Author’s response to reviews

Title: Respiratory compromise in children presenting to an urban emergency department of a tertiary hospital in Tanzania: A descriptive cohort study

Authors:

Biita Muhanuzi (biitamuhanuzi@yahoo.com)
Hendry Sawe (hendry_sawe@yahoo.com)
Said Kilindimo (skilindimo@yahoo.com)
Juma Mfinanga (jumamfinanga@gmail.com)
Ellen Weber (ellen.weber@me.com)

Version: 2 Date: 06 Dec 2018

Author’s response to reviews:

Travis Whitfill (Reviewer 1)

Minor Comments

Comment

Abstract

The concept of "limited" income countries is introduced in the abstract; however, I think "low income countries" is a more standard definition (this is what the World Bank uses)

Response

Thank you for your comment.

We have changed it to the standard definition as recommended [Line 28-29]
Background:

It may be helpful to add some additional background on Tanzania’s healthcare system for the readers, especially with an emphasis on pediatrics. Where do pediatric patients typically present? Is there a Children’s Hospital in Tanzania? Do other hospitals in Tanzania transfer critically ill/injured patients to MNH?

Response

Thank you

A paragraph about health system in Tanzania added with 2 more references [Line 72-75]

Comment

Methods:

The relative risks calculated for the EMD interventions add questions in my opinion. For example, for CPR there was a higher RR of mortality. Is this because quality of CPR was very poor or because the patients requiring CPR were more critically ill? It would be interesting to tease out EMD interventions that were done correctly (e.g., correct dose of Abx, correct CPR [e.g., compression and ventilation rates etc.]) and/or control for confounders (e.g., severity score). I understand these are likely not feasible especially from case collection forms, but could be a source for future work. I think the next step should be identifying areas for improvement in managing this patient population due to the high mortality rate compared to other countries as you pointed out.

Response

Thank you for the comment. The reviewer is correct that the RR for mortality is higher among patients receiving CPR as those who receive CPR in our setting are critically ill on arrival. Our department is highly experienced in CPR as we do it frequently. We agree that looking at how well interventions were done would be something to examine.

Comment

Results:
You say "in adjusted analyses," but I do not believe the RRs in Table 6 are adjusted for any potential cofounders. Please clarify.

Response

Thank you for the comment.

This has been corrected to unadjusted analyses.[Line 170]

Comment

Discussion/limitations:

To my point above, you could mention in the last paragraph in the discussion that another possibility could be poor adherence to respiratory management guidelines or poor quality of interventions (e.g., CPR)

Response

Thank you for the comment. This paragraph has been added [241-242].

Minor Comments

Comment

Style/language: There is a mixture of American and British English throughout the paper (e.g., paediatric and pediatric; aetiology and etiology; -ize instead of -ise, etc.). Would make consistent (I believe the style of the Journal is British English).

Response

Thank you. This has been rectified to maintain consistency of British English.
Cover page:

Note academic/institutional email addresses are typically used for correspondence instead of personal email. Also, it seems that Dr. Sawe's email address may be incorrect ("yaho.com" instead of "yahoo.com").

Response

Thank you very much. This has been rectified. [Line 11, 21]

Comment

Methods:

SPSS should be cited as (SPSS version 22.0, IBM Corp., Armonk, NY, USA)

Response

Thank you

SPSS cited as advised. [Line 126-127]

Comment

References:

- The references need to be checked. E.g., references 2 (missing all information), 3 (missing source [UpToDate], editors, and date it was updated), 4 (missing author), 11 (missing title, source, author, date), 15 (additional words), 19 (lacking information), 20 (weird addition in the title), 23 (missing journal name and year etc.).

- A lot of the references are not from peer-reviewed sources and would ideally be replaced with more credible resources. For example, the PALS guidelines are published (ref 10) and should not cite a website. Please update these references

Response

Thank you for comments
References have been changed and updated.

Author, date and source added to reference 2 [Line 263-266]

Source added to reference 3

Editor, source and date added to reference 3 [Line 267-269]

Title, author and date added to reference 11 [Line 294-296]

Comment

Tables:
- There seem to be a lot of tables - I think Table 4 can be merged with Table 1

Response

Thank you

Table 1 merged with table 4 [Line 400-402]

Comment

Figure:
- Figure needs to be edited—e.g., the respiratory failure bubble has no percentage sign; the respiratory distress and admitted bubbles have no closing parentheses. One line is blue and the others are black. Not sure if the Journal will fix this, but wanted to point this out.

Response

Thank you for the comment. This has been fixed as recommended
Comment

Grammar:

These are minor that may be caught by editors, but would like to highlight several grammatical errors:

Abstract:

- "We enrolled 165 children; their median.." (replace comma with semicolon)
- "24 hours mortality" should be "24-hour mortality"
- It would read better to have parallel structure in the results: e.g., "20 (12%) were sent to the ICU, four (2%) were discharged from the EMD, and 14 (8%) died in the EMD."
- "In the EMD, 18 children" (add "the" and comma).
- 2 should be "two"
- Add closing parenthesis and period in last sentence of the results

Background:

- "LIC’s" should be "LICs"
- Unclear to whom "our" setting refers - please clarify

Methods:

- "Data from REDCap… [were]" (replace "was" with "were")
- "residents in [an] emergency medicine program"
- "24 hours mortality" should be "24-hour mortality"

Results:

- "[The] median age was.."

Discussion:

- "therapy, however, only 11%" should be "therapy; however, only 11%" (replace comma with semicolon)

Tables:

- Table 1: "[Difficulty] breathing"
- Table 6: (7.9%) should be (7.9)
Thank you for the comment. These have been rectified. [Line 49-425].

Andreas Schibler (Reviewer 2)

Comment
First, a definition of respiratory distress and respiratory failure is required and not just referenced. Second, since almost one third of the patients do present with a cardiac condition it would be good to know what the underlying congenital defect is, if known.

Response
Thank you for comment
Respiratory failure and distress defined as advised [Line 68-69].

Comment
Then for the data analysis I believe that the three categories of patients, which are no pneumonia, cardiac disease and sepsis, need to be used to model the outcome. Only in their second step the presenting clinical features should go in the modelling as they only described the severity of the underlying disease. This would help to make a better decision model for the emergency department.

Response
Thank you very much for the comment. We have opted to present the data in this manner, because, in the ED, often the underlying cause is not known, and so we need to determine which presenting features have the highest risk for mortality

Comment
I fully understand that the underlying cardiac condition in these settings often is not known and hence transcutaneous measured oxygen saturation lower than 90% could be simply due to right to left shunt. But it looks like that hypoxemia and decreased level of conscience is the greatest predictor of death.

Response

Thanks much for the comment: indeed hypoxemia and decreased level of consciousness (and bradypnea) are the greatest predictors of death. [Line 169-172].

Comment

I also suggest that within the text and the results more clarity is achieved in combination with the tables. Both sections are repetitive.

Response

Thank you much for the comment, we have adjusted as proposed. [Line 132-172]

Comment

Do the authors have as well the overall mortality of all children in the hospital after presented through the emergency department as a comparison?

Response

Than you very much for the comment. Unfortunately, this is difficult to determine due to the lack of a hospital-wide EMR and that the main point is that this mortality rate is higher than in high-income countries.

Minor comments

Comment
The references are not within the style of recommended and I have spelling errors of authors so need to be carefully checked

Response

Thank you, we have checked and rectified as necessary.