



WAYFINDING DYSPHAGIA

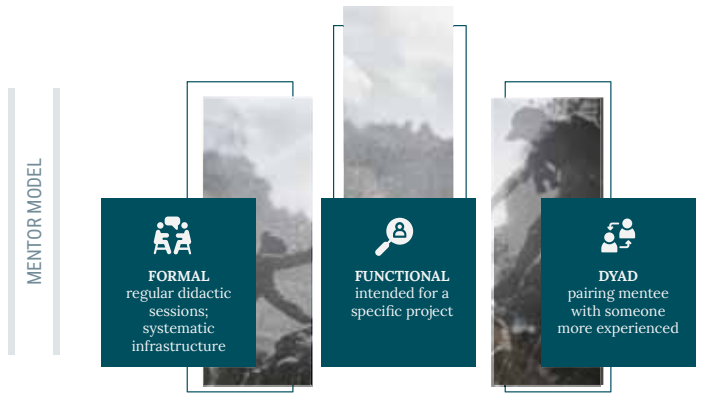
Mentoring New Practitioners Toward Clinical Expertise



Christine Yoon, MA OTR/L
 Jamie Sakamoto, MA, OT/L, PAM, SWC, CLEC



- 
DESCRIBE
 the collaborative journey of **developing clinical expertise** between mentor and mentee
- 
UTILIZE
 the **theoretical frames of reference** to facilitate the clinical decision making process
- 
UNDERSTAND
 the social, emotional, cognitive, and physical **considerations impacting dysphagia** in the neuro-impaired
- 
APPLY
 at least 3 **traditional swallow therapy approaches** supported by current evidence.



Kashiwagi et al. (2013); Cho et al. (2011)

MENTORSHIP

PURPOSE

- Guide **experiential learning**
- Support transfer of learned **theory into practice**
- Establish **expert behavior and evidence based practice**

BENEFITS

- Retention
- Self-efficacy
- Career Satisfaction
- Succession

Kashiwagi et al. (2013); Cho et al. (2011)

EXPERTISE BUILDING



DELIBERATE PRACTICE

Structured Activities
Exposure
Repetition
Persistent Effort

Mixed Method

Verbal Instruction
Observation
Hands-On
Review of Literature
Review of MBSS

EPISODIC

Context
Application of Learned Theory

FEEDBACK

Challenge critical thinking
Collaborative Discussion
Reinforcement

Abuzour et al., 2017; Kashiwagi et al., 2013; Kulasegaram et al., 2013; Overholser, 2010; Petty et al., 2010

LEVELS OF EXPERTISE

Expert

Does; Synthesizes and Creates; Able to see BIG PICTURE

Proficient

Shows How; Analyzes and Evaluates

Competent

Knows How; Applies; Practical Knowledge, Needs Experience and Exposure

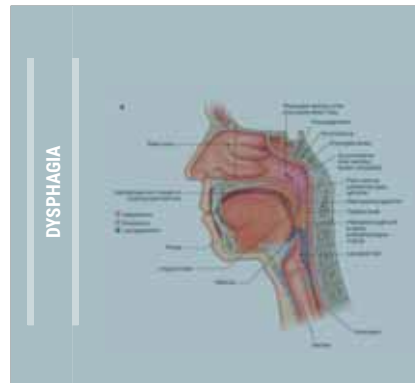
Advanced Beginner

Knows; Understands; Simple, Controlled Learning

Novice

Knows About; Remembers Theory; Relies on Recipes/Guidelines

DYSPHAGIA



01

DYSPHAGIA
Oral cavity to Esophagus
Bolus to Trachea or Lungs

02

OROPHARYNGEAL DYSPHAGIA
Pharynx
Upper Esophageal Sphincter
Mouth to Esophagus

03

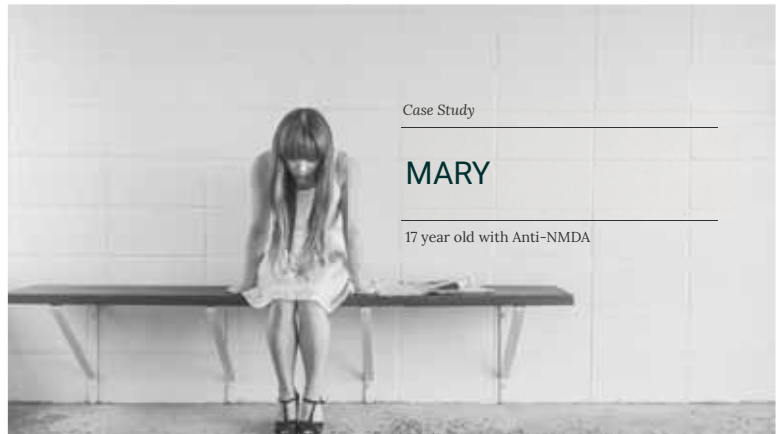
ESOPHAGEAL DYSPHAGIA
Esophagus

Clave and Shaker, 2015

DYSPHAGIA BASICS



- 01 CAUSES**
 - Anatomical
 - Pathophysiological
 - Disease
- 02 AT-RISK POPULATION**
 - Elderly
 - Neuro impairment
 - Cancer
- 03 COMPLICATIONS**
 - Malnutrition/Dehydration
 - URI/PNA
 - Quality of Life



Case Study

MARY

17 year old with Anti-NMDA

ANTI-NMDA


Anti-N-methyl-D-aspartate-receptor (NMDAR) Encephalitis

- Flu-like symptoms
- Memory deficits
- Sleep disorder
- Speech dysfunction
- Cognitive and behavioral disturbances
- Seizures
- Movement Disorder
- Loss of Consciousness
- Autonomic Dysfunction
- Central Hypoventilation
- Vision and/or hearing impairment

Ferreira et al. 2018

INITIAL CONSULTATION

- SOCIAL HISTORY
- OCCUPATIONAL HISTORY
- FUNCTIONAL EVALUATION
- TREATMENT PLAN



01 OCCUPATIONAL THERAPY
Clinical Impressions & Goals



DYSPHAGIA CONSULT
FEEDING & SWALLOWING AS A MEANINGFUL OCCUPATION



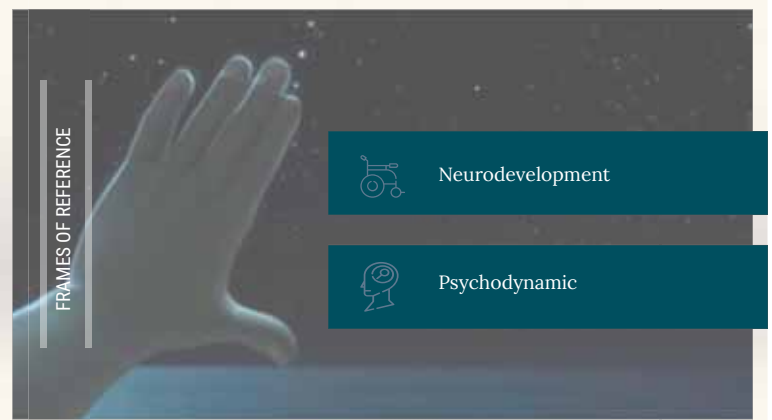
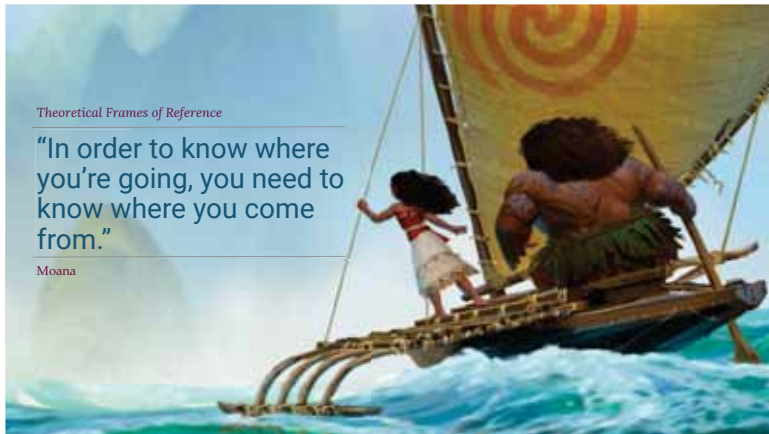
DYSPHAGIA CONSULTATION

- FEEDING HISTORY
- ORAL MOTOR ASSESSMENT
- PHARYNGEAL SCREEN
- TREATMENT PLAN



02 DYSPHAGIA
Clinical Impressions





Occupational Therapy and Dysphagia from a Singular Lens

Shifting into Focus

- Motor Skills
- Cognition and Processing
- Social-Emotional

Binocular Perspective



OT Consult

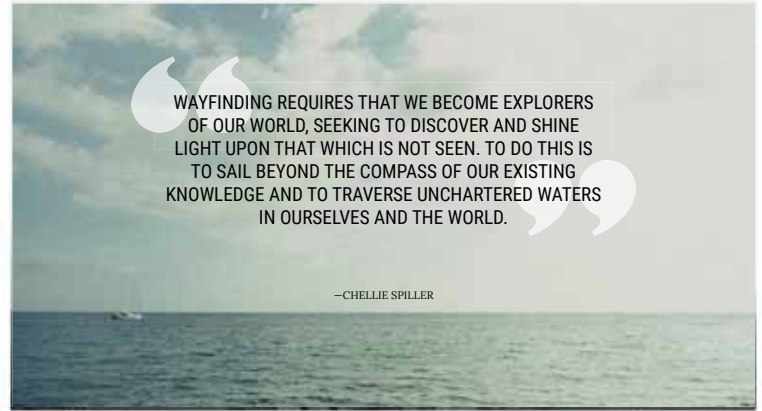
- Easily fatigued
- Uncoordinated, poorly graded movement
- Decreased grip strength
- Limited task initiation and sequencing
- Inconsistent direction following
- Minimal expressive language
- Poorly oriented
- Poor family carry-over

- Reduced endurance
- uncoordinated, poorly graded oral movements
- decreased strength and oral range of motion
- limited initiation and sequencing of feeding and swallowing
- decreased safety awareness
- poor hunger/satiety
- poor family carry-over



Dysphagia Consult

- 01 PROXIMAL STABILITY
head and neck control
- 02 ORAL PHASE
lip seal
- 03 PHARYNGEAL PHASE
initiation of swallow



Evidence-Based Practice

BEST PRACTICE

Literature Review of Common Therapeutic Approaches to Addressing Pharyngeal Impairment

Pharyngeal Exercises

Swallow

- **Effortful Swallow**
- **Masako**
- Supraglottic
- Mendelsohn Maneuver
- McNeil Dysphagia Protocol

Non-Swallow

- **Shaker**
- **Effortful Pitch Glide**
- Pharyngeal Squeeze Maneuver
- Resistive Jaw Opening
- Lee Silverman Voice Treatment
- Respiratory Muscle Training

Effortful Swallow

- Description: Push tongue to the roof of the mouth and swallow hard. Effortful swallow as if swallowing a golf ball.
- Indication: decreased tongue base movement for bolus clearance
- Target Muscle/Muscle Groups
 - Pharyngeal Constrictors
 - Base of tongue
- Evidence
 - Decreased lingual pressure
 - Increased oral pressures as compared to non-effortful swallow

Pisegna & Langmore, 2014

Let's Practice

1. Start with your tongue at rest.
2. Press your tongue against the roof of your mouth as hard as you can.
3. Swallow as hard as you can.



Masako: Tongue Hold Swallow

- Description: Swallow secretions while holding tongue gently between teeth
- Indication: reduced tongue base retraction
- Target Muscle/Muscle Groups
 - Superior pharyngeal constrictors
 - Genioglossus and submental musculature
 - Increased anterior movement of the posterior pharyngeal wall
- Evidence
 - No long term effect on swallow

Pisegna & Langmore, 2014

Let's Practice

1. Stick out the tip of your tongue, hold it between your teeth or lips.
2. Keeping your tongue in place, try to swallow your spit.



Shaker: Head Lift Exercise

- Description: Lay Supine
 - Isometric: Lift head and hold for 60 seconds. Rest 60 seconds. Repeat x3
 - Isokinetic: Perform consecutive head lifts x30
- Indication: cryopharyngeal or UES dysfunction
- Target Muscle/Muscle Groups
 - Hyolaryngeal elevation - suprahyoid muscles: anterior belly of the digastric, mylohyoid, geniohyoid
 - Anteroposterior diameter and cross sectional area of UES opening
- Evidence
 - Positive long term effects
 - Improved strength of supra hyoid muscles
 - Increased UES opening
 - Improved strength and endurance
 - Greater thyrohyoid distance post exercise
 - Improved post swallow aspiration results

Antunes & Lunet, 2012

Let's Practice

1. Lie flat on your back.
 2. Lift your head and look at your toes (lift head only, do not raise shoulders).
 3. **Hold** this position (the goal is 60 seconds).
 4. Relax, lower head and rest one minute.
- *Perform steps 1 to 4 three times.**
5. Lift head up and lower head quickly 30 times (head only, do not raise shoulders).



Effortful Pitch Glide

- Description: Take a deep breath. Say "eeee" with effort moving from low to high pitch. Reach high squeal voice and sustain this effort for several seconds
- Indication: reduced hyolaryngeal approximation
- Target Muscle/Muscle Groups
 - Long pharyngeal muscles
 - Shorten and constrict the pharynx
 - Elevate the larynx
- Evidence
 - Greater muscle activation of supra hyoids and long pharyngeal muscles
 - Elevation of the larynx
 - Superior anterior movement of the hyoid
 - Shortening and widening of the supraglottic area

Miloro, Pearson, & Langmore, 2014

Let's Practice

1. Begin in a low pitch
2. Say "eeeeee"
3. Maintain as you slowly raise it to the highest pitch possible



Limitations

- Little to no evidence in people with dysphagia
- Little to no evidence in pediatrics
- Limited to no control trial



MBSS

Video Samples

PROGRESS

INPATIENT REHAB
3-6 MONTHS POST-ADMIT

- ADLs with supervision - Min A
- IADLs with Max - Total A
- Significant limitations in higher level cognitive skills
- Advanced solid foods
- Thin liquids with supervision
- MBSS

DISCHARGE TO HOME
4-6 MONTHS POST-ADMIT

- ADLs/IADLs with Supervision - set-up
- Limitations in higher level cognitive skills
- Regular Diet for Age
- Thin Liquids with supervision
- Plan to return to school
- Outpatient follow-up

Evidence-Based Practice



“By staying still and adjusting to signs in the world, the island comes to the wayfinder. This is a journey of **be-coming** not **be-going**”

- C. Spiller, H. Barclay-Kerr, J. Panoho

THANKS!

Do you have any questions?
jsakamoto@chla.usc.edu
cyoona@chla.usc.edu
chla.org

CREDITS: This presentation template was created by Slidesgo including icons by FLATIcon and infographics and images by Freepik and Pixabay.

- Abuzour, A.S., Lewis, P.J., Tully, M.P. Practice makes perfect: A systematic review of the expertise development of pharmacist and nurse independent prescribers in the United Kingdom. *Research in Social and Administrative Pharmacy*. 2018; 14; 6-17.
- Antunes EB, Lunet N. Effects of the head lift exercise on the swallow function: a systematic review. *Gerodontology*. 2012; 29:247-257. DOI: 10.1111/j.1741-2358.2012.00638.x.
- Ashford J., McCabe D., Wheeler-Hegland K., Frymark T., Mullen R., Musson N., Schooling T., Hammond CS. Evidence-based systematic review: Oropharyngeal dysphagia behavioral treatments. Part III – Impact of Dysphagia treatments on populations with neurological disorders. *Journal of Rehabilitation Research and Development*. 2019; 46(2); 195-204. DOI: 10.1682/JRRD.2008.08.0091.

- Barry H., Byrne S., Barrett E., Murphy KC., Cotter DR. Anti-N-methyl-D-aspartate receptor encephalitis: review of clinical presentation, diagnosis and treatment. *BJ Psych Bulletin*. 2015; 39:19-23.
- Bhat P, Ahmed A, Jolepalem P, Sittambalam C. A case report: anti-NMDA receptor encephalitis. *Journal of Community Hospital Internal Medicine Perspectives*. 2018; 8(3):158-160.
- Cho CS., Ramanan RA., Feldman MD. Defining the ideal qualities of mentorship: a qualitative analysis of the characteristics of outstanding mentors. *The American Journal of Medicine*. 2011; 124(5):453-458. DOI 10.1016/j.amjmed.2010.12.007.
- Ding H., Jian Z., Stary CM., Yi W., Xiong X. Molecular Pathogenesis of Anti-NMDAR Encephalitis. *BioMed Research International*. 2015; 2015:1-6.
- Dreyfus SE. The Five-Stage Model of Adult Skill Acquisition. *Bulletin of Schieffelin, Technology & Society*. 2004; 24(3): 177-181. DOI: 10.1177/0270467604264992.

REFERENCES

- Drulia TC., Ludlow CL. Relative Efficacy of Swallowing versus Non-swallowing tasks in dysphagia rehabilitation: Current Evidence and Future Directions. *Curr Phys Med Rehabil Rep.* 2013; 1:242-256. DOI 10.1007/s40141-013-0029-7.
- Ericsson KA. Deliberate practice and the acquisition and maintenance of expert performance in medicine and related domains. *Academic Medicine.* 2014; 79:S70-S81.
- Huckabee ML., Lamvik-Gozdzikowska K. Reconsidering rehabilitation for neurogenic dysphagia: strengthening skill in swallowing. *Current Physical Medicine and Rehabilitation Reports.* 2018. 6; 186-191. DOI: 10.1007/s40141-018-0193-x.
- Kashiwagi DT., Varkey, P., Cook DA. Mentoring Programs for Physicians in Academic Medicine: A Systematic Review. *Academic Medicine.* 2013; 88(7):1029-1037. DOI: 10.1097/ACM.0b012e318294f36.

REFERENCES

- Kulasegaram KM, Grierson LEM, Norman GR. The roles of deliberate practice and innate ability in developing expertise: evidence and implications. *Medical Education.* 2013; 47:979-989. DOI: 10.1111/medu.12260.
- Langmore SE., Pisegna JM. Efficacy of exercises to rehabilitation dysphagia: A critique of the literature. *International Journal of Speech-Language Pathology.* 2015; 17(3); 222-229. DOI: 10.3109/17549507.2015.1024171.
- Lazarus C. Mendelson Maneuver and Masako Maneuver. *Manual of Diagnostic and Therapeutic Techniques for Disorders of Deglutition.* 2013; 14; 269-280. DOI: 10.1007/978-1-4614-3779-6_14.
- Overholser JC. Clinical Expertise: A Preliminary Attempt to Clarify Its Core Elements. *Journal of Contemporary Psychotherapy.* 2010; 40:131-139. DOI 10.1007/s10879-009-9129-1.

REFERENCES

- Petty NJ., Scholes J., Ellis L. Master's level study: learning transitions toward clinical expertise in physiotherapy. *Physiotherapy.* 2011; 97:218-225.
- Pisegna, J., Langmore, S. The Efficacy of the Masako (Tongue-Hold) Maneuver: A Pilot Study. Poster presentation. Boston University. 2014.
- Woo HS., Won SY., Chang KY. Comparison of muscle activity between two adult groups according to the number of Shaker exercise. *Journal of Oral Rehabilitation.* 2014; 41; 409-415. DOI: 10.1111/joor.12165.