Background Information

- Children’s Hospital of Pittsburgh (CHP) is a level 4 NICU in Pittsburgh, PA.
- The ability to feed orally is often the last discharge requirement met for a preterm infant - increasing length of stay and financial burden.
- The inability to oral feed orally may be attributed to delayed oral-motor development and oral sensory aversion from treatment methods in the NICU.

The Premature Infant Oral-Motor Intervention (PIOMI) is a 5-minute intervention designed specifically for preterm infants to build the range of motion, strength, and coordination required to feed orally.

Objectives

1. Create training materials for nursing staff for use of strategies to prevent oral sensory aversion and use of the PIOMI to facilitate oral feeding development.
2. Develop educational materials for caregivers on PIOMI and sensory strategies.

Methods

- Pre-Knowledge Survey
  - Current knowledge and confidence regarding oral-motor and sensory strategies in the NICU
- Surveyed NICU team
  - Reviewed site’s Empower Program for gaps in information
- Literature Search
- Needs Assessment
- Knowledge Check
  - Sensory Considerations for Feeding in the NICU
- Module Distribution
- Knowledge Check
  - Sensory Strategy for Feeding in the NICU
- Three questions following each of the modules
- Steps of the PIOMI
- Feedback and IMPLEMENTATION
- Create + Education
- Documentation

Results: Objective 1

- How familiar are you with the PIOMI protocol for oral feeding readiness?
- How familiar are you with strategies within nursing care to improve oral sensory processing and decrease oral sensory aversion?

Survey Results: Pre- and Post-Module Completion

<table>
<thead>
<tr>
<th>Average Nurse Performance on Module Knowledge Checks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not all</td>
</tr>
<tr>
<td>Pre-modules (n = 78)</td>
</tr>
<tr>
<td>Post-modules (n = 78)</td>
</tr>
</tbody>
</table>

Discussion

- Educational modules analyzing sensory strategies and the PIOMI led to increased reported familiarity among nurses in the NICU.
- Evidence-based caregiver education materials based on sensory strategies and the PIOMI were created and implemented to expand the current home programming for NICU caregivers following discharge.

Future Directions and Sustainability

- Incorporation into on-boarding process upon hire
- Documentation changes to include oral motor and sensory interventions
- Reserving paid time to complete modules during workday
- Creation of interactive caregiver education sessions to ensure handout carryover (videos, live sessions, etc.)

Conclusion

- The systematic, widespread standardization of oral feeding guidelines, focusing on sensory and oral motor strategies, is essential for facilitating quicker oral feeding readiness among premature infants in the NICU.
- These guidelines should include caregiver education to ensure carryover of strategies to the home following discharge.
- Occupational therapy practitioners are experts in taking a holistic approach to feeding and have the knowledge to implement these guidelines among the interdisciplinary team.
- With quicker development of feeding readiness in the NICU, premature infants may achieve discharge requirements earlier, decreasing length of stay and overall healthcare costs.

Acknowledgements

Thank you to all of the NICU staff at UPMC Children’s Hospital for your continued support throughout our project implementation. Special thanks to our site mentors Kim Kubiski, OTD, OTR/L, Nicole Klausing, CSiD, OTR/L, Jamie Scheller, OTR/L, NTMTC, and Kelly Fill, MDT, OTR/L. Additional thanks to the creator of the PIOMI, Brenda Lessen Knoll, PhD, RN.

References