Background

- When compared to parents of typically developing (TD) children, parents of children with cerebral palsy (CP) have a higher prevalence of both anxiety and depression.
- Mothers of children with CP have significantly worse Beck Anxiety Inventory Scores and Beck Depression Scores compared to mothers of TD children, demonstrating the greater pervasiveness of mental health illness among parents of children with CP.
- Children affected by CP are at a greater risk for mental health disorders compared to TD children.
- Guardians of children with CP must be supported by the medical team to improve quality of life for both the patient and their caregiver.
- Furthermore, surgery can increase parental and patient anxiety.
- Pre-operative education programs are effective in reducing parental anxiety and decreasing pain scores in the general pediatric surgical population.
- Parental education programs regarding anesthesia have increased parental satisfaction with care.

Currenty, there are no published parent/patient perioperative education programs specific to CP surgical care

Methods

- Prior to education program implementation, baseline measurements are being collected utilizing the following surveys:

**Pre-Operative Measures**

<table>
<thead>
<tr>
<th>Name of Survey:</th>
<th>What is evaluated:</th>
<th>Score Range:</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Trail Anxiety Inventory-CH (STAI-CH)</td>
<td>Patient Anxiety</td>
<td>40-160</td>
</tr>
<tr>
<td>Yale Preoperative Anxiety Scale (m-YPAS)</td>
<td>Patient Anxiety</td>
<td>22.5-100</td>
</tr>
<tr>
<td>EASI Temperament Survey</td>
<td>Patient Temperament</td>
<td>14-70</td>
</tr>
</tbody>
</table>

**Post-Operative Measures**

<table>
<thead>
<tr>
<th>Name of Survey:</th>
<th>What is evaluated:</th>
<th>Score Range:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAHPS Children Hospital Survey (Child HCAHPS)</td>
<td>Parental Satisfaction</td>
<td>Broken into relevant sub-composite scores for effective evaluation</td>
</tr>
<tr>
<td>Faces, Legs, Activity, Cry, Consolability (FLACC), Faces Pain Scale Revised (FPS-R)</td>
<td>Postoperative Pain</td>
<td>0-10</td>
</tr>
</tbody>
</table>

- Following baseline collection (3-4 months), we will implement the comprehensive perioperative education program:

1. **Video:** Explanatory video highlighting key members of the healthcare team and common settings/sights a patient will encounter on their journey to the operating room (In development by research team)
2. **Procedure-Specific Handouts:** Detailed explanation and overview of each surgery performed, developed by research team
3. **Procedure Specific Diagrams:** Drawings by a skilled artist to help families and patients understand their procedure
4. **Pain Management Handout:** Step-wise protocol for post-operative pain management, developed by Dr. Thompson

Results

<table>
<thead>
<tr>
<th>Average Baseline Scores</th>
<th>Pre-Operative</th>
<th>Post-Operative</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAI-CH</td>
<td>64.5</td>
<td>43.3</td>
</tr>
<tr>
<td>m-YPAS</td>
<td>40.84</td>
<td>3.29</td>
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</tbody>
</table>

Child HCAHPS Sub-Composite Scores

<table>
<thead>
<tr>
<th>Name of Survey:</th>
<th>Average Score:</th>
<th>Score Range:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication about Medications</td>
<td>5.5</td>
<td>4-12</td>
</tr>
<tr>
<td>Paying Attention to Child’s Pain</td>
<td>1</td>
<td>1-3</td>
</tr>
<tr>
<td>Helping the Child Feel Comfortable</td>
<td>2</td>
<td>2-6</td>
</tr>
</tbody>
</table>

Discussion and Limitations

- Many children with CP are non-verbal. Parents are asked to complete surveys on their behalf, which may lead to inaccuracy in reporting.
- Parents of children with CP may be more familiar with the surgical process due to prior surgeries and frequent doctor visits as compared to families of TD children, affecting baseline anxiety levels.
- Families may be so looking forward to increased mobility that the benefit of increased ambulation may outweigh their stress and anxiety.

Conclusions

- We will continue to gather baseline data and introduce the education program in the Fall with the stated goal of improving the perioperative experience.
- After 8-12 months of data collection, we will evaluate the effect of this education program on patient anxiety and parental satisfaction.
- This comprehensive program has the potential to forge a more trusting and collaborative relationship between patients, families, and providers.

References


Hypothesis

A comprehensive perioperative education program will:
1. Increase parental satisfaction
2. Decrease patient stress and anxiety
3. Decrease patient-reported pain scores post-operatively

Objectives

- To create a comprehensive perioperative education program for planned orthopaedic procedures in children with CP that is evidence-based and adapted for the CP community
- To decrease parental and patient stress and anxiety through application of this program

Discussion and Limitations

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