



## A New Outcome Metric for Young Children with Burns: Item Pool Development for the Preschool Life Impact Burn Recovery Evaluation (LIBRE) Computer Adaptive Test (CAT) Profile

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### Introduction

- Burn injuries can have a significant impact on the health and development of young children.
- Patient-reported outcomes measures (PROMs) are important for tracking recovery and long-term outcomes following burn injury.
- The Burn Outcomes Questionnaire 0-5 is one of few burn-specific PROMs available to specifically assess preschool-aged burn survivors.

### Purpose

- To develop items pools for a new, parent-reported outcomes measure which could be administered via computer adaptive test for preschool-aged children with burns.

### Methods

- Literature review of existing instruments assessing health and developmental outcomes.

- Parent cognitive interviews were conducted to ensure comprehensibility.

• Preschool LIBRE Conceptual Model<sup>1</sup> based on the International Classification for Children (ICF) and the Burn Outcomes Questionnaires (BOQ 0-5) informed initial items.

- Qualitative review process to bin items together based on the underlying construct they assessed.
- Items were then winnowed down and further refined based on clinical expert consensus meetings.
- Winnowing process focused on ensuring items assessed abilities and behaviors that could be reliably determined by parent report, were age-relevant, and focused on health and developmental concepts that are important in the assessment of children's burn recovery.

- In final reviews, we standardized item recall periods, response options, verb tense, and literacy demands.

### Results



- Receiving meaning
- Producing meaning



Communication & Language Development  
(42 items)

- Gross motor
- Fine motor



Physical Functioning  
(53 items)

- Internalizing behaviors
- Externalizing behaviors
- Dysregulation
- Toileting
- Response to trauma



Psychological Functioning  
(56 items)

- Connecting with family & peers
- Friendships
- Play



Social Functioning  
(37 items)

### Conclusions

- Four item pools were developed aiming to assess physical and psychosocial domains relevant to preschool-aged children.
- Incorporating clinician and parent/patient perspectives can help guide the development of items in a new outcomes measure.

### Applicability to Practice

- This work is relevant to researchers and practitioners evaluating the effects of burn injury on preschool-aged children's health and developmental outcomes.
- This work was supported by Shriners Hospitals for Children (Grant Award ID 72000-BOS-18) and by the National Institute on Disability, Independent Living, and Rehabilitation Research (Grant #90DPBU0001).

### References

1. Brady KJS, Grant GG, Stoddard FJ, et al. Measuring the Impact of Burn Injury on the Parent-Reported Health Outcomes of Children 1 – to – 5 Years: A Conceptual Framework for Development of the Preschool Life Impact Burn Recovery Evaluation (LIBRE) Profile CAT. *Journal of Burn Care and Research*. 2019. irz110, <https://doi.org/10.1093/jbcr/irz110>

