Analyzing Patient Outcomes and SLP Perspectives to Prepare for the Onboarding of FEES

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Background

Fiberoptic Endoscopic Evaluation of Swallowing (FEES) and the Videofluoroscopic Swallow Study (VFSS) are performed by certified Speech-Language Pathologists (SLPs) to evaluate a patient's swallowing function and determine their risk for aspiration. FEES is performed by passing a flexible camera (endoscope) through the nose to obtain a clear view of the patient's throat. A VFSS is completed when food and liquids of various consistencies are mixed with barium and given to the patient to swallow via semi-continuous x-ray. Having access to both FEES and the VFSS is considered best practice and the "gold standard." It is at the clinician's discretion to determine which test, or both, is most appropriate for the patient. At Lehigh Valley Health Network (LVHN), clinicians are currently being trained to administer FEES to attain full staff competency.

Prior to this project, the department had little information available regarding SLPs' current practice patterns. It was hypothesized that not having sufficient access to swallow studies impacted patients' need for alternate forms of nutrition (DHT, NGT, PEG, G-tube, J-tube) and NPO (no food by mouth) recommendations. Therefore, the purpose of this project was to review the outcomes of patients who have been diagnosed with dysphagia, analyze SLPs' perspectives and their current understanding of FEES, and assess baseline practice patterns prior to the implementation of FEES.

Methods

This process improvement project was approved by the Advisory Board of Rehabilitation Innovation and Research.

Patient-Centered Data:

- Reviewed 274 charts of patients who were admitted to either LVHN-Cedar Crest or LVHN-Muhlenberg during May 2024 and received at least a bedside swallow evaluation from an SLP.

Clinician-Centered Data:

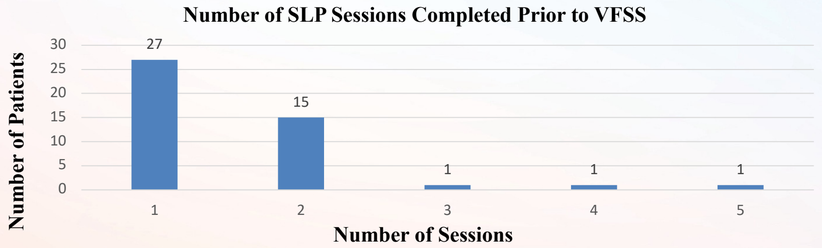
- A voluntary staff survey in May 2024 to all full-time and part-time acute care speech therapists at LVHN-Cedar Crest and LVHN-Muhlenberg.
- The results from the first survey were reviewed and a second survey was created to monitor ongoing trends in the reported comfortability of FEES utilization. This is projected to be administered within the next 6-12 months.

Patient-Centered Results

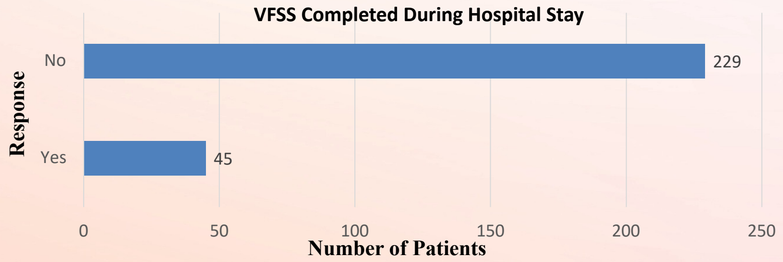
Patient Chart Results

A summary collected from the 274 patient chart reviews can be seen below:

- The patients' mean **length of stay** was 7.85 days (SD 5.77)
- **Thickened liquids** were used in 17.2% of initial evaluations
  - If recommended **without an instrumental**, thickened liquids were used an average of 3.14 days (SD 3.02)
- An average of 1.53 **SLP sessions** were completed prior to the recommendation of a **VFSS. Below is a breakdown of the number of sessions:**



A **VFSS was completed** during 16.4% of patient's hospital stays. **Below is a breakdown of the patients' stays:**



Below summarizes SLP's NPO and/or alternate feeding recommendations:

- Of the 45 patients who participated in a VFSS, 26.1% of patients were recommended to receive thickened liquids post swallow study
- 10.2% of patients were recommended to be NPO by the SLP
- 28.6% of patients utilized a DHT or NGT after SLP care was initiated
- The average length of time a patient used an alternative feeding tube was 9.13 days (SD 7.72)
- 4.8% of patients required a PEG, G-tube, or J-tube due to dysphagia

Clinician-Centered Results

Clinician Survey Results

- 90% of surveyed clinicians have completed a FEES course with ASHA CEUs (American Speech-Language Hearing Association Continuing Education Units)
  - 77.8% of clinicians participated in non-advanced courses
  - 55.6% of clinicians participated in a hybrid course

The following 6 Likert statements were determined to be of interest when reviewing staff surveys. **A summary of their responses can be seen below:**

Statement	Clinician Responses	
I understand the normal anatomy and physiology of the oropharyngeal swallow from a FEES view	1/10 strongly agree **5/10 agree**	3/10 are neutral 1/10 disagree
I know when a FEES vs VFSS is clinically indicated	3/10 strongly agree **4/10 are agree**	3/10 are neutral
I know the contraindications to performing both FEES and VFSS	**4/10 strongly agree** 2/10 agree	**4/10 are neutral**
I can differentiate between the boundaries of penetration and aspiration on a FEES	4/10 agree	**6/10 disagree**
I know what patient outcome measures we will be collecting on a FEES	1/10 strongly agree 1/10 agree	3/10 are neutral **5/10 disagree**
I feel prepared for the onboarding of FEES at LVHN	3/10 agree 3/10 disagree	**4/10 are neutral**

Conclusion

It was hypothesized that the inability to repeatedly expose patients to radiation during a VFSS could influence SLPs' timing/recommendation for VFSS and a patient's ability to consume food by mouth. However, it was found that only 16% received at least 1 swallow study. Therefore, other components may be impacting SLPs' practice patterns.

A retrospective IRB should be considered to further analyze the complexity of the patient population assessed. In addition, a qualitative approach should be considered to gather SLPs' perspectives on why swallow studies are infrequently completed. For the clinician survey, it is evident that there are varying levels of comfortability surrounding FEES and further in-depth education is needed for clinician success.

References

LVHN.org

Lehigh Valley Health Network