PEER REVIEW HISTORY

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**) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Prevalence and fluid management of dehydration in children without diarrhoea admitted to Kenyan hospitals: A multi-site observational study.
AUTHORS	Omoke, Sylvia; English, Mike; Aluvaala, Jalemba; Gathara, David; Agweyu, Ambrose; Akech, Samuel

VERSION 1 – REVIEW

REVIEWER	Fatihi Hassan Soliman Toaimah Weill Cornell Medical College and Hamad Medical Corporation, Qatar
REVIEW RETURNED	10-Aug-2020

GENERAL COMMENTS	The best fluid (type, rate and volume) therapy among sickkids remains a challenge among clinicians. The idea behind this research is good and clear. However, a randomized clinical trial is the proper study design to answer the research question. In general, observational studies are liable to high risk of bias. Methods and outcome measures of the study are not clear. The results revealed a case fatality of 12.9% which is a little bit higher than that reported by African bolus (FEAST) tral (12.0%), considering similarity of patients in both studies. If you need to repeat this study, choose a different design as mentioned above, to achieve a strong evidence that may change the practice.

REVIEWER	Janet Adede Carboo North-West University South Africa
REVIEW RETURNED	04-Sep-2020

GENERAL COMMENTS	Well written manuscript on a very important topic. However, there are revisions and clarification needed in table 3 The reviewer provided a marked copy with additional comments. Please contact the publisher for full details.

VERSION 1 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

Reviewer 1

- The best fluid (type, rate and volume) therapy among sick kids remains a challenge among clinicians. The idea behind this research is good and clear. However, a randomized clinical trial is the proper study design to answer the research question. In general, observational studies are

liable to high risk of bias. Methods and outcome measures of the study are not clear. The results revealed a case fatality of 12.9% which is a little bit higher than that reported by African bolus (FEAST) trial (12.0%), considering similarity of patients in both studies. If you need to repeat this study, choose a different design as mentioned above, to achieve a strong evidence that may change the practice.

Response: We agree with the reviewer's observation on the potential biases from observation studies and agree that a randomized controlled trial would be ideal in establishing correct fluid treatment for children with dehydration but without diarrhea. The case fatality seen in this study, 12.9%, is comparable to the FEAST trial, 12.0%, but the FEAST trial included patients with fever plus impaired perfusion in general rather than only those with dehydration who were included in this study. As such our study highlights a unique sub-population of patients that are being seen by frontline clinicians that warrant careful consideration especially after the FEAST trial findings that showed harm in using bolus fluid for treatment of non-diarrhoeal children with impaired perfusion.

Reviewer 2

- Well written manuscript on a very important topic. However, there are revisions and clarification needed in table 3

Response: We have revised the table and implemented the suggestion of putting the total N of each column at the title at the column, instead of repeating throughout. We have also looked at the IV fluids prescription and corrected the inconsistencies.
Page 11 and page 12

Please see the attached file for additional comments

- A reference should be provided for the definition of tachycardia

Response: We have added a reference material as suggested and cited it appropriately.
"Carcillo JA, Fields AI. Clinical practice parameters for hemodynamic support of pediatric and neonatal patients in septic shock. Crit Care Med. 2002;30(6):1365-78"
Page 8, paragraph 1

- Why are the clinical characteristics not over the total N (2019)?

Is it due to non-reporting of these characteristics in some participants, missing information? Please provide a brief explanation in a line or 2 in the to give some clarity
Response: The change in denominator is due to non-reporting in some of the participants. We have clarified this in Table2.
Page 10

- 65.3%

Response: This was a typographical error in our part, we have revised the manuscript and added %.
Page 11,paragraph2.

- 30.0% to maintain consistency of the number of decimal places used throughout the paper

Response: We agree with the reviewer's observation, we have updated this in the revised manuscript.

- If a total of 819 in the febrile group had a fluid prescription, and 376 had IV prescription, while 409 oral fluid prescription, that makes a total 785, that leaves 34 participants not reported. Can you please provide clarity on that? The numbers do not add up

Response: This was an error in our part. We have since rectified it in the revised manuscript. Participants in the febrile group with IV fluid prescription were 557 and not 376 as reported earlier.
Page 11,paragraph 2.

- From your line 6 fluid prescription is categorized as either IV or oral.

From table 3, a total of 1127 had a fluid prescription. 545 had IV and 562 had oral fluids, making a total of 1107 which is less than 1127. After considering those that had both IV and oral, 20

participants are missing. Would you clarify this discrepancy?

Response: This was an error in our part. We have since rectified it in the revised manuscript. Participants with IV fluid prescription were 768 and not 545 as reported earlier.
Page 11 and page 12

- This table can be made less cumbersome and easy to read by putting the total N of each column at the title at the the column, instead of repeating throughout , Eg All cases N=2019, n(%) Shock N=142 n(%)

Response: We appreciate this feedback and we have updated this accordingly.
Page 12

- It would be very insightful to also provide a breakdown of the case fatality observed across the different fluid treatment

Response: We have added this in page 9, paragraph 5 results section.

Comments from the Editor:

- Please include the study design in the Title and Abstract.

Response:
Response: We have revised and included this

- Please revise the Strengths and Limitations section of your manuscript (after the Abstract). This section should contain five short bullet points, no longer than one sentence each, that relate specifically to the methods.

Response: We have revised our strengths and limitations accordingly

- Please revise your checklist so that the page numbers and lines in your manuscript where the relevant information can be found are listed.

Response: We have revised the checklist and included page numbers

VERSION 2 – REVIEW

REVIEWER	Janet Adede Carboo North-West University
REVIEW RETURNED	30-Dec-2020

GENERAL COMMENTS	Comment made in document The reviewer provided a marked copy with additional comments. Please contact the publisher for full details.

VERSION 2 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

- The acronym AVPU should be written in full below the table

Response: *We have revised and included this*