Objectives

- The participant will identify at least 3 treatment approaches that affect the underlying physiology of swallow.
- The participant will describe additional factors that affect decision making when working with older adults who have dysphagia.
- The participant will examine issues surrounding the end of life when treating older adults who have dysphagia.
- The participant will define informed consent and discuss how to apply it in case studies of older adults who have dysphagia.

Top 10 List Things NOT to do when providing Dysphagia Services

10. Fail to understand informed consent.
9. Fail to weigh the evidence when selecting the most appropriate approaches for your patient.
8. Write a goal stating “patient will consume 75% of ‘x’ diet at 3 meals per day.” or “patient will tolerate ‘x’ diet without s/s of aspiration 80% of the time.”
Things NOT to do when providing Dysphagia Services

7. Recommend NPO because the MBS noted aspiration.
6. Ignore other factors besides aspiration in making diet recommendations.
5. Spend two weeks observing the patient at mealtime.
4. Discharge the patient with complex instructions for follow up by caregivers.

Things NOT to do when providing Dysphagia Services

3. Change a diet based on a screening (without doing a physician-ordered evaluation).
2. Stop treating the patient because they are "non-compliant" with your diet recommendation.
1. Fail to treat the underlying physiological problem causing the dysphagia.

Your Questions

• What do you need from today’s presentation?
Do you know?

- How many times you swallow each day?
- You stop breathing when you swallow?
- How many pounds of food you eat in one year?
- How many gallons of saliva you produce during your life?

“There is no love sincerer than the love of food.”
George Bernard Shaw
### Assessment of Dysphagia: ICF Framework

- Normal and abnormal parameters of structures and functions affecting swallowing;
- Effects of swallowing impairments on the individual’s activities (capacity and performance in everyday contexts) and participation;
- Contextual factors that serve as barriers to or facilitators of successful swallowing and participation for individuals with swallowing impairments.
- Environmental and personal factors
- Preferred practice patterns for the profession of speech-language pathology 2004. Available at: [http://www.asha.org/docs/](http://www.asha.org/docs/)

### Components of Dysphagia Decision Making

#### Comprehensive Evaluation

- Clinical Bedside
- Instrumental Assessment
  - Determine prognosis, treatment goals, treatment plan

#### Consider Contextual Features

- Quality of Life
- Patient Preferences
  - Determine predicted outcome, impact of the plan

### Pre-Feeding Components of the Clinical Bedside Evaluation

- Medical History
- Nature of the Complaint
- Contributing Factors
- Complicating Factors
- S/S Dysphagia
- Respiratory Status
- Nutritional Status
- Medications
- Cognition
- Language
- Oral Mechanism Examination
- Cranial Nerve Functions
Cranial Nerve Functions

- Trigeminal (CN V)
  - Motor Innervation
    - Mastication
    - Hyolaryngeal Excursion
    - Tensing Velum
  - Sensory Innervation
    - Sensation from cheek and anterior 2/3 of the tongue (not taste)

Cranial Nerve Functions

- Facial Nerve (CN VII)
  - Motor Innervation
    - Lip Closure
    - Buccal Tone
    - Hyolaryngeal Excursion
  - Sensory Innervation
    - Taste from the anterior 2/3 of the tongue
    - Salivation

Cranial Nerve Functions

- Glossopharyngeal Nerve (CN IX)
  - Motor Innervation
    - Pharyngeal Constriction
    - Pharyngeal Shortening
  - Sensory Innervation
    - Taste and sensation for the posterior 1/3 of the tongue, velum, faucial arches, superior portion of the pharynx
Cranial Nerve Functions

- Vagus Nerve (CN X)
  - Motor Innervation
    - VP Closure
    - Tongue Base Retraction
    - Airway Closure
    - UES Closure and Opening
    - Esophageal Motility
  - Sensory Innervation
    - Posterior and inferior portions of the pharynx
    - Larynx
    - Esophagus

- Hypoglossal Nerve (CN XII)
  - Motor Innervation
    - Tongue Motility
    - Hyolaryngeal Elevation

Nutrition / Hydration Status

- Albumin
- Electrolytes
Functional Targets

- Lip Closure
- Hold Position / Tongue Control
- Bolus Preparation / Mastication
- Bolus Transport / Lingual Motion
- Initiation of Pharyngeal Swallow
- Epiglottic Movement
- Soft Palate Elevation and Retraction
- Laryngeal Vestibular Closure
- Laryngeal Elevation
- Height of Swallow
- Anterior Hyoid Excursion
- Pharyngeal Stripping Wave
- Pharyngeal Contraction
- PE Segment Opening
- Tongue Base Retraction
- Esophageal Clearance

Evidence-Based Interventions

- Lingual exercises including isometric tongue exercise (Robbins et al., 2005)
- Nutritional supplements including supplementation during and between meals and supplements of essential vitamins and minerals; protein supplements to maintain muscle mass; appetite stimulants (Hanson et al., 2011)
- Socialization at mealtimes; incorporating family-style meal times and company (Milne & Potter, 2006)
- Maintenance of adequate oral hygiene

Direct treatment affecting physiology

- Exercise
  - Resistance / strengthening
  - ROM
- Maneuvers
  - Use voluntary control to change specific physiologic components
Exercise

- Mouth Opening Exercise
  - Recommended for severe difficulty in opening the mouth
- Lip Closure Exercise
  - Recommended for reduced lip closure during swallow
- Lingual Resistance Exercise
  - Recommended for severely reduced range of motion and strength

Exercise

- ROM Activities
  - Recommended for reduced range of motion of lips, tongue, and/or jaw
- Lingual Coordination Exercise
  - Recommended for reduced coordination of anterior – posterior tongue movement to initiate swallow
- Oral Manipulation and Chewing Exercise
  - Recommended for reduced lateral tongue movement and reduced tongue coordination

Shaker Exercise

- Patients lie supine without a pillow under the head
- Raise head (keep shoulders flat) until you can see your toes (or touch chin to chest)
- Repeat 30 times in rapid succession
- Repeat 3 additional times, holding the lift position for 60 seconds on each lift then resting for 60 seconds between lifts
Effortful Swallow
- Instruct the patient
  - Swallow normally but “squeeze hard” with his or her muscles

Masako Maneuver
- Instruct the patient
  - Stick out your tongue and hold it forward between your front teeth as you swallow

Mendelsohn Maneuver
- Swallow normally several times and focus on laryngeal movement during the swallow
- Ask the patient whether he or she can feel the larynx lifting during the swallow
- When the larynx is fully lifted during the swallow, hold the larynx up using the muscles of the throat and do not let it drop for several seconds
- Monitor with fingers on thyroid cartilage
Supraglottic Swallow

- Instruct the patient:
  - To inhale and hold the breath at the top of the inhalation
  - To swallow while holding the breath
  - After the swallow, to cough to clear any residual material

Super Supraglottic Swallow

- In addition to the instructions from the supraglottic swallow, the patient has to increase the effort of the breath hold prior to the swallow.
- Instruct the patient
  - Tightly hold breath before, continuing through the swallow
  - Cough after completing the swallow

Compensations – Increased sensory input before or during the swallow

- Increased pressure with the spoon
- Bolus taste
- Bolus temperature
- Bolus volume
- Carbonation
- Thermal / Tactile Stimulation
Compensations – Changes in Presentation / Process

- Slower rate of presentation
- Altering food placement
- Manipulation of bolus volume
- Alternating solids and liquids
- Cough and clear
- Double swallow
- Reducing distractions

Compensations – Postural Changes

- Chin down
- Head rotation
- Head tilt

Diet Modification

- SLPs make recommendations for diet consistency modification based on the patient’s capabilities for responding to the characteristics of food or liquid.
Thickened Liquids

- Characteristics
- Benefits
- Risks

Treatment of Dysphagia in the ICF Framework: Beyond “tuck your chin”

- Physiologic approach is critical
  - (1) adequate nutrition and hydration,
  - (2) decreased risk of aspiration related illness,
  - (3) decreased choking risk...
  - This approach, although essential, is not sufficient to intervene globally with persons with dysphagia...
  - Must also... (4) decrease risk of psychosocial effects such as social isolation or depression in persons with dysphagia.” (Threats, 2007; p 330).

What guides our decision-making?

- Ethics
  - Ethics, morals & values
- Evidence
  - Why EBP?
- Professional codes
Evidence Based Practice

- Clinical Expertise
- Patient Preference
- Best Evidence

Current Best Evidence

- Clinical Decision Making

Clinical Expertise
Client Values

ASHA Resources

- ASHA policy documents
- ASHA EBP website
- Clinical trials and guidelines registry
- On-line tutorials
ASHA Principle I

“Individuals shall evaluate the effectiveness of services rendered and of products dispensed and they shall provide services or dispense products only when benefit can reasonably be expected.”


“The use of feeding tubes was associated with reduced survival rates in a study of 2,000 critically ill patients.”


575 were patients that had end stage liver disease
"The use of feeding tubes was associated with reduced survival rates in a study of 2,000 critically ill patients."

_Journal of the American Geriatrics Society (2000)_

But were these people already malnourished & therefore not fit to make most benefit from surgery?

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**Ethics**

- "Professional morals"?
- Formal system or rules
- Explicitly adopted by group
  - medical ethics
- Internally defined & adopted

_ChangingMinds.org (2008)_

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**Medical ethical principles**

- Autonomy
- Beneficence
- Nonmaleficence
- Justice
Autonomy

Respect another’s worth & right to make choices
- Accept that patient may choose not agree to our “best practice” idea
- Understand that patient may value eating a little with family despite risk of choking

Beneficence

Take positive action to do good for others AND act to prevent or remove harm
- Liaise with dietitian to optimize nutrition & hydration with an altered diet
- Assess patient’s swallow function comprehensively to identify physiological impairment

Nonmaleficence

Avoid causing harm
- Do not recommend surgical procedure that patient would be harmed by
- Do not recommend diet resulting in inadequate hydration
Justice

*Provide what patients need in fair & equitable manner*
- Consider cost of procedure
- Likely benefit to patient & to all patients?

Advance Directives

- A document that enables people to express their wishes about their health care in a form that will tell others how to care for them and to make decisions for them if and when the time comes that they are unable.
  - Living Will
  - Durable Power of Attorney for Health Care

Informed Consent

- The AMA defines informed consent as:
  "a process of communication between a patient and physician that results in the patient’s authorization or agreement to undergo a specific medical intervention."
Group Discussion

What if the family does not cooperate?

- Scenario A: The patient in an IRF is on a pureed diet and honey-thick liquids. He is doing well with treatment for his oral and pharyngeal phase deficits and the SLP is almost ready to advance his diet to mechanical soft and nectar-thick. His family members persistently bring his “favorites” – Big Mac, french fries, and a chocolate shake – despite expressing agreement to follow the prescribed diet.

- How should the SLP document about this?
- Should the SLP continue to treat this patient?
- What other documentation needs to be completed?

What if the patient refuses?

- Scenario B: Based on the clinical and instrumental assessments, the best judgment of the SLP leads to a recommendation for a pureed diet and nectar-thick liquids. The patient is aspirating thin liquids and regular textures of foods per the videofluoroscopic swallow study. The SLP goes to change the diet and the patient and family insist that there is no way the patient is willing to have pureed food or thickened liquids.

- What do you do now?
- What diet consistency should the SLP recommend to the physician?
- Should the SLP treat this patient?
### What if the person has dementia?

- Scenario C: The patient is aspirating on all consistencies of food and liquid per the instrumental assessment that was done in the hospital prior to admission to the SNF. Recommendation is made for NPO. The patient is 85 years old and suffers from mild to moderate dementia. Family members say they want the patient to “enjoy life”. He has a living will stating no artificial means of nutrition or hydration.
  - What do you do now?
  - What diet do you recommend?
  - Should the SLP treat this patient?

### What if the patient disagrees with the current plan?

- Scenario D: The patient is admitted to a SNF from the hospital, NPO with a g-tube. The patient and family express wishes that the patient be able to eat by mouth. This patient had a CVA 3 weeks ago and was made NPO after an instrumental assessment showed risk of penetration and/or aspiration on all food and liquid consistencies.
  - What are the next steps for the SLP in the SNF?

### What if the patient has negative outcomes?

- Scenario E: The patient is being cared for at home with a home health SLP visiting 2 times per week. After the 10th visit by the SLP, the patient is sent back to the hospital for suspected pneumonia. At home, the patient’s diet was chopped meat with thin liquids. Diagnoses include CHF, COPD, and Dementia.
  - What should happen to this patient in the hospital?
  - What should the home health SLP document?