## Foundations of Sensory Differences: Developing a Staff Training Module for a Pediatric Health System

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### Background

- Sensory processing is how the brain interprets inputs through the eight senses to respond to different environments.
- Sensory differences describe variation in how individuals experience their sensory environment and are common in neurodiverse populations
- Neurodivergent is an umbrella term that includes a variety of diagnoses, such as ADHD and Autism Spectrum Disorder.
- Disrupted sensory processing can lead to maladaptive behaviors and motor responses, affecting a child's development and interactions (Galiana-Simal et al., 2017) and ultimately hindering occupational and social participation (Miller, 2017).
- Hospital environments can overstimulate young patients, leading to negative experiences, poor communication, and unmet sensory needs (Muskat, 2015).

Dysgraphia Dyslexia
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Cerebral Palsy Epilepsy
Tic Disorders Down Syndrome OCD
Sensory Processing Anxiety
Autism Spectrum Disorder
Fetal Alcohol Spectrum Disorder

#### Purpose

To support Mary Bridge Children's Health Network in creating a sensory-friendly healthcare system by training all employees on the basics of sensory processing differences.

#### **Training Development**



- Met with community mentor to determine needs for a sensory training for staff
- Completed environmental scan of Mary Bridge resources and trainings
- Reviewed external sensory resources and trainings
- Reviewed literature on staff trainings and sensory-based trainings



Prototype Development

- Created a prototype 15-minute training and script on the foundations of sensory differences
- Surveyed select Mary Bridge staff and OTs on content of training prototype
- Incorporated feedback from community mentor and surveyed staff
- Modified training content to improve accessibility for all staff by adapting reading level



Implementation

- Recorded video style training with Mary Bridge in April 2025
- Training was edited and published to learning stream by Mary Bridge
- Estimated training rollout in Fall 2025

#### **Evaluation & Results**

- A sample of 10 volunteers without prior knowledge of or experience with sensory differences was obtained.
- All participants completed the online 15minute training and answered brief pre- and post-test surveys.
- In the survey, all participants stated feeling more confident in their understanding of sensory processing after completing the training than before the training started.

# Confidence Levels in Understanding Sensory Processing Pre Test vs Post Test Before the training After the training Not at all confident Slightly confident Somewhat confident Very confident Extremely confident

#### Recommendations

- Evaluate training effectiveness
  - Assess staff knowledge of sensory differences using a post-training questionnaire
- Assess staff confidence
  - Measure employee confidence in using sensory regulation tools through selfassessment scales
- Offer enhanced instructional methods of training for select staff teams
  - Intensive didactic in-person training on neurodiversity and sensory differences
  - Hands-on training with modeling and error correction of tools and skills to regulate the sensory system
  - Discussions about sensory differences with people who have personal experience
  - Multimedia content e.g. patient case studies and practice scenarios via videos or in person
- Provide department-specific support
  - Offer tailored consultations, support and toolkits based on department needs
- Pursue formal recognition for sensory-friendly hospital practices
  - Research options for sensory-friendly designation or certification for health systems

#### References

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