BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form ([http://bmjopen.bmj.com/site/about/resources/checklist.pdf](http://bmjopen.bmj.com/site/about/resources/checklist.pdf)) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

**ARTICLE DETAILS**

<table>
<thead>
<tr>
<th>TITLE (PROVISIONAL)</th>
<th>Clinical emergency care quality indicators in Africa: a scoping review and data summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHORS</td>
<td>Pickering, Ashley; Malherbe, Petrus; Nambuba, Joan; Bills, Corey; Hynes, Emilie; Rice, Brian</td>
</tr>
</tbody>
</table>

**VERSION 1 – REVIEW**

<table>
<thead>
<tr>
<th>REVIEWER</th>
<th>Lee, Jeong IL Worju College of Medicine, Yonsei University, Department of Emergency Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVIEW RETURNED</td>
<td>19-Feb-2023</td>
</tr>
</tbody>
</table>

**GENERAL COMMENTS**

This paper provides very useful information for clinical emergency care in Africa. Now, research on Africa, which is growing a lot, is much needed. This study has produced the presently given indicators through an overly broad challenge and observational review. This is very important for developing the country’s system and for quality control. However, when such extensive research is carried out, it is often confused about what the core of the thesis is for readers to read. Therefore, it will be more helpful for the reader to understand if the result shows the quality control index table and explanation, which are key among the many reviews.

<table>
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<tr>
<th>REVIEWER</th>
<th>Möckel, Martin Charite Universitätsmedizin Berlin, Emergency and Acute Medicine</th>
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**GENERAL COMMENTS**

This is an important scoping review with a strong methodology, comprehensive presentation and good discussion. I am missing in the discussion the specific African perspective from at least one regional author, who could provide insights how meaningful the restriction to English literature is.

<table>
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<tr>
<th>REVIEWER</th>
<th>Shenoy, Amrita University of Baltimore College of Public Affairs</th>
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<td>REVIEW RETURNED</td>
<td>20-Feb-2023</td>
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</tbody>
</table>

**GENERAL COMMENTS**

BMJ Open
Manuscript Title: Focus on quality: a scoping review and data summary of clinical emergency care quality indicators in Africa
Reviewer Report
The study presented in this manuscript is well written, detailed, and thorough. Review findings on the sections of this manuscript is as follows:
I. Abstract:
Objectives:
a. Spell out AFEM-CC here instead of in Settings, thereafter, leverage acronym in the latter.
b. Briefly state the purpose of this study’s objectives, i.e., the importance and relevance of conducting this study.

II. Discussion:
a. Explain in detail the following:
i. Significance of this study in terms of:
   • Why is this study important?
   • What aspects of this study should be utilized to target which aspects of
     a. the patient population,
     b. geographic area,
     c. access to emergency healthcare, and
     d. determinative quality indicators of emergency care
   ii. Limitations
     • Build upon this subsection in terms of further enlisting your limitations and how were those handled?
   iii. Strengths:
     • Enlist the strengths of this study in terms of methodological as well as relevance to clinical emergency care
   iv. Future work
     • Propose strategies in terms of how this study benefit would if prospectively leveraged and strategies of which when implemented benefit the target population in the specific geographic area

As your reviewer, I am recommending a Major Revision for now and shall, by all means, be accessible to review a revised draft of your study should you choose to submit one.

Thank you for your fantastic research,
Dr. Shenoy
Amrita Shenoy, PhD, MBA, MHA, MSc
Assistant Professor of Healthcare Administration
University of Baltimore | College of Public Affairs | School of Health and Human Services

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Dr. Jeong IL Lee, Wonju College of Medicine, Yonsei University, Wonju College of Medicine, Yonsei University
Comments to the Author:
This paper provides very useful information for clinical emergency care in Africa. Now, research on Africa, which is growing a lot, is much needed. This study has produced the presently given indicators through an overly broad challenge and observational review. This is very important for developing the country’s system and for quality control.

However, when such extensive research is carried out, it is often confused about what the core of the thesis is for readers to read.

Therefore, it will be more helpful for the reader to understand if the result shows the quality control index table and explanation, which are key among the many reviews.
Thank you for highlighting that a clear summary of the main takeaway from the extensive literature reviewed was needed. We added a summary at the beginning of the discussion section, page 22, lines 20-24:

“The above scoping review demonstrates that limited data about emergency care quality in Africa does exist, but these data are rarely presented explicitly as quality metrics and exist in the absence of any organizing framework. This scoping review represents a first time this data has been organized in a single location and will hopefully provide synergy with AFCEM efforts to establish a quality framework to support future quality improvement and research efforts.”

Reviewer: 2
Dr. Martin Möckel, Charite Universitätsmedizin Berlin
Comments to the Author:
This is an important scoping review with a strong methodology, comprehensive presentation and good discussion.
I am missing in the discussion the specific African perspective from at least one regional author, who could provide insights how meaningful the restriction to English literature is.
Two of the primary authors of this study are Africans who are working in the United States currently, Petrus Malherbe and Joan Nambuba. All authors recognize the limitation that including only publications available in English poses. This limitation is further addressed in page 25, line 15 – page 26, line 2:

“We acknowledge that English is an official language in only approximately half of African countries, but that the use of English as a medical and academic language, and publications in multiple languages may increase the availability of relevant publications in English to some extent. One reason for limiting our searches to English was that our exhaustive search strategy required 570 individual queries even for a single language. Multiplying these efforts with additional languages was beyond the capacity of this scoping review. Additionally, despite having two team members (PM and JN) who are Africans currently working in the United States, no one on the team was adequately fluent in other languages spoken in Africa to review literature in those languages. This study is unfunded and thus we could not procure professional translation services. We chose to focus instead on an extensive search of the English language literature.”

Reviewer: 3
Dr. Amrita Shenoy, University of Baltimore College of Public Affairs
Comments to the Author:
BMJ Open
Manuscript Title: Focus on quality: a scoping review and data summary of clinical emergency care quality indicators in Africa

Reviewer Report
The study presented in this manuscript is well written, detailed, and thorough. Review findings on the sections of this manuscript is as follows:

I. Abstract:
Objectives:
a. Spell out AFEM-CC here instead of in Settings, thereafter, leverage acronym in the latter
This was addressed throughout the manuscript.

b. Briefly state the purpose of this study’s objectives, i.e., the importance and relevance of conducting this study.
Addressed as above - Background was added to the objectives section, page 3, line 4-8.

“Emergency care services are rapidly expanding in Africa; however, development must focus on quality. The African Federation of Emergency Medicine consensus conference (AFEM-CC) based
quality indicators were published in 2018. This study sought to increase knowledge of quality through identifying all publications from Africa containing data relevant to the AFEM-CC process clinical and/or outcomes quality indicators.

II. Discussion:
Explain in detail the following:
i. Significance of this study in terms of:
• Why is this study important?
This is addressed extensively in the introduction, however we added a summative statement to the beginning of the discussion to help reorient the reader to the larger relevance of the paper following the in-depth methods and extensive results, as above, page 22, lines 20-24:
“The above scoping review demonstrates that limited data about emergency care quality in Africa does exist, but these data are rarely presented explicitly as quality metrics and exist in the absence of any organizing framework. This scoping review represents a first time this data has been organized in a single location and will hopefully provide synergy with AFEM efforts to establish a quality framework to support future quality improvement and research efforts.”

• What aspects of this study should be utilized to target which aspects of
a. the patient population,
b. geographic area,
c. access to emergency healthcare, and
d. determinative quality indicators of emergency care
We address the patient population, emergency care patients in Africa, throughout the discussion section. We include discussion specific to the main subsegment of this population, patients with traumatic injuries, on page 25, lines 1-12:
“Finally, much of the data came from trauma registries. This creates asymmetry in the knowledge base as more is understood about the quality of emergency care for injuries than medical emergencies. However, these efforts are to be lauded as the registries appear to facilitate research efforts around quality indicators. Hopefully, these successes can encourage efforts to start or maintain emergency unit registries in Africa.”
We also address the limited data identified which was relevant to rural areas, on page 24, line 17-22: “A disproportionate amount of the included studies were from a handful of countries and especially from urban academic centers. This highlights the challenge facing emergency care development in Africa where a huge knowledge gap exists about the emergency care needs of most countries and for rural populations across the continent. This gap brings into question the utility and applicability of the current evidence base for emergency care in many African settings.”

This study does not purport to address access to emergency care, on the contrary it is designed the investigate quality of clinical care once the patient has reached the emergency department.

ii. Limitations
• Build upon this subsection in terms of further enlisting your limitations and how were those handled?
As above, we added future discussion in the strengths and limitations section as well page 25, lines 13-23.

iii. Strengths:
• Enlist the strengths of this study in terms of methodological as well as relevance to clinical emergency care
As above, we added future discussion in the strengths and limitations section as well page 25, lines 13-23.
The relevance of quality and quality indicators to clinical emergency care development is extensively addressed in the introduction, page 4, lines 12-19:
“Emergency care can address much of the excess morbidity and mortality from acute illness and injury in Africa. However, to achieve this impact, emergency care services must be both timely and of high quality. Emergency care services (including prehospital, facility-based, and interfacility networks) are rapidly developing in Africa. While health outcomes are improving in Africa, it is widely recognized that health development in the Sustainable Development Goals era must focus on improving care quality rather than just access. Measuring quality of emergency care delivery, however, has not been a significant focus for emergency care researchers or policymakers in Africa to date.”

The major strength of this study is the extensive search strategy utilized to locate quality indicator data points in the medical literature at large rather than solely in publications addressing emergency care quality explicitly. This is highlighted in, page 21, lines 1-12:

“Our methodological approach was comprehensive but required a very large number of searches. The searches of the medical literature required 128 individual searches of the medical literature (including PubMed, Cinhal, EMBASE and the African Journal of Emergency Medicine) and 442 individual searches of the grey literature (including Ministry of Health websites, WHO, Google, Google Scholar, Path). These 570 searches yielded 1,314 unique results and 314 of which warranted full-text review. This large volume of work only identified 146 total data points published to date in Africa that can be directly applied to the AFEM-CC-QI. Furthermore, only 59 of those data points met AFEM-CC-QI precisely enough to enable comparison between sites and studies. Producing this work has required a large investment in time but also internet connectivity and institutional access to medical libraries which represent structural barriers to replicating this sort of search in many low-income settings in Africa. Notably, these areas most directly benefit from obtaining and disseminating this data.”

iv. Future work

• Propose strategies in terms of how this study benefit would if prospectively leveraged and strategies of which when implemented benefit the target population in the specific geographic area

This is addressed throughout the discussion:

Page 22, lines 20-24:

“The above scoping review demonstrates that limited data about emergency care quality in Africa does exist, but these data are rarely presented explicitly as quality metrics and exist in the absence of any organizing framework. This scoping review represents a first time this data has been organized in a single location and will hopefully provide synergy with AFCEM efforts to establish a quality framework to support future quality improvement and research efforts.”

Page 23, line 20 - Page 24 line 1:

“The authors believe that publication of this scoping review is an important first step in organizing and disseminating this widely scattered data in a format that is usable for clinicians, researchers, and policy makers to assist with subsequent development efforts. This data builds upon AFEM’s efforts and can provide a starting point for benchmarking efforts and a common language for quality.”

Page 24, lines 6 – 16:

“One of the goals of quality indicators is to provide references for comparing between sites and targeting quality improvement efforts. These aims are severely hampered by the lack of standardization in data measures and reporting. This problem was most clearly highlighted in the mortality outcomes data presented in Table 2. The abundance of mortality studies in the “near match” category suggests strong interest from researchers. This contrasts with the dearth of “exact match” mortality data and underlines how even subtle differences in age groups and/or outcome variables severely limits generalizability of data and comparison between studies. Moving towards standard definitions for inclusion criteria and outcomes will greatly increase the collective impact of this existing research interest. It is hoped that this scoping review can provide a reference point for efforts to standardize quality research and generate quality benchmarks in African emergency care.”
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<tr>
<td>GENERAL COMMENTS</td>
<td>Thank you for revising this paper. It seems to adequately touch base upon the revision points of view of this study. Note for the inviting Editor: I would recommend this paper to be accepted.</td>
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