



# Oral Motor and Feeding in Very Young Infants

A webinar for ECI teams

## Content of Training

- Incidence and red flags
- Inter-relatedness of feeding and other developmental domains
- Application of ECI eligibility requirements relevant to feeding
- Needs assessment and planning
- Developing the IFSP and outcomes

## Incidence & Prevalence

25-45% of typically developing children

33-80% of children with developmental disabilities

35% of infants exhibit food selectivity and refusal

57-92% of children with CP have dysphagia (feeding disorders)

31% of NICU graduates will experience feeding difficulties before one year of age  
(Hawdon, et al, 2002)

Occurrence is highest in children with physical disabilities, medical illness and prematurity.

## Incidence and Prevalence

- Feeding difficulties can continue as the infant gets older
- Feeding difficulties may be identified later, as volume of fluid intake increases

***Although parents voice concern about feeding on average around 7.4 months of age, they are not referred to EI until 15.7 months of age***

***- Bailey Jr., et. Al. (2004)***



## Don't Wait!

- Feeding is a developmental process
- Early experiences are key to long-term success
- When feeding development is interrupted, children may demonstrate
  - Oral sensorimotor dysfunction
  - Undernutrition (FTT)
  - Poor growth
  - Delayed development
  - Poor academic achievement
  - Psychological problems
  - Loss of overall health and well-being



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## Red Flags for Feeding/Oral Motor

- Oral-motor dysfunction
- Medical Hx of Dx related to feeding disruption
  - EX: Bronchopulmonary Dysplasia, cardiac, neuro impairment, GERD
- Supplemental tube feedings
- Failure to match diet/quantity to developmental age
- Poor meal scheduling or other parental feeding strategies



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## Red Flags for Feeding/Oral Motor

- Excessive gagging or recurrent cough w/feeding
- Severe irritability or behavior problems during feeds
- History of recurrent pneumonia and feeding difficulties
- Lethargy or decreased arousal during feeding
- Unexplained food refusal and under nutrition



## Recommendation for ECI Teams

Ensure that a SLP or an OT (or other staff qualified to assess feeding) evaluates every infant who is under 6 months of age.

Any time there are questions regarding feeding or oral motor, be sure to consult with the SLPs or OTs in your program.

## Important to Remember

- Development in an infant can't be compartmentalized
- In an infant, feeding is related to and dependent on the other developmental areas



## Effect of Overall Tone & Gross Motor Development on Feeding

Mobility develops from a proximal base of stability (middle of the body) toward more distal (farther away from the core of the body) control

- Refined development of oral motor skills is affected if proximal stability is an issue
- Oral stability is dependent upon development of neck and shoulder girdle stability, which are dependent upon trunk and pelvic stability



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# Effect of Overall Tone & Gross Motor Development on Feeding

## Hypotonia

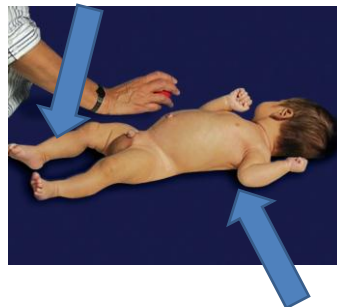
- Poor postural stability = decreased control of trunk, shoulders, head & neck
- During feeding, the baby may try to compensate by “fixing” in a position or hyperextending (e.g., pulling back shoulders & extending jaw)
- Tires easily and may cease feeding before full



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## Body Flat in Supine - Hypotonia



# Effect of Overall Tone & Gross Motor Development on Feeding

## Hypertonia

- All movements are against increased tension/resistance of muscles
- Tends to fix spine & limit movements to small range
- Tire easily due to increased work

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## Social Emotional Importance of Feeding



Feeding is the most basic type of nurturing.

## Evaluation and Assessment

- BDI 2 may identify children who qualify due to feeding difficulties.
- 1<sup>st</sup> three items in Self-Care:
  - SC4 Smooth Coordinated Suck
  - SC5 Both hands on bottle or breast
  - SC7 **Mouths soft foods**

Continue with Needs Assessment  
by asking 3 questions:

1. Are the parents concerned about the child's eating?
2. Does the child have a medical diagnosis or any structural limitations associated with difficulties in the area of feeding?
3. Are there any oral motor indicators of concern?





## Continue with Needs Assessment

1. Are the parents concerned about the child's eating?
  - *Gather and document detailed information about the concerns.*
  - *History and parent interview*
  - *Observation*
  - *Cultural differences*



**Parent Questions** (Examples)

*To help identify the child's unique strengths and needs related to this developmental area:*

- Can you tell me a little about how things are going with your child's feeding?
- What kinds of foods is your child eating?
- Do you have any questions or concerns about how your child drinks or eats?

*[May probe further with the following questions as needed dependent upon child's age, apparent needs, and areas parent did not address in the general, open-ended questions]*

- Has your child ever been tube fed?
- What types of food does your child eat? (probe for breakfast, lunch, dinner and how the food is prepared, e.g., commercial strained, blended, etc.)
- Who are the people who usually feed your child?
  - Is he bottle- or breast-fed?
  - How is he fed at home, e.g., in your lap, high-chair, propped on pillow?
  - Do his lips seem to seal around the nipple fairly well or does it seem like a lot of milk drips out? What kind of nipples do you use?
  - About how long does it take to feed your child?
  - Does your child seem to have favorite foods?
- (note texture, taste, temperature preferences)
- Does your child seem to dislike certain foods? (note texture, taste, temperature dislikes)
- Are there any other important aspects of your child's feeding or drinking that I have not asked that you feel are important for us to know?

*[IMPORTANT: If the parent answers positively to any of the following questions, the child should be referred to a physician if this has not been evaluated. Intervention and assessment strategies will be dependent upon medical findings]*

Does your child:

- Have any medical problems that you are aware of that could interfere with feeding?
- Have frequent respiratory or breathing problems?
- Cough or gag a lot during feeding?
- Ever vomit during or after feeding?
- Usually get extra fussy or irritable after he has eaten?
- Have any known or suspected food allergies or sensitivities? Does anyone in your family have food allergies?
- Has your child seen a doctor for any of these concerns?

## Response to Feeding

If possible, allow caregiver to feed, and then take a turn feeding so you can observe directly.

- State control
  - Is baby able to maintain calm state throughout feeding? Does baby start out or become disorganized?
- Behavioral Response
  - Do you notice any stress signals? Does baby appear to be satisfied after feeding (goes to sleep or appears calm/happy)?



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## Assessing Infant Cues

### Stress Signs: Moderate

- Sighing
- Sweating
- Trembling (jaw/limb)
- Facial grimacing
- Straining
- Bowel movements
- Multiple swallows
- Sneezing
- Startling
- Hiccups
- Gasping
- Falling asleep
- Averting gaze
- Increasing hyper/hypotonicity
- Yawning
- Squirming or increased activity level

### Stress Signs: Major

- Coughing
- Spitting up
- Arching/posturing of trunk or extremities
- Changes in vital signs
- Changes in color
- Respiratory pauses or breath holding
- Choking
- Gagging
- Irregular respiration
- Bradycardia

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## Cultural Differences

Cultural differences and expectations must be considered in all developmental areas when evaluating young children. The next two slides are summaries of studies about cultural differences regarding feeding. The full citations are provided in the reference list.



## Cultural Differences

“Health professionals are faced with a growing challenge to appreciate the cultural beliefs influencing infant feeding practices for both recent immigrants as well as for resident US ethnic groups. Discussions regarding infant feeding often are the initial interaction between clinician and mother and, as such, are important in building a foundation of trust and rapport necessary for successful well child visits leading to optimal development of the infant through childhood.” (Pak-Gorstein, S., et al., 2009)



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## Cultural Differences

Authors investigated whether Asian-Indian (AI) mothers who immigrate to the US change their infant feeding beliefs from those held in India, and how the infant feeding beliefs of Anglo-American (AA) mothers differ from those held by Asian-Indian-American (AIA) mothers. Survey responses from 141 AA mothers and 133 AIA mothers living in the southeastern US, and 101 AI mothers living in Coimbatore, India, were presented. The mean ages of the ethnic groups were similar, all 3 groups were relatively well educated, and the AIA mothers had lived in the US for a median of 5.9 years. The infant feeding beliefs of the Asian-Indian-American (AIA) and Asian-Indian (AI) mothers indicate that they are especially in need of services provided by dietitians and other health care providers. Otherwise, differences in beliefs were found between the 3 groups, except that all 3 groups believe that a baby should not take a bottle to bed. (Kannan S, et al.,1999)

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## Continue with Needs Assessment

2. Does the child have a medical diagnosis or any structural limitations associated with difficulties in the area of feeding or oral motor?
  - *Review the first 7 slides of the archived webinar [Clinical Skills for Assessment and Intervention of Feeding in the Young Infant, Part 1](#).*



# Factors that Limit Feeding Skill Development

## Structural limitations

- **Oral-Facial** (Choanal Atresia, Cleft Lip/Palate, Micrognathia, Macroglossia, Dental Malocclusions, Short Lingual Frenulum)
- **Gastrointestinal** (Esophageal Stricture, Pyloric Stenosis, Esophageal Atresia, Anal Atresia, Tracheoesophageal Fistula, Congenital Diaphragmatic Hernia, Hiatal Hernia, Short Bowel Syndrome)
- **Respiratory and Cardiac** (Tracheomalacia, Laryngomalacia, Pulmonary Atresia/Stenosis, Aortic stenosis, etc.)



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# Factors that Limit Feeding Skill Development

## Physiological limitations

- Oral-Pharyngeal (aspiration)
- Gastrointestinal (Gastroesophageal Reflux-GER, Esophagitis, Esophageal Dysmotility, Achalasia, Stomach Motility disorders, Delayed Gastric Emptying, Dumping Syndrome, Chronic Intestinal Pseudo-obstruction, Hirschsprung's Disease, Diarrhea, Constipation)
- Respiratory-Cardiac (Bronchopulmonary Dysplasia, Scoliosis/Kyphosis, Hypotonia/Hypertonia, Congestive Heart Failure)

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## Continue with Needs Assessment

3. Are there any oral motor indicators of concern?
  - *Habitual open mouth*
  - *Tongue protrusion*
  - *Low tone*
  - *Other (see your SLP or OT for further information about indicators in this area)*



## Continue with Needs Assessment

If the answer to any of the 3 questions is “Yes”, the child may need intervention, and a specialist should take a closer look.

If the answers to the 3 questions are “no”, there is probably not a need for intervention even though the child has a qualifying score on the BDI2.

## Writing the IFSP for a young infant with Feeding Concerns

Meal Times						
X	X	X	What do meal times look like for your child? Is there anything difficult or special about meal times? <small>(adaptive/self-help, motor, social-emotional and communication)</small>		✓	10
Sam's mom is breast feeding him. He "dribbles" milk down his chin & sometimes seems to gasp for air. He eats every 2 hours, around the clock.						
	X	X	How does your child let you know when he/she is hungry or thirsty, what he wants and when he is finished? <small>(communication, adaptive/self-help and cognitive)</small>		✓	10
Sam's mom loves feeding him, but she's concerned that he is not getting enough. He falls asleep numerous times in each feeding, so it takes a long time to feed him & they are never sure when he is finished.						

DARS ECI Sample IFSP 7/2/12

## Writing the IFSP for a young infant with feeding concerns

- An outcome can be written to target the feeding concerns.
- The family wants the feedings to go faster, and they want to feel confident that he is getting the required calories.
- The outcome might look like...

## Young Infants Webinar Series

Last webinar in this series will address specifics of planning and service delivery

It is best to initially assume that a very young infant and the family will need at least one therapy service 4 X month.

Frequency can be adjusted up or down, but use this assumption as the starting place for planning.