

# FIBEROPTIC ENDOSCOPIC EVALUATION OF SWALLOWING

## WHAT IS FEES?

Fiberoptic Endoscopic Evaluation of Swallowing (FEES) is a well established technique that has revolutionized the field of dysphagia diagnostics. FEES is a sensitive, accurate, portable, and safe examination that yields clinically useful information relative to swallowing physiology and swallowing safety.<sup>1</sup> The procedure involves passing a flexible endoscope across the floor of a patient's nasal passage into the pharynx so that the larynx, pharynx and upper esophageal opening are viewed directly from above. Then the patient is administered food or liquids mixed with food coloring in order to determine safe swallowing function and integrity. FEES can be done at the patient's bedside, in an office, intensive care unit or in a long-term care facility in under 20 minutes with regular food and liquids. Since there is absolutely no radiation administered the studies are able to be sustained for longer time intervals, allowing the clinicians the ability to tell if a patient's swallowing technique is impacted by fatigue.

## HOW LONG HAS FEES BEEN UTILIZED TO DIAGNOSE SWALLOWING DISORDERS?

Susan Langmore, Ph.D., and coworkers coined the term FEES in 1986 and published the first data demonstrating the effectiveness of the procedure in 1988.<sup>2</sup> It is also known by a few other names such as "video endoscopic evaluation of dysphagia" and "bedside endoscopic swallowing test". Typically this procedure falls within the scope of practice of speech-language pathology.

## WHAT OTHER OPTIONS EXIST TO DIAGNOSE SWALLOWING DISORDERS?

The Modified Barium Swallow Study (MBSS), also known as video-fluoroscopic swallow study, is a common, older procedure for the assessment of dysphagia. It is performed in the video-fluoroscopy suite in a hospital involving a radiologist, a radiology technologist and a speech-language pathologist. The patient must be seated in an upright position and fed barium coated food while being x-rayed. The MBSS study is time limited in order to reduce radiation exposure for the patient.<sup>3</sup> The time limitation doesn't allow for impact of fatigue on a patient's ability to swallow effectively. Food and liquid consistencies are simulated through the use of liquid barium and barium pastes.



Fiberoptic Endoscopic Evaluation  
of Swallowing  
(FEES)

Modified Barium Swallow Study  
(MBSS)

Contact us at 877.390.1887 to discuss your specific system requirements, pricing or to request a live product demonstration.



## HOW DOES FEES COMPARE WITH MBSS?

FEES has repeatedly demonstrated a sensitivity equal to or greater than MBSS in determining whether a patient is exhibiting penetration, aspiration, delay in swallowing initiation and pharyngeal residue.<sup>4,5,6</sup> Additionally, FEES provides visualizations of pharyngeal secretions that cannot be detected during MBSS.<sup>7</sup>

- FEES can be performed at the patient's location - no need to transport patients to fluoroscopy suite
- No need to coordinate time with radiology department schedule
- No radiation exposure with FEES
- No unpleasant barium-tainted food & no barium-associated constipation for patients
- No waiting to be cleared from isolation precautions
- FEES can be used with patients on mechanical ventilation
- Normal food is given to patients
- FEES can be performed while a patient is sitting upright or in bed
- FEES can be performed easily on morbidly obese patients as opposed to MBSS
- FEES can be given to medically complex patients who otherwise would not tolerate a trip to radiology<sup>8</sup>
- Physician does not have to be present during a FEES study
- NDÖVision FEES is shown in High Definition digital color as both a still and video
- The use of the term "gold standard" as applied to MBSS is no longer appropriate<sup>9</sup>
- Videotape recording of endoscopies objectively discovers and documents details that cannot be appreciated by the unaided eye in real-time<sup>10</sup>
- There may be cost advantages associated with FEES versus MBSS for the inpatient management of dysphagia<sup>11</sup>

## How CAN FEES IMPROVE PRODUCTIVITY?

	FEES	MBSS
SCHEDULING TIME REQUIRED	3- 5 business days	7-15 business days
TRANSPORTATION COSTS	\$0	\$500- \$2,000
CLINICAL COSTS (SLP, Radiology- MBSS, Supplies- MBSS, etc.)	\$425	\$300- \$1,200
Part A - SLP PRODUCTIVITY IMPACT (per patient)	+ \$ 440 to \$ 1,320	\$ 0 to (\$1,320)
Part B - SLP PRODUCTIVITY IMPACT (per patient)	+ \$ 313.04 to \$ 939.12	\$ 0 to (\$939.12)

### FOOTNOTES

Medicare part A patient	Increased productivity. 4-12 additional treatment days. CPT 92526 @ 30 additional treatment minutes per patient. RUG Rehab Very High increased to RUG Rehab Ultra High increases daily rate by approximately \$110 per day. \$440 to \$1320 per patient. Typical full time SLP initiates at least 10 new patients per month: \$4,400.00 to \$13,200 per SLP. Decrease demonstrates days not providing appropriate treatment to patients with dysphagia.
Medicare part B patient	Increased productivity. 4-12 additional treatment days. CPT 92526 @ \$78.26 is \$313.04 - \$939.12 per patient. Typical full time SLP initiates at least 10 new patients per month: \$3130.40 to 7826.00 per SLP. Decrease demonstrates days not providing appropriate treatment to patients with dysphagia.

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3 Page E. Understanding the Modified Barium Swallow Study. Radiographicceu.com. Article 23; March 14, 2006.

4 Wu CH, Hsiao TY, Chen JC, Chang YC, Lee SY. Evaluation of swallowing safety with fiberoptic endoscope: comparison with video-fluoroscopic technique. Laryngoscope 1997;107:396-401.

5 Leder SB, Sasaki CT, Burrell MI. Fiberoptic endoscopic evaluation of dysphagia to identify silent aspiration. Dysphagia 1998;13:19-21.

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9 Langmore S. Evaluation of oropharyngeal dysphagia: which diagnostic tool is superior? Current Opinion in Otolaryngology & Head and Neck Surgery, December 2003, 11:6.

10 Gallivan G. FEES/FEESST and videotape recording: There's more to this than meets the eye. Chest 2002 122:1513-1515.

11 Aviv JE, Sataloff, RT, Cohen, M, et al. Cost-effectiveness of two types of dysphagia care in head and neck cancer: a preliminary report. Ear Nose Throat J 2001;80:553-558.