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## PAEDIATRIC DYSPHAGIA: CLINICAL ASSESSMENT

CHRIB 2010 Presenter: Mrs Mari Viviers

### Introduction:

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- Defining feeding disorders: Problems in a broad range of eating activities that may or may not be accompanied by a difficulty with swallowing food and liquid.
  - Characteristics of feeding disorders: food refusal, disruptive mealtime behaviour, rigid food preferences, less than optimal growth, failure to master self-feeding skills expected for developmental levels.
- (Arvedson, 2008)

### Introduction (cont'd):

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- Incidence of feeding disorders is estimated to be 25 – 45 % of typically developing children
- Up to 80 % of children with developmental disabilities
- The incidence of dysphagia (swallowing disorder) is unknown, although it seems clear that the incidence of swallowing dysfunction is increasing
- Reasons for increase: Improved survival rates of children with history of prematurity, low birth weight & complex medical conditions

### Introduction (cont'd):

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- An interdisciplinary approach is essential for coordinated service delivery and Evidence based practice (EBP), which focus on the whole child and caregivers/parents, who may have multiple interrelated health and developmental issues.
- An overview of 1997 – 2007 by Bell & Alper (2007) indicated that assessment & intervention for feeding & swallowing problems in infants and children have attracted international research attention.

### Introduction (cont'd):

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- Miller & Willging (2003) concur that a steady increase in research in the field of paediatric dysphagia is noted, however, the efficacy of commonly employed diagnostic & treatment strategies have been largely unexplored. Thus a need for evidence based assessment methods exist



### Introduction (cont'd):

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- Dearth of research in the field of paediatric dysphagia
- Rapidly evolving field for slt's working in medical settings especially
- Undergraduate training not adequate for slt's to go out and confidently assess premature babies, high risk neonates and infants
- Very few slt's working in this exciting yet precarious field

### Assessment: Role of slt (ASHA, 2000;2008)

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- Clinical swallowing & feeding evaluations
- Instrumental assessment of swallowing function
- Identifying normal & abnormal swallowing anatomy & physiology
- Identifying possible signs of disorders in the upper aero-digestive tract
- Making appropriate referrals

### Assessment:

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- GOAL=identification of swallowing and feeding difficulties + forms foundation for developing management strategies
- Why different measures? Provides different kinds of information, one type of assessment does usually not provide complete diagnostic information, re-assessment through course of treatment

### Important considerations for assessment: (Arvedson, 1993; Swigert 1998):

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During the assessment of infants & young children with feeding disorders it is important to consider the following factors:

- Oral-motor development
- Ability to maintain nutrition and hydration
- Relationship and interaction between the caregiver and the child
- Medical &/or neurological problems affecting the child

### Why is oral-motor development important?

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- Essential for the child to achieve adequate abilities for eating & drinking by mouth
- Depending on age of child: assess oral-motor skills in isolation and during feeding/only during feeding
- Sl't's understanding of the development of these skills are crucial



### Why is nutrition and hydration status important?

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- Perform in consultation with dietitian
- Specific information needed: growth needs, nutritional needs, weight gain, fluid balance
- If a child is growing appropriately changes should occur in all body components and not just in weight gain
- The child thus needs to be growing in skeletal, brain & fat components

### Why is the care-giver-child relationship important?

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- Crucial relationship between child & primary feeder
- Children with oral-motor difficulties may require more time for safe feeding & this can contribute to feeder frustration
- Inform feeder why extra time is needed
- Feeder should be able to accommodate the needs of the child
- Negative behaviour interaction during feeding can lead to failure to thrive



## Why is it important to know about medical & neurological problems?

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- Related to feeding disorders
- Cause feeding disorders
- Slt should understand medical condition
- Slt should understand the treatment of specific conditions & how it may impact on feeding



## Multi/Interdisciplinary team work:

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- Variety of healthcare professionals usually involved in assessment of infant or young child with feeding disorder
- Paediatrician or family doctor usually the first to notice a problem or the problem is reported to them first
- Common referral criteria that indicates the need for team assessment



## Referral criteria:

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- The most common criteria is indicated by Arvedson (1993):
- Sucking and swallowing incoordination
  - Weak suck
  - Breathing disruptions or apnea during feeding
  - Excessive gagging or recurrent coughing during feeding
  - New onset of feeding difficulty
  - Diagnosis of disorders typically associated with dysphagia or failure to thrive
  - Severe irritability or behaviour problems during feeding
  - History of recurrent pneumonia & feeding difficulty
  - Concern for possible aspiration during feeding

## Referral criteria (cont'd):

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- Referral criteria (cont'd):
- Lethargy or decreased arousal during feeding
  - Feeding periods longer than 30 – 40 minutes
  - Unexplained food refusal and failure to thrive
  - Vomiting
  - Nasal regurgitation
  - Increased drooling

## Signs & symptoms indicating a need for CLINICAL assessment:

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- Sucking and swallowing incoordination
- Weak suck
- Breathing disruptions or apnea during feeding
- Excessive gagging or recurrent coughing during feeds
- New onset of a feeding difficulty
- Diagnosis of disorders associated with dysphagia or undernutrition

## Our focus today:

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- Clinical assessment of high risk neonates and infants
- We will be discussing:
  - Holistic factors to be considered
  - Assessment areas
  - Assessment procedures
  - Format to structure observations
- Today's information sharing session is also based on my preliminary work for my doctorate
- The doctorate will focus on developing a validated clinical assessment instrument for paediatric dysphagia

## Suggested clinical assessment protocol

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### Case history areas:

- Personal information
- Current diagnostic status
- Pre-, peri- & postnatal history (birth history)
- Neonatal period
- Medical history
- Developmental history

### Case history areas (cont'd):

- Feeding & swallowing history
- Broad environment
- Parental concerns
- Family & social history
- Speech & Language development

## What I need to know?

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- Embryology
- Paediatric anatomy and physiology
- Normal development
- Especially normal development of oral structures, swallowing mechanism, reflexes and self-feeding skills
- What to assess and how to assess?
- Relevant intervention options

## Suggested protocol (cont'd):

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Clinical assessment

### MAIN AREAS TO INCLUDE:

- Behaviour/state/sensory integration
- General postural control/tone
- Respiratory status
- Oral/motor/cranial nerve evaluation
- Feeding & swallowing evaluation
- Suggested compensations

## Clinical assessment:

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### Behaviour/state/sensory integration

- Physiological status: heart rate/respiratory rate/saturation level
- Stages of alertness
- Colour of baby's skin
- State related stress cues
- Motor related stress cues
- Autonomic related stress cues
- Infant's response to touch/stimulation

### General postural control/tone:

- Overall muscle tone
- Head/neck/trunk alignment
- Independent head support
- Pelvic stability
- Trunk stability
- Movements against gravity
- Problems observed

## Clinical assessment (cont'd):

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### Respiratory status

- Breaths per minute
- Mouth breather
- Breathing pattern
- Abnormal respiratory patterns
- History of aspiration
- Tracheostomy

### Oral/motor/cranial nerve evaluation

- Oral primitive reflexes
- Oral structure & function: at rest & lmitation (24 m +)
- Cranial nerve symptom screening

## Clinical assessment (cont'd):

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### Feeding & Swallowing evaluation:

- Non-nutritive sucking
- Nutritive sucking
- Positioning
- Presentation information (breast/bottle/cup/spoon etc)
- Oral-motor/swallowing patterns with different consistencies

### Suggested compensations

- Compensatory strategy indicated
- Description provided by slt

## Clinical assessment (cont'd):

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### Recommendations

- State
- Positioning
- Presentation
- Feeding schedule
- Environment
- Stress signals
- Further evaluations recommended

### Other considerations for slt:

- Somatic growth patterns
- Neurodevelopmental status
- Cardiopulmonary function
- Gastrointestinal function

## Feeding observation pointers:

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- Newborn infant – cardiorespiratory status must be stable
- If infant is anticipated to be an oral feeder, observation of feeding should be for at least 15 – 20 minutes.
- Preterm infants – they are fed according to their cues, tolerance range from 10 – 30 minutes.
- Older infants & children – use a familiar feeder during observation, immitate regular feeding environment as far as possible
- What should you be able to answer after your observation: CAN THIS CHILD EAT & DRINK SAFELY STRICTLY ORALLY?

## If the answer is YES...

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- Sometimes modification is necessary, it may include but are not limited to:
  - Posture & position alterations
  - Taste, texture & temperature changes of food or liquid
  - Broader based sensory & motor interventions
  - Scheduling of meal & snack times to facilitate hunger
  - Structure & routines at meal times to improve parent-child interactions as well as behavioural responses of the child



## Suggested scales for use in clinical practice:

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Infant oral sensorimotor Function for Feeding

- Palmer et al. 1993. Neonatal Oral Motor Assessment Scale (NOMAS).
- Description of NOMAS: Can evaluate bottle/breastfeeding, checklists of behaviours in categories of normal, disorganized, and dysfunctional tongue & jaw movement



## Suggested scales for use in clinical practice:

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Infant oral sensorimotor Function for Feeding

- Association of Women's Health, Obstetric and Neonatal Nurses. 1990. Systematic Assessment of the Infant at the Breast (SAIB)
- Description of SAIB: Observations related to alignment, areolar grasp, areolar compression, and audible swallowing.



## Suggested scales for use in clinical practice:

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Infant oral sensorimotor Function for Feeding

- Nyqvist et al. 1996. Preterm Infant Breastfeeding Behaviour Scale (PIBBS).
- Description of PIBBS: Diary by mother – rooting, amount of breast in mouth, latching, sucking, sucking bursts, swallowing, state, letdown, time.
- Tobin. 1996. Breastfeeding evaluation.
- Description: For term infant. Purpose – to identify if mother would benefit from lactation support. List of feeding expectations.



## Suggested scales for use in clinical practice:

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Infant oral  
sensorimotor  
Function for  
Feeding

- Vandenberg. 1990. Bottle feeding: Feeding flow sheet.
- Description: Observations for state, respiratory rate, heart rate, nipple, form of nutrition, position, coordination, support quantity, and duration changes over time.



## Suggested sources for use in clinical practice

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