long and very hard for the reader to interpret. I would suggest the authors classify the row items and reduce the number of rows. The lists in the tables feel undigested; it would be interesting to know how the results played out by type of facility and whether or not some facilities were missing many of the items, not just one item. Were some facilities overall well-equipped and others not, or were the shortages arbitrarily distributed across facilities? There seems to be quite a mix of facilities ie provincial, specialist, regional, general hospitals and a health centre. Were the specialist hospitals better equipped than the health centre for example? Why were all these facilities referred to as first-referral?<br>Under “human resources”, I am not sure what is meant by “more data is needed to comment on the Health Human Resources in Somalia” This goes without saying. Again, it would be more helpful to describe the human resources by hospital.<br>Under “interventions”, the authors state “acute burn management, wound management… are widely provided”. That a facility has the capacity to provide these interventions does not mean that they actually provide them.<br>Under “emergency equipment”, it seems the authors are talking about much basic equipment that could also be used in an emergency.<br>11) Are the discussion and conclusions justified by the results? There is only a discussion section which returns to the global overview and then repeats some of the findings. Some additional interpretation is needed, for example: 1) the group could compare their results with some of its own findings in other countries where they have repeated and published these types of studies. It would help to understand where the situation in Somalia fits among the other studies. 2) Health facilities are clearly devastated across Somalia. To what extent are the shortages reported peculiar to surgery or representative of the overall situation? Some of the basic infrastructure data helps us answer this question. If, as is likely, the overall situation is poor, then it would be helpful if the authors could indicate how improving surgical facilities could raise the overall quality of the facilities (and vice versa). I imagine the lack of guidelines was not just for surgery, for example. 3) There is no attempt to make any recommendations about how to improve the situation and whether any priorities should be given to some shortages over others. 4) in line with the objective, where is the discussion of the “benchmarks” for improvement?<br>12) Are the study limitations discussed adequately? There really are quite a few limitations to this type of study and they should be expanded upon both in the methods and in a section headed limitations.<br>14) To the best of your knowledge is the paper free from concerns over publication ethics (e.g. plagiarism, redundant publication, undeclared conflicts of interest)? Several paragraphs/sentences of this paper are identical to those in a paper recently published by this group in BMJ Open on Tanzania.<br>15) Is the standard of written English acceptable for publication? It is generally acceptable but the abstract needs editing. |

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| **REVIEWER** | Miliard Derbew<br>Addis Ababa University<br>College of Health Sciences<br>School of Medicine<br>Department of Surgery<br>Addis Ababa, Ethiopia |
| **REVIEW RETURNED** | 08-Dec-2013 |

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| **GENERAL COMMENTS** | Review of the article<br>Strengths<br>1. Provides a very good information on the status of EESC in SW Somalia<br>2. The methodology is good<br>3. Ethical considerations are well addressed<br>4. Discussion part tries to analyze global, regional and local situation of EESC very well<br>5. References are well cited<br><br>Weaknesses<br>1. There are a lot of topographical errors (Spelling, word spacing, etc…)<br>2. Tables are not summarized and looks bulky, redundant and not reader friendly<br>3. There is no mention of district hospitals in the study where as the WHO tool is mainly used for district hospitals<br>4. In the tables only percentages are written but not the absolute figures<br>5. There is no given title for the study<br>Conclusion<br>The paper is good and if the above comments are incorporated it would provide a new set of insight and knowledge as to the situation of EESC is in Somalia and strengthens the global evidence where the situation is. Therefore with some improvement, it adds to the body of knowledge to the global initiative for emergency and essential surgical care (GIEESC).<br>NB. Sorry that I haven't used a structures review format. Would have been nice if the journal sends a review format |

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| **REVIEWER** | chris lavy<br>oxford univ, UK |
| **REVIEW RETURNED** | 10-Dec-2013 |

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| **GENERAL COMMENTS** | This is a great paper in terms of turning our minds to issues of major global need. I think it is worth publishing somewhere. The question is whether the BMJ is the place. Essentially that is an editorial choice. The scientific content of the paper does not meet the BMJ's usual standard, but you might choose to relax this standard in order to push readers to an important global issue, that of inadequate surgical provision. The other options for this paper are the world journal of surgery or the WHO bulletin.<br><br>The WHO tool for situational analysis to assess emergency essential surgical care is a good starting point as a tool but definitely needs refinement. For example it asks if kidney dishes, plastic buckets and examination tables are always available, sometimes available or |

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| | never available. How easy is that question to answer? either you have a plastic bucket or you don't. Or perhaps you dont know whether your hospital has plastic buckets. Either way it is hard to take seriously the response of a hospital that says it sometimes has plastic buckets and sometimes has examination tables and kidney dishes. The WHO tool is a good start but needs refining. Perhaps the BMJ is the organ that give it that push.<br><br>My recommendation of acceptance with major revision is given only if the editorial team want to take on the whole new avenue of global surgical need. That is an editorial choice. I know that the Lancet is going to fight this war in the next 18 months with the Lancet Global Surgical Commission that is being set up in 2014. Personally I would be very happy if you did, but that is your choice. If you dont then the scientific content of this paper probably does not merit acceptance. |

**VERSION 1 – AUTHOR RESPONSE**

Professor Macfarlane:
We have revised the entire document for grammar and spelling. Thank you for pointing out the mistakes. The objective has been updated.
We have clarified how the surveys were distributed and subsequently collected. We also expounded on the limitations that we face using the tool and methods of distribution of collection. At this time, we regret to inform you that we were unable to collect the full list of 20 facilities due to an inability to obtain a response from authors in Somalia. If the BMJ can give us 2 week more, we believe we can obtain that list and update the revision. In line with you suggestion, we included more data on health facility characteristics within the table to contextualize the range of facilities we are looking at.
We have mentioned the previous studies conducted in all other countries that who have used the WHO SitAn. We chose not to compare those results to the ones presented. We feel that this study should present the state of surgical capacity in Somalia, and comparison of results should engender a longer more thorough review of multiple countries than we could provide in this paper.
In regards to the tables, we have broken them up by subcategory, hoping to make the information a bit more digestible. We could not find a way to classify multiple rows and report data that was comprehensible so we hope that this breakdown will allow readers to view data in smaller portions. We feel that this raw data is important in relaying the state of surgical capacity in the hospitals and facilities presented in the study. What is striking and very apparent is the lack of basic equipment and infrastructure that occurs at a majority of the facilities. Further the numbers have been updated to absolutes rather than percentages. We hope that we have clarified the limitations faced when analyzing the data for human resources.
With our discussion we hoped to contextualize for the reader the necessity of strengthening surgical capacity in Somalia. We included a section noting the necessity of many of the queried infrastructure and equipment in the delivery of general primary and emergency care, and that investing in these infrastructures could increase quality of the entire primary care spectrum. We feel that this is also addressed in our earlier discussion of the role of surgical care in achieving MDGs and reducing DALYs. We also stressed the need to invest in improving access to equipment and investment in infrastructure, and also presented the WHO IMEESC tool as a viable tool to strengthen management guidelines, planning strategies, and future research. Given the nature of political instability and decaying health care infrastructure in Somalia, we reported that further study into cost-benefit strategy was needed in order to prioritize certain aspects of surgical care system improvement, something that we were unable to do with data on just the health facilities.

Professor Derbew:
1. Thank you pointing out these topographical errors. We hope we have addressed all of them.
2. The tables have been broken down into sections and the absolute numbers have been given to

make them reader friendly.
3. A district hospital is a major health facility in the region, and these facilities represent facilities that fit this definition. They self identify in other classification to give context as to their size, funding, and resources.

Professor Lavy:
We hope that the inclusion of the definition of Always and Sometimes have clarified the question of availability that you might have. Given the decaying health infrastructure in Somalia, renewable items or even capital outlays could be absent for periods or in a state of disrepair, to name a two examples.

We agree that WHO SitAn Tool is not perfect, and we thank you for your comments and suggestions on how to improve the tool. We are constantly updating the tool in each study that we perform to make sure that we can collect the most accurate and telling data that we can.

We also thank you for your recognition that this is an important issue, and we posit that the BMJ Open is an excellent journal for this publication. Given its open source subscription and its wide audience of medical professionals, the BMJ Open serves the purpose of increasing awareness of this very important issue.

We thank all three reviewers for their comments and suggestions and hope that our revisions have satisfied a majority your questions and concerns. Again we ask for a 2 week extension to provide the list of 20 health facilities, as we see this as an incredibly important qualification of our data. We ask that BMJ hold off on requiring us to submit the manuscript as a new document.