

## Peer Review File

**Article information:** <https://dx.doi.org/10.21037/tp-21-3>

**Title:** A scoping review to inform a multi-disciplinary approach for nutrition therapy in critically ill children with pressure injuries

We have revised the title as suggested.

### Reviewer A

#### Comments to the authors:

This paper was a delight to read. You have addressed a critical need in knowledge and research and provided actionable recommendations. I look forward to seeing this paper published.

#### Author response:

Thank You for your very supportive and encouraging comments.

### Reviewer B

#### Comments to the authors:

This is an important and interesting topic, but the review is has not taken a systematic or evidence based or quality approach. The approach to the review does not even outline any questions that were explored. The recommendations made are subsequently also not evidence based and are more aligned with opinion based guidelines.

#### Author response:

Thank you, we appreciate your feedback. We chose a scoping review approach as there is very limited published analytical literature on this important topic. Due to the dearth of data, we did not intend to perform a critical appraisal, but instead an overall review with the focus on nutrition associated with wounds, wound care and pressure injury. Instead, we have developed what we hope will be suggestions that lead to the establishment of best practice guidelines.

We have added the following in the Methods section to better characterize use of a scoping review: “We performed a scoping review to characterize the importance of nutrition status and therapy (including macro and micronutrients) in the context of PI in hospitalized or critically ill children. A scoping review was employed as there is limited published literature on this topic. Scoping reviews are an increasingly important methodology to systematically explore and describe broad research topics, and to set the stage for further, more specific investigations such as systematic reviews (11). Scoping reviews differ from other review methods in that they may accommodate and include sources that are not empirical or have a rigorous research methodology. Additionally, scoping reviews do not perform critical appraisal or assessment on the selected evidence.”

## **Reviewer C**

### **Comments to the authors:**

Well written comprehensive review article. Please add a few discussion points on the limitations on the project, your next steps and plans for these results.

### Author response:

Thank you for this response. We have added a section to address limitations to our work and identify future work that is necessary to better care for these patients.

## **Reviewer D**

### **Comments to the authors:**

Overall, this is a very well written article and was a pleasure to read. The title: Nutrition optimization in critically ill pediatric patients with pressure injuries: an abbreviated scoping review and proposed nutrition management, should be adhered to within the article. I would recommend removing all sections related to explaining the Braden QD, the SPS Bundle and the figure regarding the team approach that is used within your hospital. The article is not about setting up a PI prevention program but only on the nutrition component.

### Author Response:

Thank you very much for your comments and suggested edits. We have adjusted the title of this work to be more reflective and better adhere to the body of the work. We have also removed the text related to the SPS bundle. The information related to the Braden QD has been significantly reduced to give some reference for how pressure injuries and wounds are assessed and may require nutritional supplementation to contribute to healing. Since the Braden QD has been validated in children and augments assessments related to nutrition, we thought it important to include here. We have included the sensitivity (0.86 [95% CI 0.76-0.92]) and specificity 0.59 ([95% CI 0.55-0.63]) (Ref # 5 in manuscript) data related to the Braden QD to further illustrate its importance and usefulness in this population.

We also acknowledge and very much appreciate your comment and suggestion to remove the text related to the team approach and accompanying figure. Identification and therapy of pressure injury is, we believe, a shared multidisciplinary team responsibility and we believe the potential model presented illustrates a team approach that may be helpful to identify, assess and provide therapy for these patients.

## **Reviewer E**

### **Comments to the authors:**

First of all, I want to thank the editors of the magazine for giving me the opportunity to value such a necessary and important work for the safety of hospitalized children. It is a subject little worked with scientific methodology and this type of work is necessary. Thanks

Below I indicate a series of comments and contributions that I hope will help you improve your

article

#### -General

The review article is long and some of the sections could be shortened (micronutrients or the explanation of the Braden Q and QD for example) to emphasize or complete the rest of the information they share.

#### Author Response:

Thank you for this critique – we significantly reduced sections of the manuscript, particularly areas related to Braden QD. As addressed to a previous reviewer, the Braden QD is validated in pediatric patients and includes areas specific to nutrition, therefore we thought it extremely important to include it and provide more information related to its specificity and sensitivity in children.

#### -Introduction

Please, review this section and the references that we indicate. The references it uses are old and there are already more current ones.

Please check the wording of the objective. It is long and its wording leads to confusion.

#### Author Response:

Thank you for pointing this out, we have adjusted the verbiage for clarity to explain the components of this review.

#### -Methodology

This is the section that needs to be completed the most. Little information is given on the review process. This may be because a standardized method has not been used and therefore the recommendations in this article cannot be taken into account. In order to assess them, it is necessary to use a scientific review method or, at least to complete certain important points such as the evaluation of the risk of bias and indicate the eligibility criteria of the articles.

Furthermore, it is not indicated whether the review is narrative, critical, systematized or systematic. This is important so that the reader knows what he is going to read and can understand it.

Do not include numerical results about your search in this section. To do this, put a flow chart and explain it in results.

Use PRISMA to complete the information and improve the methodology used. I am aware that what they have done is not a systematic review, but it may allow them to fill in the gaps that I observe in their study.

#### Author Response:

Thank you for your review of this section. We have made significant changes to the section. We have added a table describing our literature search strategy. There is now a PRISMA diagram to

illustrate article review and have explained the process used to evaluate the literature. In addition, we have explained the rationale for using a scoping review and specifics of the review process.

#### -Results

In this section you need to start by explaining the number of articles retrieved (as we have told you in the methodology section). The sectorization by themes that it has carried out is adequate, but it has mixed the expression of results with the critical analysis.

We have added a PRISMA diagram to better identify the article numbers retrieved, reviewed and selected.

In this section he talks excessively about a single pressure injury risk rating scale. This is not correct and is incomplete, since there are other options validated by the literature that I advise you to evaluate.

Thank you for your review. The Braden QD scale has been validated (we have added the sensitivity and specificity) in various populations and has a section specific to nutrition. For these reasons, and due to its use, particularly in children, we have identified this scale as a tool that can be used for identification and assessment of PI and wounds in this population.

They talk about their way of working, but they don't talk about the type of institution they belong to. This is a problem for the reader, since his results can only be assessed within the context of care itself. Please complete the information and remove the redundant (or low-contributing) information about the scales.

We appreciate your review and the comments provided. We have added a limitations section, within which we have described our work environment.

I am strongly struck by the fact that he does not speak of nutritional risk assessment scales and their relationship with pressure injuries in pediatrics.

Thank you for pointing this out. We did not include pediatric nutrition risk assessment tools as none have been validated in the critically ill pediatric patient. We are unaware of a nutrition risk assessment scale/tool for children that includes a reference to wound or pressure injury. A line was added in the section 'Proposed nutrition management for children with PIs' to address the lack of nutrition risk assessment scales validated in critically ill children.

I also recommend that you remove Table 3. You do not need to re-indicate it if there is already a place to review it. So simply putting the URL would be enough for the reader to go and complete their training on pressure injury categories.

Thank you for this thoughtful comment. However, we feel the table and understanding the staging is an important aspect of care related to the assessment and staging of wounds and

pressure injuries. In addition, we feel the table readily available will help clinicians to identify potential nutritional, particularly micronutrient deficiencies that may be present and necessary supplementation. The table is referenced for further information for readers. We feel it is an important component of this manuscript.

In this section, he also does not indicate the limitations of his research completely and clearly with a section and this is an almost insurmountable bias for a literature review. For example, there is a clear linguistic language bias in your work and that should be indicated.

I also miss the implication of the reviews for clinical practice or research (only referred to in isolation and at the end of the conclusions). This could be indicated at the end of the results.

We have added a section on limitations to our work, and potential for next steps.

-Conclusions

Ok, but I think they must change, after revision of the article.

The conclusion has been adjusted to better reflect contents of the manuscript.