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## Improving Pediatric Feeding Assessment Skills

Series Presenter: Jennifer Dahms, MS, CCC-SLP, BCS-S

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### Improving Pediatric Feeding Assessment Skills - Full Oral Motor and Swallowing

Jennifer Dahms, MS, CCC-SLP, BCS-S

Moderated by:  
Amy Hansen, MA, CCC-SLP, Managing Editor, [SpeechPathology.com](http://SpeechPathology.com)

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## Improving Pediatric Feeding Assessment Skills – Full Oral Motor and Swallowing Assessment

By Jennifer Dahms, MS/CCC-SLP, BCS-S

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continued

## Learning Outcomes

After this course, participants will be able to:

- Describe the basic areas of oral motor and swallowing functioning for all areas of development.
- Describe the subtle/more descriptive areas of full oral motor and swallowing skills.
- Identify disordered oral motor functioning and swallowing via video examples.
- Identify the functional impact of disordered oral motor and swallowing skills.

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## Financial and Non-Financial Disclosures

- I am the owner of Valley Pediatric Feeding, LLC in Boise, Idaho and provide therapy services to children.
- I have been paid an honorarium from speechpathology.com for this presentation.
- I donate monetary funds to Smile Train, St. Jude Children's Research Hospital, and the Ronald McDonald House Charities of Idaho.
- I am an ASHA member, ISHA member, a member of the Dysphagia Research Society, a SIG 13 member, and a Board Certified Specialist in Swallowing and Swallowing Disorders.

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continued

## Why is having an intact feeding system important?

- Mishra et al. (2018)
  - This study was completed to test the reliability of a new measurement for mealtime duration and to look at the relationship to the feeding performance in children with spastic cerebral palsy.
  - n=17 children, self-feeding
  - Comparisons were made with the Dysphagia Disorder Survey, which has a binary score system (either normal or abnormal).
  - There was excellent intra- and inter-rater agreement for total mealtime duration, total solid/bite duration and total liquid/sip duration.

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continued

## Why is having an intact feeding system important?, cont.

- Mishra et al. (2018), cont.
  - The measures obtained can be used to measure signs of feeding and swallow disorders in the studied population.
  - There are limited tools for assessing children with dysphagia.
  - Can we use this information with other populations?

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continued

## Why is having an intact feeding system important?, cont.

- Hewetson and Singh (2009)
  - These authors completed semi-structured interviews with mothers of children with chronic feeding and/or swallowing deficits.
  - n=7
  - Two main thoughts emerged – deconstruction and reconstruction.
  - These two experiences included the journey that mothers face with their children, getting through life, letting go of “the dream”, and continuing with the journey of life.

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continued

## Why is having an intact feeding system important?, cont.

- Hewetson and Singh (2009), cont.
  - There have been other studies on populations with intellectual impairment, so similar feelings are most likely associated with feeding skills as well.
  - It is important to provide family-focused interventions.
  - How does this help us when working with families with children with feeding and swallowing disorders?

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continued

## Why is having an intact feeding system important?, cont.

- Lefton-Greif et al. (2014)
  - The purpose of this study was to develop and determine the validity of The Feeding/Swallowing Impact Survey (FS-IS). This is an 18-item survey that looks at the caregiver's perceptions of time demands on daily activities, worry about the child he/she is caring for, and the specific challenges related to caring for a child with feeding and swallowing needs.
  - Current tools may not have the specificity for families with children with special needs.

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continued

## Why is having an intact feeding system important?, cont.

- Lefton-Greif et al. (2014), cont.
  - The authors took data from children (n=164) with a median age of 44 months. Caregivers then completed the PEDS-QL Family Impact Module (PEDS-QL FIM) and the FS-IS.
  - The family situations correlated with Health-Related Quality of Life (HRQoL). The subscale and total scores correlated with the PEDS-QL FIM.
  - Families may need additional support when caring for their children.
  - What do we need to keep in mind with this population?

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continued

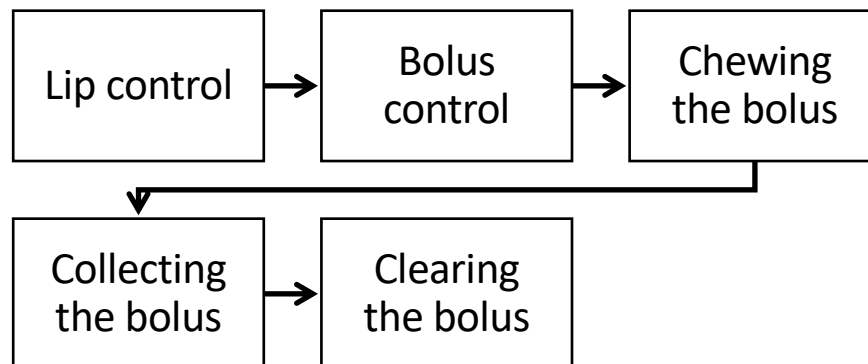
## The Movements

- Lip
- Tongue
- Chewing
- Swallowing

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continued

## The Movements, cont.



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continued

## The Basics

- Lips
  - The intake of food
- Tongue
  - Controlling the food
- Chewing
  - Preparing the food
- Swallowing
  - Movement of the food

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## What do we see and feel?

- Active lip movements during the entire bolus preparation
  - Closure, movement to the side where the bolus is positioned
- Variety of tongue movements during bolus preparation
  - The coordination of elevation and lateralization
- The type of chewing movements needed for a particular bolus
  - The bolus size, consistency, and texture

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## What do we see and feel?, cont.

- The movement of food in an A-P fashion
  - Keeping the bolus in the mouth and preparing it for ingestion
- The clearance of food from superior structures to inferior structures
  - Gravity-assisted movement and pressure differentials
- The coordination of swallowing and breathing
  - Valve closure and opening

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## What do we see and feel?, cont.

- Overall refinement of skills
  - The naturalness, smoothness

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## But...what else?

- Attention
- Distractibility
- Social impact

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continued

## The Process

- Background information about each child
- No information about therapy or previous assessments
- Simulate coming into an initial assessment situation

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continued

## Video #1

- Patient Background
- L. is a 5 ½-year-old boy with William's syndrome. He has a history of kidney dysfunction, and he had a short stint of receiving G tube feedings. His growth has been on the slow side.

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continued

## Video #1, cont.

- Video Clip

23

continued

## Video #1, cont.

- What area of deficits are seen in the video with L.?
  - A. Lip, tongue, and jaw functioning
  - B. Lip and tongue functioning
  - C. Tongue functioning and swallowing
  - D. Swallowing only

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continued

## Video #1, cont.

- Discussion

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continued

## Video #1, cont.

- How would you best describe L.'s overall oral motor skills for eating?
- A. Not functional
- B. Functional
- C. Not adequate
- D. Normal

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continued

## Video #1, cont.

- Discussion

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continued

## Video #1, cont.

- How would you describe the functional impact of L.'s overall deficits on the process of eating?
- A. There are significant safety concerns regarding his skills.
- B. There are both safety and refinement concerns regarding his skills.
- C. There are refinement and focus concerns regarding his skills.
- D. There doesn't seem to be a functional impact regarding his skills.

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## Video #1, cont.

- Discussion

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## Video #2

- Patient Background
- M. is a 4-year-old girl who was diagnosed with growth hormone deficiency secondary to a cyst on her pituitary gland. She has been receiving growth hormone injections for about 2 years. She has global developmental delays.
- She has a history of consistent gagging on textured foods.

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continued

## Video #2, cont.

- Video Clip

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continued

## Video #2, cont.

- What areas of deficits are seen in this video with M.?
  - A. Lip and tongue functioning
  - B. Lip functioning and chewing skills
  - C. Tongue functioning and chewing skills
  - D. Tongue functioning and swallowing

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continued

## Video #2, cont.

- Discussion

33

continued

## Video #2, cont.

- What areas of dysfunction should be targeted first in M.'s therapy?
- A. Lip movements
- B. Swallowing
- C. Tongue control
- D. Chewing skills

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continued

## Video #2, cont.

- Discussion

35

continued

## Video #2, cont.

- What functional limitations could occur when M. chews food more anteriorly?
  - A. Less efficient chewing overall
  - B. Longer chewing durations per bolus
  - C. Ineffective bolus preparation
  - D. All of the above

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continued

## Video #2, cont.

- Discussion

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continued

## Video #3

- Patient Background
- R. is a 1 year, 7 month-old boy. He was diagnosed with jaundice following birth. His mother has Type 1 diabetes.
- R. had some initial latching difficulties with breastfeeding and had to be fed via medicine syringe.

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continued

## Video #3, cont.

- Video Clip

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continued

## Video #3, cont.

- What areas of deficits are seen in this video with R.?
  - A. Lip and tongue functioning
  - B. Chewing and tongue functioning
  - C. None – the child is functioning within normal limits
  - D. Swallowing

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continued

## Video #3, cont.

- Discussion

41

continued

## Video #3, cont.

- Why is open mouth chewing not an area of concern for R.?
  - A. The piece of food is too big.
  - B. His age would indicate open mouth chewing as a normal stage of development.
  - C. The food texture that he is eating impacts his mouth position.
  - D. None of the above

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continued

## Video #3, cont.

- Discussion

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continued

## Video #3, cont.

- What would you do if presented with this situation?
  - A. Recommend a re-evaluation in 3 months
  - B. Recommend no therapy
  - C. Recommend a re-evaluation in 6 months
  - D. Refer to another specialist

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continued

## Video #3, cont.

- Discussion

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continued

## Video #4

- Patient Background
- W. is a 14-year-old boy who was born very prematurely and spent several months in the NICU. He received a G tube as an infant and continues to receive 100% of his nutrition from his feeding tube. He was diagnosed with Failure to Thrive, Autism, and growth delays. He has global developmental delays.

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continued

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## Video #4, cont.

- Video Clip

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continued

## Video #4, cont.

- What deficits were seen in the video clip with W.?
  - A. Poor bolus control
  - B. Decreased tongue lateralization skills
  - C. Abnormal swallowing
  - D. All of the above

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continued

## Video #4, cont.

- Discussion

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continued

## Video #4, cont.

- Should W. be able to sustain himself for a portion of his nutrition via an oral diet?
- A. Yes
- B. No
- C. Not sure

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continued

## Video #4, cont.

- Discussion

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continued

## Video #4, cont.

- Why are W.'s slower movements and abnormal swallowing pattern concerning?
  - A. Eating and swallowing are less efficient.
  - B. There could be a concern with aspiration.
  - C. There is a lack of support for oral eating.
  - D. All of the above

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## Video #4, cont.

- Discussion

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## Summary

- When we are assessing a child's full oral-motor and swallowing capabilities, we need to look at the individual movements and "jobs" of each oral motor structure. We then need to see how these structures work together to manage a bolus.
- When there is a breakdown in one of the steps within the system, many other areas can be affected.
- We can target one aspect of disordered feeding or swallowing skills in therapy; however, if we do not understand the interrelationship of how all of the parts work together, we may not be providing the best therapy for a child.

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continued

## Summary, cont.

- We should first look at the overall safety of the situation for each child, how food should be handled for a particular bolus, how efficient the system is working as a whole, if there is refinement of skills present, and what diet level a child can manage.
- We also sometimes have to look past just the muscle-based aspects of eating in order to understand the full situation. The dynamics of the full mealtime situation are also crucial to a child's overall success.

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continued

## Thank you!

- [valleypediatricfeeding@yahoo.com](mailto:valleypediatricfeeding@yahoo.com)

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## References

- Hewetson, R. & Singh, S. (2009). The lived experience of mothers of children with chronic feeding and/or swallowing difficulties. *Dysphagia*, 24, 322-332. DOI 10.1007/s00455-009-9210-7.
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- \*\*All videos taken by Jennifer Dahms, MS/CCC-SLP, BCS-S

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