KentuckyOne Health™

Speech Therapy Care in ALS

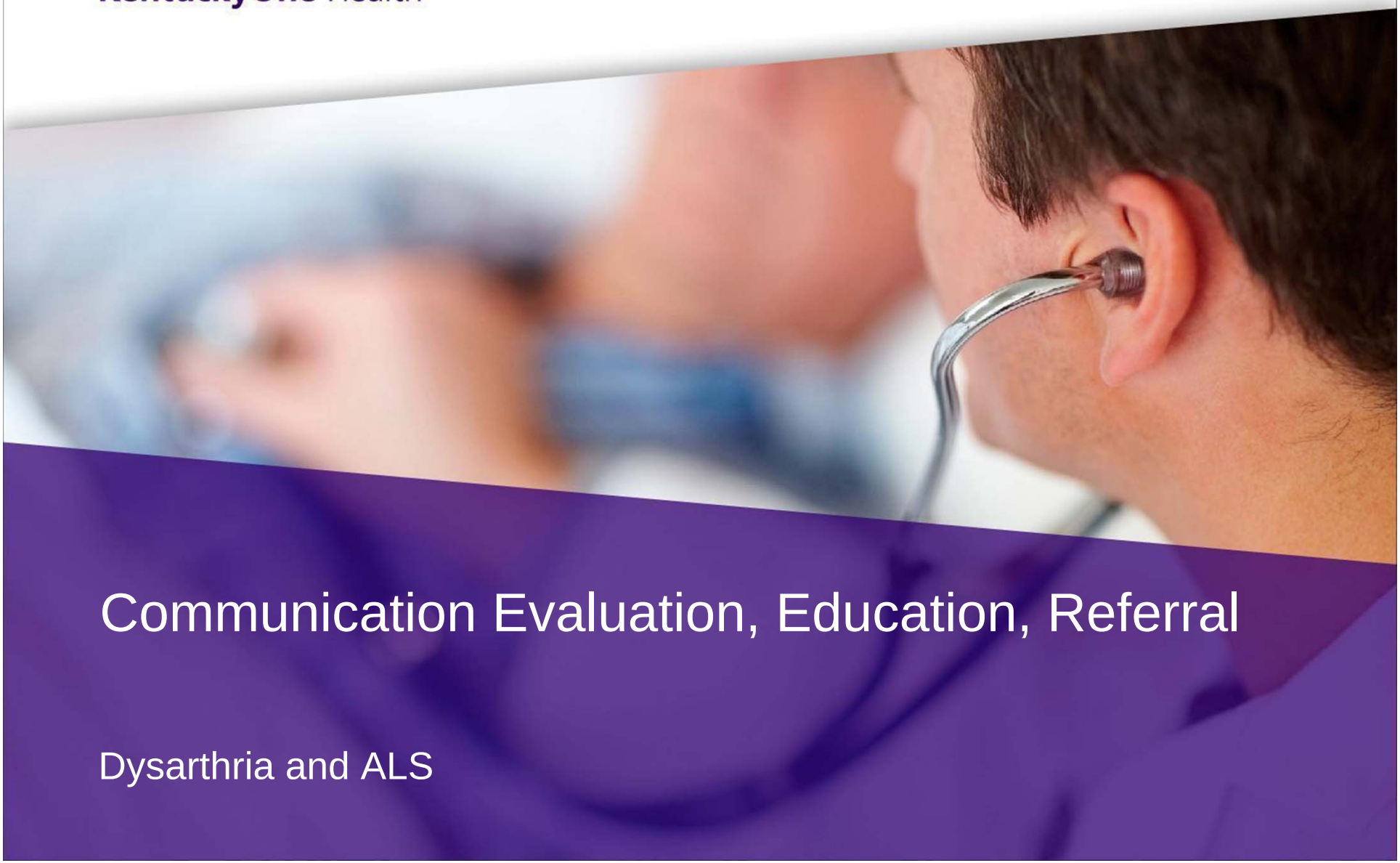
Brittney Skidmore, MS, CCC-SLP

- I have the **following relevant financial relationship(s)** in the products or services described, reviewed, evaluated or compared in this presentation.
- University of Louisville Office of Continuing Medical Education and Professional Development
  - Financial compensation for speaking
- Frazier Rehab Institute
  - Employee
- I have **no relevant nonfinancial relationship(s)** to disclose.

Role of SLP

- **Evaluate** speech, swallow, and – sometimes – cognitive function with consideration of diagnosis and progression.
- **Educate** patient/family/caregivers concerning appropriate compensations and tools to improve function, safety, and qualify of life.
- **Refer** as necessary for
  - Augmentative and Alternative Communication
  - Objective Swallow Assessment: VFSS, FEES
  - Neuropsychological Evaluation

KentuckyOne Health™



Communication Evaluation, Education, Referral

Dysarthria and ALS

Communication: Evaluate

- **Oral Mechanism Examination**
  - Consider for swallow screen as well
- **Intelligibility Rating**
  - Familiar versus unfamiliar listener
- **Rate of Speech**
  - Time the “Grandfather Passage”
- **Vocal Quality**
  - Informal conversational discourse

Communication: Evaluate

- **Mixed Spastic-Flaccid Dysarthria** characteristics:
  - defective articulation
  - slow laborious speech
  - imprecise consonant production
  - marked hypernasality with nasal emission of air during speech
  - harshness
  - strained/strangled voice (spastic dysphonia)
  - disruption of prosody

Communication: Evaluate

- **Mixed Spastic-Flaccid Dysarthria** characteristics:
  - decreased respiratory function leads to a weak voice
  - inappropriate vocal loudness for conversational utterances
  - abnormal vowel production
  - monopitch voice
  - short phrases, distorted vowels
  - monoloudness
  - ‘breathy’ voice quality

Communication: Evaluate

- Assess rate of speech by:
  - Have the patient read “the Grandfather Passage”
  - Time with stopwatch
  - Calculate wpm by dividing 7740 divided by time in seconds
- Provides measurement for comparison in follow-up
- Use for referral criteria

Communication: Evaluate

- Other clinically simple and useful tools include:
  - The ALS Severity Scale – Speech
  - ALSFRS-R, Appel scale
  - Norris Score
  - Charing Cross Quantative and Qualitative scales

Communication: Educate

- For **25-30%** of patients, dysarthria is a first or predominant sign in the early stage of ALS.
- Dysarthria is **8 times** more frequent than dysphagia to present as an initial s/s.
- Dysarthria impacts up to **70%** of patients with limb onset at a later date in disease progression.

Communication: Educate

- Voice and Message banking
  - **Before** speech changes or still mild dysarthria
  - **Refer** to AAC specialist as necessary
  - **Stress** the importance of preparation now versus later

- *Many patients do not see the significance of voice and message banking early on – especially if their speech/voice/respiratory function has not changed.*
- *This is when it is most important to remind them that they may never need this but when they do it will be available*

Communication: Educate

- Voice and Message banking
  - Modeltalker.org
  - Tobii Dynavox message banking system
  - VocaliD

Communication: Educate

- Remember to educate the patient that communication strategies are not to improve strength and coordination of speech but to

CONSERVE AND **COMPENSATE**

- Discuss and provide handouts concerning:
  - Dysarthria tips and tricks
  - Vocal hygiene and conservation
  - Augmentative and alternative communication options

Communication: Refer

- Refer for AAC when:
  - A patient is speaking at a rate of less than ~125 words per minute
    - A rate of 100 wpm indicates a moderate-severe progressive impairment.
    - The patient will require more than 1 minute 2 seconds to read the Grandfather Passage.
    - If the patient is close to this threshold and has demonstrated rapid regression since most recent visit, I also recommend referral.

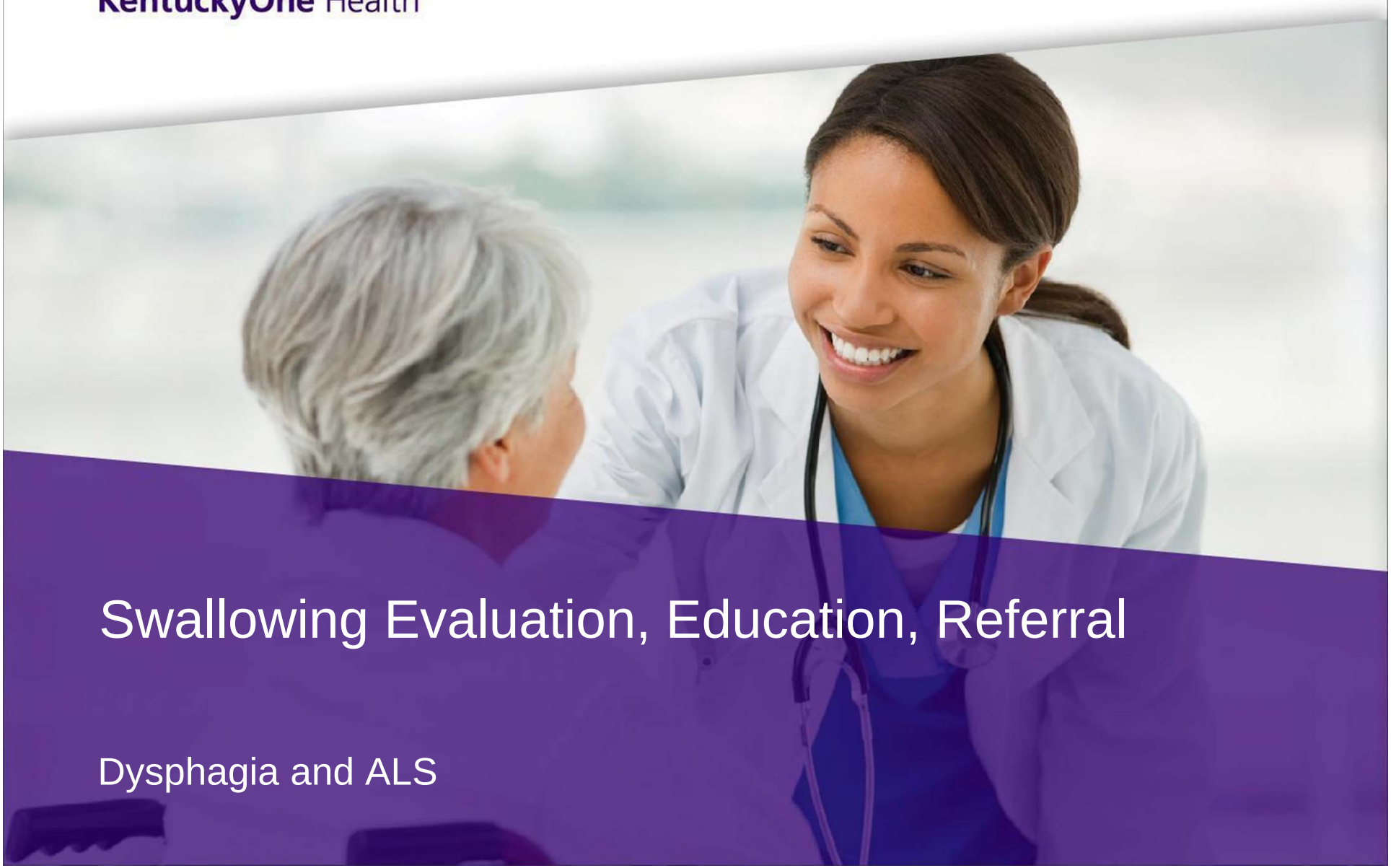
Communication: Refer

- Refer for AAC when:
  - The patient demonstrates a mild but declining dysarthria (75-90% intelligibility) with NO use of upper extremities.
  - The patient demonstrates a moderate dysarthria (50-75% intelligibility) with no and/or limited use of upper extremities.
  - The patient demonstrates a severe dysarthria (less than 50% intelligibility).

Communication: Refer

- REFER **AS SOON AS POSSIBLE**:
  - *The patient should be seen for an AAC assessment within the next three months to receive their device by the time they will need it.*

KentuckyOne Health™



Swallowing Evaluation, Education, Referral

Dysphagia and ALS

Swallow: Evaluate

- While every patient is different in their desire to maintain safety versus quality of life, it is significant to assess and educate the patient as necessary.
- EAT:10 Swallow Screening Tool
  - Score greater than 3 indicates the patient may have problems swallowing efficiently and safely
  - Max score is 40
- Clinical Feeding Evaluation
    - Water by cup and straw
    - Mixed consistency and dry solid

Swallow: Educate

- Provide education concerning the patient's swallow status, safety, and risk.
- Provide compensations and recommendations versus restrictions and orders.
- Your primary goal is the patient's primary goal:
  - Do they want to maintain safest swallow possible?
  - Do they want to maintain quality of life?
  - Are they somewhere in between?
- This information can be overwhelming so don't forget handouts!

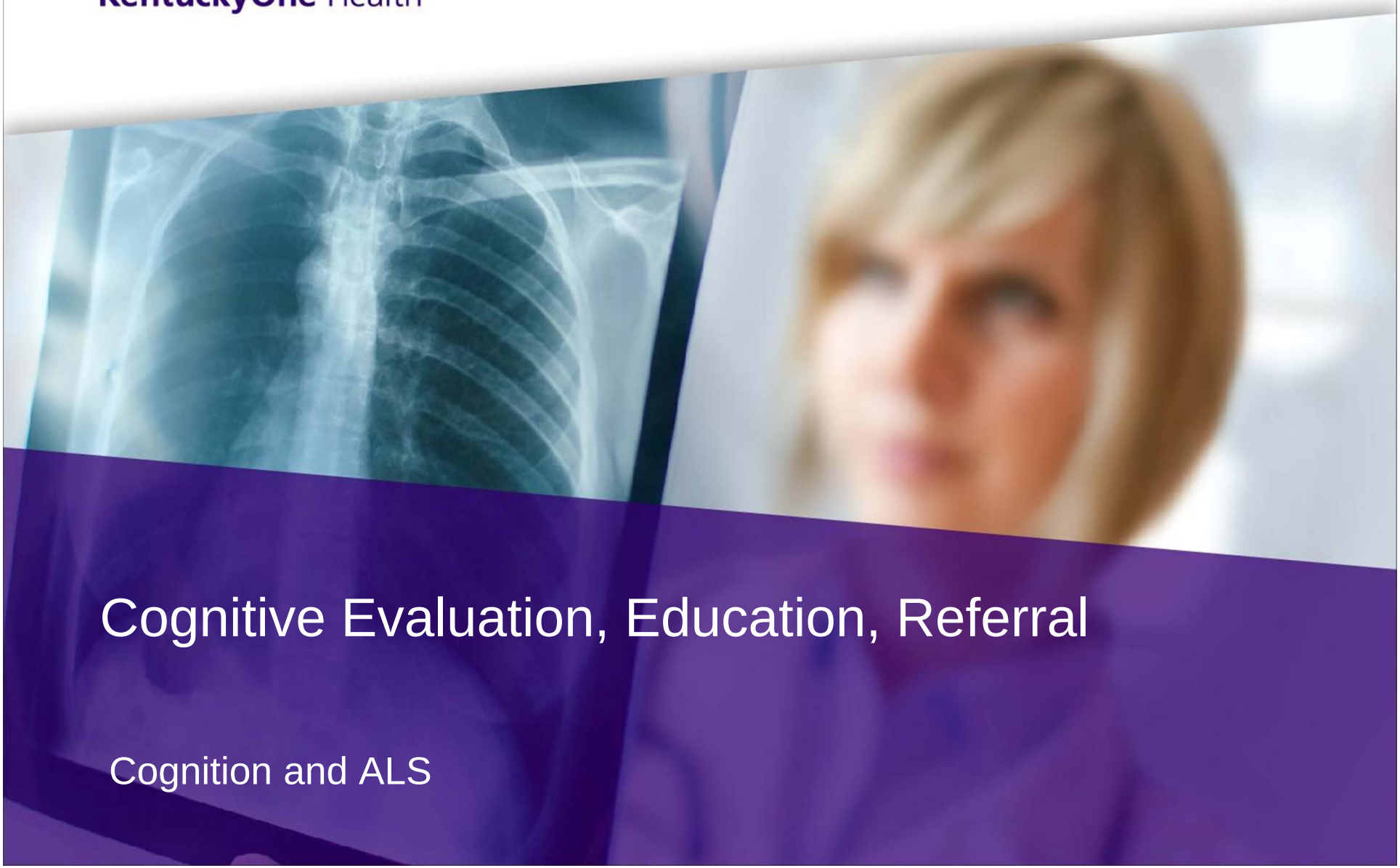
Swallow: Refer

- Request order for more objective measurement of swallow (VFSS, FEES) if…
  - Score is greater than 2 on EAT:10 *and/or*
  - Inconclusive signs/symptoms observed during clinical feeding evaluation
- Use your clinical judgment.
- Plan ahead: never forget this is progressive.
- Always remind the patient this is a *recommendation*
  - NOT a requirement

Swallow: Palliative Care

- Discussing **alternate means of nutrition** can be one of the most difficult conversations to have with a patient with a progressive illness.
- It is important to remember that the patient may need a PEG before they demonstrate a true dysphagia and/or their swallow function significantly declines secondary to **respiratory status**.
- Discuss with physician and pulmonary.

KentuckyOne Health™



Cognitive Evaluation, Education, Referral

Cognition and ALS

Cognition: Evaluate

- The primary **misconception** about ALS is that because it is a motor neuron disease, no cognitive impairment is observed.
- "… data confirm the presence of cognitive impairment in 50% of patients with ALS and particularly implicate executive dysfunction and mild memory decline in the disease process. More severe impairment occurs in a subset of patients with ALS and has features consistent with FTD (frontotemporal dementia)." (Ringholz, 2005)

Cognition: Evaluate

- ALS Cognitive Behavioral Screen
- Informal Observation
- Patient/Family/Caregiver Report

Cognition: Educate

- Tread lightly when educating a patient and family members about cognitive deficits.
- Depending on what informal observation and the ALS Cognitive Behavioral Screen reveal – education may be better received following extensive evaluation with neuropsychology.
- If appropriate, provide handouts concerning:
  - Frontotemporal dementia
- Remember…
  - Cognitive deficits can impact referrals for AAC.

Cognition: Refer

- Refer for neuropsychological evaluation
  - If the patient demonstrates deficits on ALS CBS
  - If the patient/family report concerns about safety
  - If you informally note concerns based on patient/family report and/or clinical observation
- Remember that this referral is also a *recommendation* for the patient – not a requirement.

References

- Tomik, Barbara, and Roberto J. Guiloff. “Dysarthria in Amyotrophic Lateral Sclerosis: A Review.” *Amyotrophic Lateral Sclerosis,* 2010; 11: 4-15.
- Rofes, L., and V. Arreola, R. Mukherjee, and P. Clave. “Sensitivity and Specificity of the Eating Assessment Tool and Volume-Viscosity Swallow Test for Clinical Evaluation of Oropharyngeal Dysphagia.” *Neurogastroenterology & Motility,* 2014; 26: 1256-1265.
- Cheney, Diane M., AB, and M. Tausif Siddiqui, MD, Juliana K. Litts, MA, SLP-CCC, Maggie A. Kuhn, MD, and Peter C. Pelafsky, MD, PhD. “The Ability of the 10-Item Eating Assessment Tool (EAT-10) to Predict Aspiration Risk in Persons with Dysphagia.” *Annals of Otology, Rhinology & Laryngology,* 2015, vol 124, 5: 351-354.

References

- Nordness, and Ball, Fager, and Beukalman. “Late AAC Assessment Patterns for Individuals with Amyotrophic Lateral Sclerosis.”
- Yorkston, K., Beukelman, D., & Tice, R. (1996). *Sentence Intelligibility Test*. Lincoln, NE: Institute for Rehabilitation Science and Engineering at Madonna Rehabilitation Hospital.
- Ball, L., Beukelman, D., & Pattee, G. (2002). Timing of speech deterioration in people with amyotrophic lateral sclerosis. *Journal of Medical Speech-Language Pathology*, 231–235.
- Ringholz, G., et al., *Prevalence and patterns of cognitive impairment in ALS*. Neurology, 2005. 65: p. 586-590.