

## INTRODUCTION

### Background:

- Each year pediatric acquired brain injuries (ABIs) result in over 500,000 Emergency Department visits and 60,000 hospitalizations in the US.<sup>1</sup>
- A study found that the readability scores for online educational materials for brain injuries and epilepsy failed to meet the recommended levels and are above the US average 8th grade reading level.<sup>2</sup>
- In coordination with the UPMC Children's Hospital of Pittsburgh's (CHP) Rehabilitation staff, we identified the need to develop an evidence-based approach for the delivery of education to caregivers of children with ABIs.

### Significance:

- Traumatic events are innately stressful for the family, but they can become even more taxing when the family feels they are receiving contradictory and/or confusing information from various disciplines.<sup>3</sup>
- In order to reduce caregiver burden, we must equip them with the tools they need to confidently incorporate their new roles and responsibilities as a primary caregiver.<sup>4</sup>
- Practitioners must ensure that they are providing adequate, up to date information in an organized, comprehensible, and timely manner.

## OBJECTIVES

1.) Create tangible staff and caregiver education materials regarding strategies to promote the knowledge of environmental modifications, cognitive/behavioral changes, phases of recovery, what to expect, and discharge planning, to be used with caregivers of children with ABIs at UPMC Children's Hospital of Pittsburgh.

2.) Create a suggested dissemination protocol for providing caregiver education to promote consistent communication using appropriate health literacy levels.

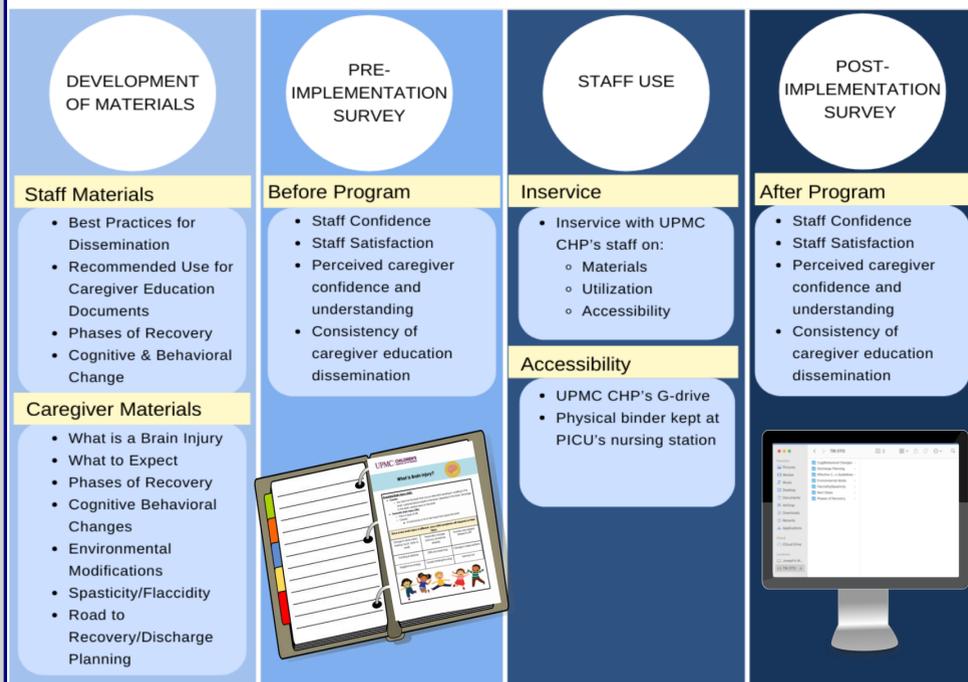
## METHODS

### Participants:

CHP Rehabilitation Staff (Occupational & Physical Therapy)

Caregivers of children with ABIs

### Process:

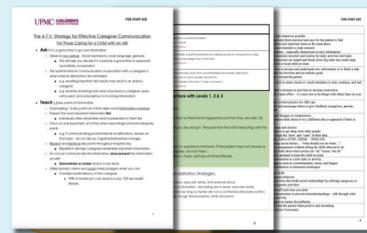


## RESULTS

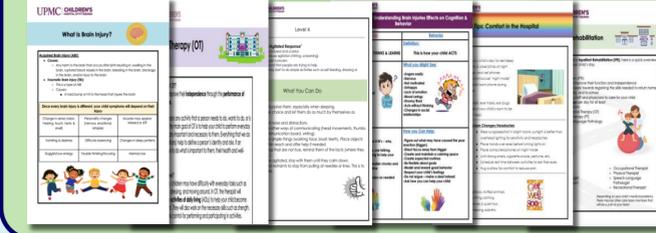
### Education Materials:

\*Below are some of the finished education materials we created based on our findings during our development of material phase

#### Staff



#### Caregiver

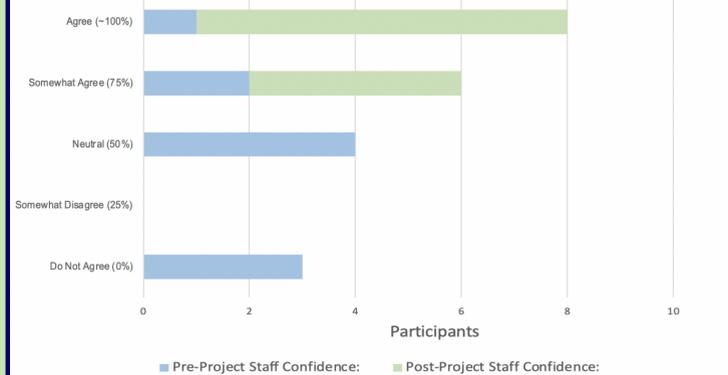


### Survey Results:

- 100% of the participating rehab therapists (n=11) responded to pre- and post-surveys
- 100% of therapists were mostly/completely satisfied with materials developed
- 70% increase in staff satisfaction with caregiver education after material development



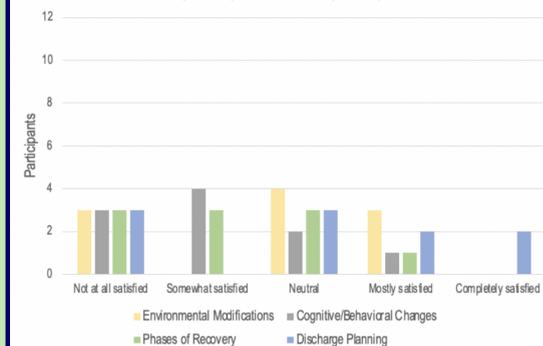
"I am confident in the effectiveness of the caregiver education materials I am distributing"



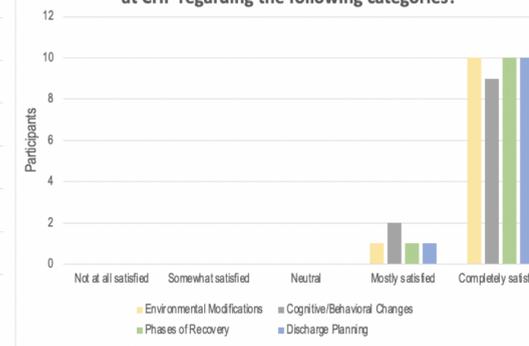
**Quote from CHP Staff**  
"I think this can help not only clinicians, families, but departments in better support patients and families with ABI."

**Quote From Family**  
"These materials were so helpful and easy to read. We wish they were around when we were going through this experience"

Pre-Project: "How Satisfied are you in the ABI resources available at CHP regarding the following categories?"



Post-Project: "How Satisfied are you in the ABI resources available at CHP regarding the following categories?"



## DISCUSSION

### General Findings:

- Of the 11 participants, 9 were able to utilize the staff resource file; 11 found the caregiver education and staff resources to be helpful.
- There was a 70% increase in overall staff satisfaction.
- Staff confidence increased by 77.5%
- Staff satisfaction with consistency of material dissemination to caregivers increased by 70%
- Perceived caregiver understanding increased by 50%

### Health Literacy:

- Readability analysis for all caregiver education materials revealed an average readability score of 6.9 grade level according to the Flesch-Kincaid Reading Ease Score (FRES); below the recommended 8<sup>th</sup> grade reading level
- The average readability score for our materials was higher due to the "Commonly Used Phrases" document being an outlier (12.4 grade level), because it served as a medical dictionary.

### Limitations:

- Small sample size reduces generalizability to other hospital systems/subsectors within Children's network
- Restricted access to UPMC Children's servers to upload public virtual educational materials
- Lack of on-site observation of current patient education due to COVID-19 related restrictions
- Low admission rate of ABI patients decreased staff opportunity to utilize with caregivers

## CONCLUSIONS

### General Conclusions:

- Occupational therapists are adept at structuring information and activities into easily managed pieces to encourage confidence and maximize participation in everyday activities.
- Findings from this project demonstrate the need for occupational therapists to apply their skills to create standardized educational delivery, incorporating appropriate health literacy and evidence-based practice.
- Additionally, Occupational therapists are collaborative experts and believe family and caregiver considerations are essential when caring for the patient

### Implications for Future Practice:

- Our findings demonstrate a need for client-centered, comprehensible education materials that are delivered in an organized manner to improve caregiver knowledge and confidence.

### Future Directions:

- Extending ABI caregiver and staff education material utilization beyond rehabilitation staff to other disciplines
- Brain injury support groups in PICU
- Serve as a resource for entry-level practitioners

## ACKNOWLEDGEMENTS

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