PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Emergency and urgent care capacity in a resource-limited setting: an assessment of health facilities in western Kenya
AUTHORS	Burke, Thomas; Hines, Rosemary; Ahn, Roy; Walters, Michelle; Young, David; Anderson, Rachel; Tom, Sabrina; Clark, Rachel; Obita, Walter; Nelson, Brett

VERSION 1 - REVIEW

REVIEWER	William M Macharia Aga Khan University, Nairobi
REVIEW RETURNED	28-Jul-2014

GENERAL COMMENTS	No Research question stated and objective stated as "to Understand" which is difficulty to test though acceptable for qualitative research. Needs better definitions like what "fully functional service means, States MOH approval given yet MOH has no IRB and depends on Universities or Research Institutions like Moi University in Western Kenya. Self reported information not verified hence risk of social desirability bias and over-estimate of true values. Strengths and Limitations should refer to methodological approaches used rather than findings. Minimum expected emergency care resources (essential packages for different levels) at different levels of care should have been defined as reference for determining if met or not. This could have been alongside stated domains - facility demographics, referral, personel, economics, trauma, critical care, etc. No results on intended assessments on attitudes and perceptions (morale, communication and cooperation) seen in results. I am not clear what new knowledge comes out of this work since common knowledge that government health facilities are poorly equipped to handle emergencies and acute care from work done by English M et al at district level. It would have been more valuable to define gap between current status and minimum expected package and compare across facilities so county governments then knows how to prioritize for support.

REVIEWER	lee wallis University of Cape Town, south africa
REVIEW RETURNED	31-Jul-2014

GENERAL COMMENTS	this is a basic report but it is of interest to the EM population in the region. it is well written. I don't know enough about BMJ Open to determine whether it is suitable for the audience, or whether this

	would be more appropriately placed in a more EM focused journal

VERSION 1 – AUTHOR RESPONSE

Reviewer Name William M Macharia
Institution and Country Aga Khan University, Nairobi
Please state any competing interests or state 'None declared': None

Reviewer: No Research question stated and objective stated as "to Understand" which is difficulty to test though acceptable for qualitative research. Needs better definitions like what "fully functional service means, States MOH approval given yet MOH has no IRB and depends on Universities or Research Institutions like Moi University in Western Kenya. Self reported information not verified hence risk of social desirability bias and over-estimate of true values. Strengths and Limitations should refer to methodological approaches used rather than findings.

AUTHORS' REPLY:
We thank the reviewer for the recommendations. With regard to our stated objective "to understand…," the reviewer is correct that we could use a more engaging, active, and accurate phrase to describe this assessment – even though the assessment has qualitative components. Therefore, we have revised the manuscript and used what we believe is a more active and accurate phrase: "to examine and characterize…."

We also agree with the reviewer that our phrase "fully functioning health facility" is not as clear as it could be. Therefore, we have clarified this description and changed this to "an open healthcare facility currently providing health services."

With regard to approval for the study, we were actually asked to do this assessment directly by the local ministries of health of the county of Kisumu and county of Siaya. They felt no additional local approval was necessary for this non-intervention, minimal-risk, anonymous needs/capacity assessment among healthcare providers. Nevertheless, we also sought and received IRB approval (and exemption from further review) from the IRB of Partners Healthcare (Boston, MA).

We agree with the potential limitation of social desirability. We, therefore, included this potential limitation in our Limitations section and how we attempted to mitigate this limitation (e.g., confidentiality of survey, explaining the purpose of the study and that they could choose not to participate). We have clarified this in our revised Limitations section. With regards to "Strengths and Limitations should refer to methodological approaches used rather than findings," we have carefully reviewed our Limitations section, and we feel that each of the cited limitations speaks specifically to study methods (and the resultant generalizability of findings due to the methods) rather than to any specific results. However, we welcome any additional suggestions for revisions to this section.

Reviewer: Minimum expected emergency care resources (essential packages for different levels) at different levels of care should have been defined as reference for determining if met or not. This could have been alongside stated domains - facility demographics, referral, personel, economics, trauma, critical care, etc.

AUTHORS' REPLY:
This is a great suggestion, and it's something that we had sought to do as well. There is some information available from the MOH that describes what services and resources should be available at each health facility level, and we have tried to summarize the available and relevant information in Table 1, by facility level. However, we agree that more detailed standardized packages should be established – not only in Kenya, but across sub-Saharan Africa. Fortunately, some terrific work by the

African Federation for Emergency Medicine is currently underway in recommending basic, intermediate, and advanced packages of emergency care services. We believe these forthcoming recommendations will be very useful in addressing this clear need. Therefore, in response to this reviewer comment and to clarify this point in our manuscript, we have revised our manuscript to mention the important work of the African Federation for Emergency Medicine in developing standardized packages, and we have added a reference to their recent consensus recommendation that essential packages need to be defined.

Reviewer: No results on intended assessments on attitudes and perceptions (morale, communication and cooperation) seen in results.

AUTHORS' REPLY:
The reviewer is correct that we did not include a separate results section with all of our qualitative findings, and we did prioritize the quantitative findings in the results. Nevertheless, the qualitative component of the survey was designed to examine both the local health facility context and provider perceptions. While we did not report separately on these findings, we absolutely took the most salient of these qualitative findings, which explicitly informed both our findings and our discussion. However, if even more explicit, independent presentation of qualitative data is desired, we would be happy to do so.

Reviewer: I am not clear what new knowledge comes out of this work since common knowledge that government health facilities are poorly equipped to handle emergencies and acute care from work done by English M et al at district level. It would have been more valuable to define gap between current status and minimum expected package and compare across facilities so county governments then knows how to prioritize for support.

AUTHORS' REPLY:
English M et al. have truly accomplished an incredible amount of important work on health services evaluation in Kenya and beyond. Their work is very valuable, and, in fact, we have added some of their references to the revised manuscript to reflect the importance of their work. However, their work largely (and appropriately) focuses on inpatient care in district hospitals (Level 4 facilities in Kenya) – and usually focuses on the important topics of pediatric and newborn care. Therefore, we respectfully but strongly believe that our current manuscript is completely complementary rather than redundant with previously published data. Our data examine services at health facility Levels 2-5, and we focus on emergency care.

With regard to comparing our findings to a minimum expected package, as discussed in our reply above, we provide the reader with the MOH-defined expectations outlined in Table 1, and we report in our findings how each level of facility tended to fall short of expectations and need for services. The forthcoming defined packages of emergency care services from the African Federation for Emergency Medicine are not yet published but will help to further clarify these service gaps.

Reviewer Name lee wallis
Institution and Country University of Cape Town, south africa
Please state any competing interests or state 'None declared': none declared

Reviewer: this is a basic report but it is of interest to the EM population in the region. it is well written. I don't know enough about BMJ Open to determine whether it is suitable for the audience, or whether this would be more appropriately placed in a more EM focused journal

AUTHORS' REPLY:
We very much appreciate the review. We agree that this article has interest in the region. We also, personally, believe that there is very significant relevance and utility to providers and policymakers involved in providing health services in other resource-constrained settings. Due to the increasing prevalence of injuries, trauma, and non-communicable diseases in resource-limited settings (as outlined in our Introduction), we believe the topic of quality emergency care is a priority public health crisis. Furthermore, because of the significant health inequality issue present here, we feel this article is most appropriate for BMJ Open (which publishes a significant amount of public health research) than for an EM-only journal.

VERSION 2 – REVIEW

REVIEWER	William M Macharia Aga Khan University, Nairobi
REVIEW RETURNED	08-Sep-2014

GENERAL COMMENTS	Under Common Conditions Subheadings in Results section, interpretation of absolute numbers and proportions describing Most frequently reported emergencies and Urgent Conditions is confusing confusing to readers and needs better clarity. I note Methods reports in many sections in Present tense yet study done Nov 2013-Jan 2014, it would appear more preferable to report findings in Past tense since situation found then could have changed.

VERSION 2 – AUTHOR RESPONSE

1. REVIEWER: Under Common Conditions Subheadings in Results section, interpretation of absolute numbers and proportions describing Most frequently reported emergencies and Urgent Conditions is confusing confusing to readers and needs better clarity.

--> 1. AUTHORS' REPLY: This is a great suggestion, and we have revised this section to provide additional clarity. The section in the second-revised manuscript reads: "Key informants were asked by open response to list the 10 most common emergent and urgent conditions presenting to their health facility. The most frequently reported conditions at Level 2 and 3 facilities were (in order of reporting frequency) malaria (30 of 30 facilities, 100%), diarrhea (26/30, 87%), upper respiratory infections (24/30, 80%), skin infections (18/30, 60%), sexually transmitted infections (15/30, 50%), pneumonia (14/30, 47%), and RTAs/trauma (9/30, 30%)."

2. REVIEWER: I note Methods reports in many sections in Present tense yet study done Nov 2013-Jan 2014, it would appear more preferable to report findings in Past tense since situation found then could have changed.

--> 2. AUTHORS' REPLY: We completely agree with this as well, and we have updated both the abstract and the manuscript so that the Methods and the Results are all consistently in past tense. Thank you for this suggestion.

3. REVIEWER: Well revised.