

# Going Interdisciplinary with Research and Practice: Partnering RNs & Developmental Therapists to Provide Oral Motor Therapy in the NICU

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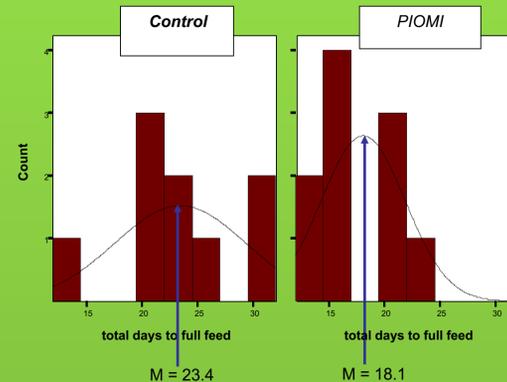


## Abstract

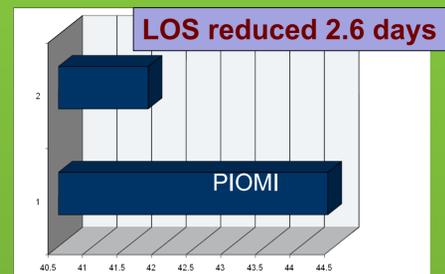
The development, research and implementation of a new oral motor intervention designed for preterm infants has required an interdisciplinary approach. Oral feeding is a complex skill that requires the infant's ability to coordinate the muscles of the jaw, lips, tongue and cheeks for motor stability, as well as incorporate intra- and peri-oral tactile sensoristimuli. Solutions to these unique feeding problems are beyond the scope of nursing alone or any single discipline. Thus oral feeding of preterm infants has become a specialized area requiring the integration of knowledge and insights from both neonatal nursing and developmental care specialists. The visibility of occupational/physical/speech-language therapists in the neonatal acute care settings has increased in recent years, largely due to these complex feeding issues.

The journey from initial development to implementation of an oral motor intervention specifically for preterm infants is used as a template/case study to demonstrate the successes and challenges of collaboration among disciplines in the NICU. Using concepts from Repko (2008) on the interdisciplinary research process, "steps" are highlighted, as well as potential barriers at each step, using examples from this case study. Nursing must invite and embrace interdisciplinary participation to continue the inspiring pursuit of advancing neonatal care.

## The Oral Motor Intervention



The PIOMI group transitioned to total oral feedings 5 days sooner than controls ( $p = 0.043$ )



The PIOMI group was discharged 2.6 days sooner than controls ( $p = .541$ )  
A 3-day decrease in LOS would save our nation more than \$2 billion annually

Steps	Technique	Purpose	Frequency	Duration
Cheek C-Stroke	1. Place a finger inside the cheek, and one on the outer cheek. Slide and stretch front to back (toward the ear), then down, then back to front (C pattern). 2. Repeat for other side.	Improve range of motion and strength of cheek, and improve lip seal.	2X each	30 sec
Lip Roll	1. Place a finger on the inside and thumb on outside of upper lip. 2. Move finger in horizontal direction while moving thumb in opposite direction (rolling lip between fingers). 3. Do on the left side of lip, then repeat on right side (2 placements). 4. Repeat on lower lip.	Improve lip range of motion and seal.	1X each	30 sec
Lip Curl	1. Place finger on outside of upper lip, and finger inside of lip. 2. Compress the tissue against the bone, then lift the lip up and over at the outer finger, then stretch downward toward the midline. 3. Do on the left side of lip, then repeat on the right side (2 placements). 4. Repeat for lower lip.	Improve lip strength, range of motion, and seal.	1X each	30 sec
Gum Massage	1. Place finger on left side of the upper gum, with firm sustained pressure slowly move across the gum to the other side. 2. Move down the lower gum (to continue a circle), with firm sustained pressure slowly move across to other side.	Improve range of motion of tongue, stimulate swallow, and improve suck.	2X each	30 sec
Lateral Borders of Tongue/Cheek	1. Place finger at the level of the motor between the side of the tongue and the lower gum. 2. Move the finger toward midline, pushing the tongue towards the midline. 3. Then move the finger back and all the way into the cheek, stretching it.	Improve tongue range of motion and strength.	1X each	15 sec
Midline of Tongue/Palate	1. Place finger at center of the mouth, give sustained pressure into the hard palate for 3 seconds. 2. Move the finger down to contact center (side of the tongue). 3. Draw the tongue downward with a firm pressure. 4. Move the finger back up to the center of the hard palate.	Improve tongue range of motion and strength, and improve suck.	2X each	30 sec
Elbow a Rock	1. Place finger at the midline, center of the palate, gently stroke the palate to elicit a suck.	Improve suck, and self-palate activation.	N/A	15 sec
Support for Non-Neutro-Boobing	1. Leave finger/pacifier in mouth (or place pacifier in mouth) and allow suckling.	Improve suck, and self-palate activation.	N/A	2 min

## Repko's Steps to Interdisciplinary Practice

Define the Problem

- Poor Feeding In Preterm Infants
- Oral Motor Therapy Undefined

Justify Using an Interdisciplinary Approach

Identify the Disciplines Involved

- RNs
- Feeding/Developmental Specialists
- Speech Language Pathology

Evaluate Insights from each Discipline

- When to have standard consult
- What oral motor therapy to use
- Implementing the oral motor therapy

- Both RNs & SLPs are involved in preterm feeding issues
- The problem of preterm feeding is complex
- No single discipline has been able to address feeding issues comprehensively
- Preterm feeding is at the INTERFACE of both disciplines
- RNs identify a general feeding issue and consult SLPs
- SLPs do an oral motor assessment and recommend a therapy
- Both RNs and SLPs are needed to implement the therapy

## Interdisciplinary Practice

A decision-making process in which the researcher considers which disciplines-with their respective viewpoints, tools, and methodologies-might be pertinent to the problem, concept, or issue at hand, and then decides which insights from those disciplines are most useful for further developing an integrated and purposeful understanding. (Repko)



## Challenges and Successes

### Challenges

- Changing roles of RNs and SLPs in the NICU
  - Increased presence of SLPs and Feeding Specialists is sometimes challenged by long term RNs who have been wholly responsible for feeding in the past
  - RNs may lack appreciation for the complexity of oral motor issues that relate to feeding, and the extensive and specialized training SLPs bring to the table
  - SLPs must also respect the specialized training the RNs have specific to the preterm infant's physiological stability, tolerance and handling.
  - Practical matters r/t sharing the responsibility of who implements the oral motor therapy:
    - RNs may do initial consult for known poor feeders
    - SLPs may come in to assess and recommend therapy
    - RNs must then implement therapy (may be daily)
    - SLPs may follow up after specified timeframe to reassess



### Successes

- PIOMI Training
  - RNs and SLPs are joining in training as PIOMI "Super-Users"
  - SLPs have been a key resource in perfecting oral motor training methods
- PIOMI Protocol Development
  - RNs have embraced collaboration by working with SLPs and Medical Staff on oral motor protocol development
- PIOMI Research
  - Both SLPs and RN PhDc (doctoral students) are launching new research studies
  - This has become globally interdisciplinary as RNs and SLPs in NICUs from 12 different countries have received training, and several have begun data collection

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## Primary References

- Lessen, B.S. (2011) Effect of the Premature Infant Oral Motor Intervention on Feeding Progression and Length of Stay in Preterm Infants, *Advances in Neonatal Care*, 11 (2), 129-139.
- Repko, A.Ff (2012) *Interdisciplinary Research Process and Methods* (2<sup>nd</sup> ed). Sage Publications.