Author's response to reviews

Title: Harmful practices in the management of childhood diarrhea in low- and middle-income countries: a systematic review

Authors:

Emily D Carter (ecarter@jhu.edu)
Jennifer Bryce (jbrycedanby@aol.com)
Jamie Perin (jperin@jhu.edu)
Holly Newby (hnewby@unicef.org)

Version: 3
Date: 9 June 2015

Author's response to reviews: see over
Author’s response to reviews

Title: Harmful practices in the management of childhood diarrhea in low- and middle-income countries: a systematic review

Authors:
Emily D Carter (ecarter@jhu.edu)
Jennifer Bryce (jbrycedanby@aol.com)
Jamie Perin (jperin@jhu.edu)
Holly Newby (hnewby@unicef.org)

Version: 3 Date: 07 June 2015

Author’s response to reviews: see cover
Dear Editor,

Thank you for the email on 08 May 2015 providing reviewer comments on our manuscript and invitation to submit a revised version. We have prepared an updated version of the manuscript reflecting the suggestions of the reviewers, as well as a few editorial improvements identified by the coauthors.

Please find a point-by-point response to the reviewer comments below, detailing the changes we have made to the manuscript.

Sincerely,

Emily Carter

**MS:** 1683265056136430  
**Research article:** Harmful practices in the management of childhood diarrhea in low- and middle-income countries: a systematic review

**Reviewer 1: Compulsory Revisions:**

This reviewer did not request any specific changes in the manuscript.

**Reviewer 2: Compulsory Revisions:**

1) “Harmful practices” may not be the most appropriate term for the practices that the authors are describing as the evidence for harm is not as clear as the authors make it seem. For example, there is some evidence that antiemetics may have benefit for diarrhea treatment (see Das, BMC Pub Health, The effect of antiemetics on childhood diarrhea, 2013). Also, while there is evidence that treating dysentery and cholera with antibiotics has benefits, the counter argument, that treating children without dysentery and without suspected cholera is not beneficial or “harmful”, is not necessarily supported with evidence; three of the four leading causes of moderate to severe diarrhea in the GEMS study (Kotloff, Lancet, 2013) were bacterial/parasitic and potentially treatable with antibiotics, and in the context of traveler’s diarrhea, which is often caused by the pathogenic ecoli’s, Shigella, and campylobacter, antibiotic treatment can be beneficial (De Bruyn, Cochrane, 2012; Shah AJTMH 2009). While there is definite evidence that restricting fluids, breast milk and fluid intake is harmful, these other two statements are less likely to be evidence supported and this paragraph may be improved by addressing some of this nuance. This speaks to a larger concern about the blanket term “harmful practices” when in fact it seems that the authors are interested in non-adherence to management guidelines. It should also be noted that some of these “harmful practices” used to be a diarrhea management guideline (food restriction during and immediately after a diarrhea episode was a recommendation until relatively recently). Therefore reasons for these practices could be related to lack of dissemination and training of new guidelines in health facilities as opposed to any individual-level correlates. These guidelines were updated after evidence revealed no advantage of delayed re-feeding (Gregorio, Cochrane, 2011 summarizes some of this evidence). Therefore, studies that included participants during the time when guidelines recommended
delayed feeding should be interpreted slightly differently from studies reported delayed re-feeding after the new guidelines were released. In all, this may mean that “harmful practices” may not be the most appropriate term for the practices that the authors are describing. Non-adherence to guidelines or something similar might be a more accurate description.

We thank the reviewer for this carefully documented suggestion, and have revised the manuscript as follows. First, we revised line 58 to read “Many fewer programs have specifically targeted non-adherence to other recommended diarrhea management practices, such as the restriction of fluids, breast milk and/or food intake during diarrhea episodes, and incorrect use of modern medicines.” Second, in line 66 we have added “We have referred to these as “harmful practices” from this point forward, understanding that under some circumstances these practices may not be detrimental.”

Introduction

2) There are a few statements in the third paragraph that need referencing. For instance, “Curtailment of fluids and restriction of feeding during diarrhea…”, “The use of antibiotics and other medications is appropriate only in the treatment of cholera or dysenteric diarrhea”.

All of the statements in the third paragraph are from the same source (WHO Diarrhoea Treatment Guidelines), which is referenced at the end of the paragraph (line 65).

3) The introduction is also lacking a unifying sentence which describes how this review addresses a gap in the existing literature and describes the implications of the findings. For example, “highlighting the frequency and correlates of guideline non-adherence will....”

We have added the sentence “Findings from this review will identify critical next steps to address harmful practices in diarrhea management, and ultimately improve child survival” to the end of the background section (lines 80 – 81).

Methods

4) The number of articles identified and the high-level summary (pg. 6 lines 98-113) usually appears in the results section instead of the methods.

We have moved the paragraph reporting the number of articles identified and the high-level summary to the first paragraph of the results section (lines 116 – 129).

5) Some details from the methods can be removed or moved to a supplementary file to help make the manuscript more concise. For example, “separate templates were developed in Excel” (line 115 pg. 6)

We removed the sentence “Separate templates were developed in Excel for extracting data from articles presenting findings on the prevalence of practices and studies reporting beliefs and motivations for harmful practices.” We also removed the sentence “Templates were developed in Excel for extracting data from articles” from the abstract. We were unable to identify other details that could be removed without jeopardizing the replicability of the review.
6) The authors mention excluding articles published before 1990 three times in the methods (pg 5 line 85, pg 5 line 92, and pg 6 line 94) which is redundant.

We removed the sentence “Only data collected since 1990 were included in the review”, formerly line 92. We maintained the two other statements. The first statement, “Publications were restricted to English-language articles published after 1990,” is needed to highlight that 1990 was used as a cut-off for publication date in the search criteria. The second statement, “Publications were excluded if they exclusively reported data collected prior to 1990...” is needed as papers published after 1990 were excluded if they only presented data collected prior to 1990.

Results

7) Paragraph 3 (line 139-142, pg 7) seems to belong more in the methods section than in the results section.

We have moved the paragraph to the end of the methods section (lines 109 – 113).

8) As a general comment, this section would benefit from being made much more concise. For each specific practice, I would recommend limiting to one to two paragraphs of high level results (and the rest can remain in supplementary text or tables) as opposed to multiple paragraphs each broken up into specific sections as it is challenging for the flow. For example, the definition and measurement sub-heading of the fluid curtailment section could be limited to the first sentence “measurement of fluid intake varied across studies (Table 1, Column 4)” and the first two sentence of the prevalence paragraph could be removed as there is not a need to re-state the variability between studies in each paragraph. This could be done by an first sentence that states that measurement of fluid intake, and prevalence estimates, varied widely across studies” which could then go into “the reported practice of curtailing fluids...”

Thank you for the guidance for improving the results section. For each practice, we have combined the measurement definition and prevalence sections. We have removed a significant amount of detail about each study in the text, and focused on the high level results. We have also condensed much of the commentary on variation in practice definition and measurement. Details specific to each study, including the study design, population, and results, are maintained in the relevant tables.

9) Paragraph two of the prevalence section (lines 162-168) could also be made more concise into a single sentence like “Fluid curtailment was associated with diarrhea severity and vomiting in two studies whereas increase in fluid was associated with long illness duration and poor appetite” or similar just to make the whole paragraph more concise and with a single message. For each practice I recommend combining all the sub-headers into one to two paragraphs and also avoiding paragraphs that have one sentence (for example page 17, line 401 and line 404).

For each practice in the results section, we have removed the sub-headings and reduced the number of paragraphs to one for each theme: measurement definition and prevalence, variation in practice by characteristics, and influential context and beliefs. We have removed a significant amount of detail about each study in the text, and focused on the high level results. Details specific to each study, including the study design, population, and results, are maintained in the relevant tables.
Editorial requests:

a) Please include the tables in the manuscript file and remove them as additional files.

The tables have been placed in the manuscript file as specified and removed as additional files.

b) Please adhere to PRISMA guidelines for reporting systematic reviews.

We have followed the PRISMA guidelines for reporting systematic reviews. The PRISMA checklist has been included as Additional File 2. Figure 1 “Flow of studies considered in the systematic review” uses the PRISMA flowchart template.

c) Please specifically mention each of the authors contribution in the 'Authors contribution' section. Use initials when referring to author's name. We suggest the following format (please use initials to refer to each author's contribution): AB carried out the molecular genetic studies, participated in the sequence alignment and drafted the manuscript. JY carried out the immunoassays. MT participated in the sequence alignment. ES participated in the design of the study and performed the statistical analysis. FG conceived of the study, and participated in its design and coordination and helped to draft the manuscript. All authors read and approved the final manuscript.

Author contribution are positioned prior to the Acknowledgements section and formatted as suggested.