

# NURTURING THE NEONATE:

## Reinforcing Infant Massage in the Sugar Land Methodist NICU

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### Introduction

Preterm infants are at higher risk of developing neurodevelopmental, respiratory, growth, or sensory conditions like Attention Deficit Hyperactive Disorder, Autism Spectrum Disorder, or Respiratory Distress Syndrome [1, 2, 3]. While various therapies such as neuromuscular training and sensory stimulation are available at **Sugar Land Methodist Hospital (HMSL)** [4], they can be costly and inconvenient for families, especially on top of medical bills and post-partum stress [5].

Alternatively, **Infant massage (IM)** is a free, accessible, and evidence-based therapy shown to improve growth, cognitive function, movement, stress regulation, digestion, and mother-baby bonding [6, 7, 8]. Although some staff at Sugar Land Methodist already use IM, its application is limited, and parents are often (1) unaware of its benefits and existence, or (2) anxious to enact skin-to-skin with the infant. This project aims to integrate infant massage more widely into the hospital's NICU care—empowering both staff and parents to support healthy development.

### Method Phase 1: Querying Nurses

As the purpose of this project was to reinforce IM, the method is in two phases: **Phase 1** focusing on the HMSL staff's current knowledge and resources, and **Phase 2** using the data to make informed implementation plans for IM.

For Phase 1, in collaboration with the HMSL NICU Nurse Manager and the HMSL NICU occupational therapist (**OT**), a query was created to survey the unit's staff on their familiarity, knowledge, and attitudes on the benefits, drawbacks, and training of infant massage. Quantitative data (Likert scale) and qualitative data was received and scored through the "HMSL NICU Query Coding Criterion".

### Results and Findings: Querying Nurses

Registered Nurses (RNs), certified RN's, and OT's were overall informed on the benefits of IM. Despite this, 66.7% lack formal training (**Figure 1**). As for IM drawbacks, HMSL staff were mainly concerned with improper education, disrupting infant routines, unhygienic practice, and time. (**Figure 2**). When asked about training preferences, many responses selected online courses, hands-on-training, and printed guides as their training methods. (**Figure 3**).

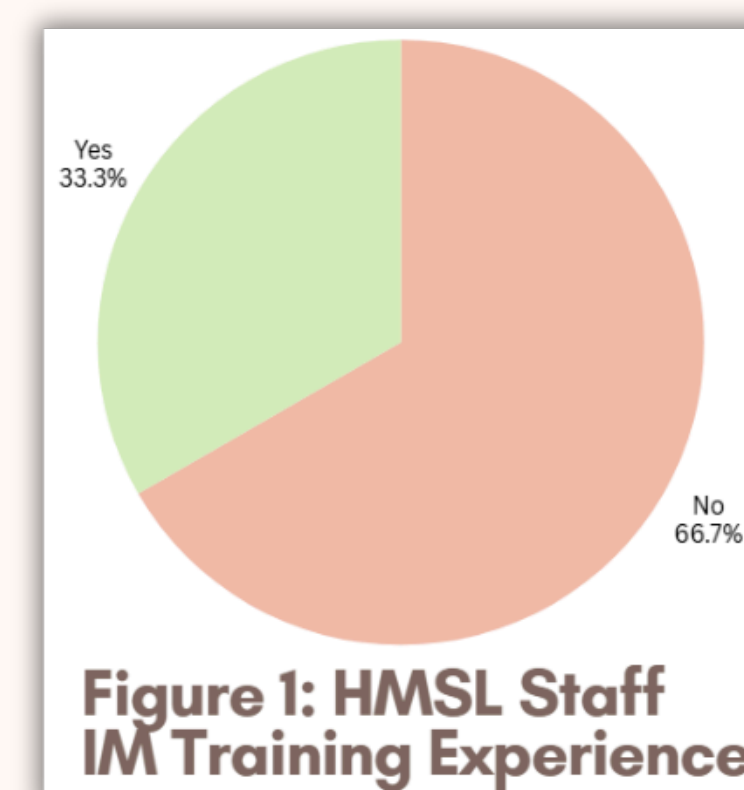


Figure 1: HMSL Staff IM Training Experience

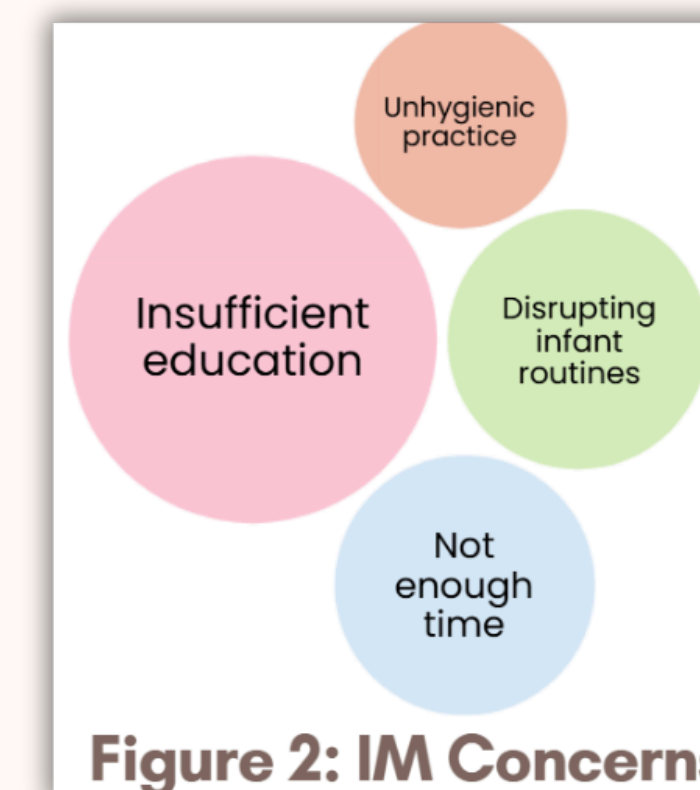


Figure 2: IM Concerns

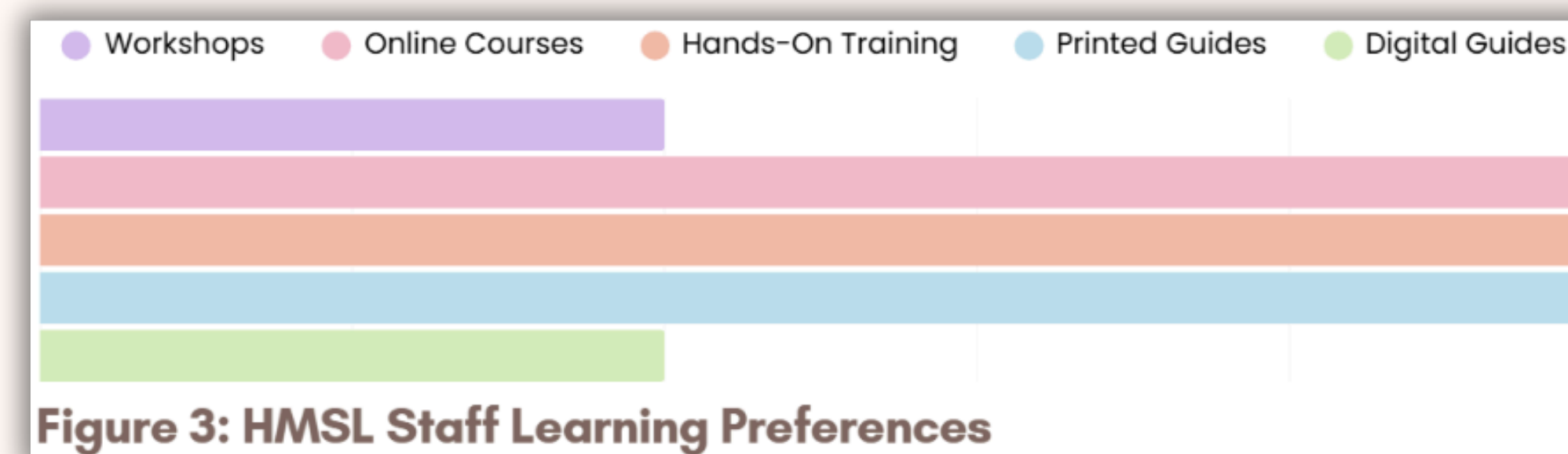


Figure 3: HMSL Staff Learning Preferences

### Method Phase 2 : Product Creation

The OT (a Certified Infant Massage Instructor, CIMI) and I developed a practical training plan for both nurses and parents based on survey data. Due to time and cost limitations, full CIMI training was not feasible; instead, printed guides and hands-on practice were chosen as the most effective options (**Figure 3**). Training focused on one simple, NICU-safe technique: "Hand Hugs", a calming hold where hands are laid around the infant's head and the torso/feet.

A **brief micro-training (Figure 4)**, including:

- A step-by-step visual guide
- A minute demo video on project website
- Optional hands-on practice with a demo doll handoff

–was created using the OT's CIMI materials, curated infant massage media, and Canva to build nurse confidence in both performing and teaching the technique to parents.



Figure 4: IM Resources

### Discussion

Overall, the training(s) were well-received by the nurses as they were convenient, concise, and effective for the infants and the parents. Focusing on one technique (Hand Hugs), the hands-on training sessions were easy to pick up, and the graphic/digital resources were easy to access. As a result of its success, the IM physical guides were printed and hung up for every NICU bed (**Figure 4**).

Though this project addressed the HMSL NICU staff's IM knowledge gaps, concerns, and learning preferences, it did not properly *measure* the nurses' feedback nor did it measure the program's impact on parent involvement; future steps may include evaluating nurse or parental confidence post-training. As a low-cost, high-impact strategy, this project could serve as a framework for other NICUs seeking to integrate parent-centered care or inspire integration of more diverse massage techniques and therapies to supporting family involvement and infant outcomes.

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