The Implementation of a FEES program in a hospital setting

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UChicago Medicine:
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ISHA 60th Annual Convention
February 7, 2020
3:30-4:30pm
Disclosures

• I have nothing to disclose
Objectives

• Participants will be able to discuss both national guidelines and state of Illinois regulations for practicing FEES

• Participants will be able to describe the general process for developing a FEES program

• Participants will be able to identify suggested components to a FEES program including competencies, marketing and quality measures
Use of FEES in Illinois

• On the contrary to VFSS/MBS, FEES is not an instrumental assessment that is widely utilized in hospital settings in the State of Illinois, despite first data demonstrating the effectiveness of the procedure in 1988 (Langmore, Schatz, & Olsen, 1988)
  – Hospitals called/contacted in Chicagoland Area
  – Of those that responded:
    • Hospitals completing VFSS: 98%
    • Hospitals completing FEES: 16%
      – UChicago Medicine Ingalls Memorial, Swedish Covenant, Lutheran General, Rush University Medical Center, Rush Copley, Hines VA, UChicago Medicine Hyde Park, UIC, Loyola, Northwestern, Shirley Ryan Ability Lab, MarianJoy Rehab Hospital, Silver Cross Hospital*, Lurie’s Childrens
Why do we need FEES if we already have VFSS?

- Assess integrity of the larynx
- Visualize secretions
- FEES is portable
- Positioning problematic - contractures, neck halo, obese Bariatric Patients, positional limitations
- Transportation to Radiology risky; medically fragile patient, ICU
- Trach/vent population
- Biofeedback
- No need to schedule with radiology and transport
- Fewer staff needed for FEES contributing to cost savings
- Reducing VFSS scheduling allows more lucrative procedures to be done in radiology suite
- Time limits of VFSS
- NO radiation exposure
- Real food products
- Caregiver involvement and observation
Fundamental differences between FEES and VFSS/MBS

• According to Langmore (2001)

**Only FEES allows:**
- Direct view of surface anatomy
- Mucosal abnormalities (edema, erythema)
- Observation of effects of altered anatomy on bolus flow and airway protection
- Visualization of glottic closure
- Clear observation of the bolus path and location of the bolus within the hypopharynx

**Only VFSS/MBS allows:**
- Visualization of the bolus during the height of the swallow
- Analysis of both oral and esophageal phase
- Observation of completeness of BOT retraction, UES opening, and extent of aspiration
- View of submucosal changes (osteophytes, metal plates)
## VFSS vs. FEES

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<thead>
<tr>
<th></th>
<th>VFSS</th>
<th>FEES</th>
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<tbody>
<tr>
<td><strong>Length</strong></td>
<td>2-3 minutes, less than 5 minutes due to radiation exposure</td>
<td>Average ~10 minutes, no radiation</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>Radiology suite</td>
<td>Anywhere: patient bedside, clinic room, SLP office, etc</td>
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<tr>
<td><strong>View</strong></td>
<td>Lateral, A-P, submucosal, extent of aspiration and BOT retraction, bolus during swallow</td>
<td>Birdseye, direct view of anatomy, secretions, bolus location, glottis integrity</td>
</tr>
<tr>
<td><strong>Stages Examined</strong></td>
<td>Direct view of oral, pharyngeal and esophageal if sweep</td>
<td>Direct view of pharyngeal, inferences of oral and esophageal</td>
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<tr>
<td><strong>Contraindications</strong></td>
<td>Positioning/size limitations, suspected fatigue issues, unstable medical status, bariatric issues, radiation limitation, barium allergy</td>
<td>Unstable facial fractures/C-Spine, unstable medical status, severe bleeding disorder, severe agitation, obstruction of nasal passages</td>
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<tr>
<td><strong>Indications</strong></td>
<td>Suspected primary oral/esophageal dysphagia, scheduling availability, suspected submucosal abnormalities, refusal of FEES</td>
<td>Suspected pharyngeal dysphagia (especially residue issues), fatigue, positioning/obstructed fluoro view, cost, availability, ? Tolerance of secretions, anatomy, biofeedback, sensation issues</td>
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Competent, not certified

ASHA code of ethics states:
“Individuals shall engage in the provision of the professions that are within the scope of their competence, considering their level of education, training and experience.”
(American Speech-Language-Hearing Association, 2016)

According to ASHA regarding the use of flexible endoscopy:
“SLPs with appropriate training and competence in performing FEES are qualified to use this procedure independently for the purpose of assessing swallow function and related functions within the aerodigestive tract
“SLPs should be aware of state laws, facility policy, and third-party payer requirements related to the presence of a physician during FEES
(American Speech-Language-Hearing Association, n.d.)
State of Illinois Requirements

(225 ILCS 110/9.3) Requirements for the use of laryngoscopes
Section 9.3 (b) “A speech-language pathologist may use a flexible laryngoscope for the sole purpose for observing and obtaining images of the pharynx and larynx if all of the following requirements have been met”

1) SLP has observed 10 procedures performed by either a physician who has been granted hospital privileges or a speech pathologist who has completed (1, 2, 6) in a licensed health care facility, clinic affiliated at a hospital university, college or ASHA-approved CE course that has emergency back up and a physician available or in the office of a physician who is available

2) The SLP has successfully performed 25 procedures under the direct supervision of a physician who has been granted hospital privileges to perform or delegate a SLP who has met the requirements of the state. MD must provide written verification that SLP in training has met requirements demonstrating ability to perform procedures. SLP must have written paperwork on file

(State of Illinois, 2009)
State of Illinois Requirements (continued)

3) Procedure must take place under supervision and in a licensed health care facility etc. that has emergency back up

4) **pertains to voice; SLP must receive referral from MD to complete procedure due to voice disorder or vocal fold dysfunction

5) SLP must receive referral from MD to complete procedure due to swallowing disorder

6) SLP has completed a hands-on university course or hands-on seminar or workshop in endoscopy as a technique for investigating speech and swallow which qualifies for continuing education with ASHA

7) Report must be sent to referring physician with any additional findings/concerns that require further examination/attention

** Each institution may have additional requirements however State of Illinois criteria but be met at a minimum

(State of Illinois, 2009)
Getting Started: First steps

• No particular concrete order
• HOWEVER, please get approval for SLP department to perform procedure at your facility before purchasing equipment
• Do your homework!
• Be familiar with ASHA statement on FEES and State Regulations
• Get quotes from vendors, look at equipment options
• Speak with your Management and get their support
• Request to speak with Medical Executive Committee
• Find out who will support you (ENT, allowance of other FEES training company SLP, mobile FEES contractor, hire registry SLP who is deemed competent by State of Illinois requirements & get it in writing)
Departments Involved in the Implementation of FEES

- SLP
- ENT
- Medical Executive Committee
- Infection control
- Central processing/Sterile Processing Department
- Nursing
- Pharmacy
- CA
- Therapy Tech
- Dietary/Food and Nutrition Services
- Environmental services
- BIOMED
- Informatics
- IT
- Medical records/billing
- Purchasing
- Quality/Risk Management
Petitioning for FEES

State your case

– Provide leadership with indications and benefits of FEES
– Provide references and resources pertaining to the efficacy of FEES, Safety of FEES, and patient comfort
  • Patient Comfort: (Leder, Ross, Briskin, & Sasaki, 1997) (O’Dea et al., 2015) (Singh, Brockbank, & Todd, 1997)
– Provide examples of patients that would benefit from FEES
– Find physicians or other non-SLP leaders within institution who will be an ally
– Equipment demonstration if applicable(sales rep): can research ahead of time to determine, ease of use, image quality etc.
Cost analysis

- FEES is cost efficient
  - A large hospital in Canada introduced FEES and within 6 months $20,000 reduction in radiology costs, increased radiology access for other procedures, decreased time waiting for instrumental assessments, earlier discharge (Barrett & Bandur, 2014)

- Cost of Barium is HIGH

- Fewer staff needed for FEES contributing to cost savings
  - MBS/VFSS procedures involve additional resources/departments such as transport, nursing, radiology tech, radiologist

- FEES vs VFSS Medicare reimbursement
  - 92611 MBS/VFSS $94.55
  - 92612 FEES $203.55

  (American Speech-Language-Hearing Association, 2019)
Options for FEES equipment

Potential endoscopes (not limited to the following):

- KayPentax
- Olympus
- Storz
- NdoHD
- AMBU Disposable scope
Vendors and Equipment

- Get quotes from multiple vendors
- Talk to other institutions
- ASHA, DRS, FEES courses have numerous vendors with demos
- Investigate central processing options available at hospital and compatibility with FEES equipment
- Some equipment have bundles and will pay for SLPs to attend courses if their equipment is purchased
- How does each vendor offer updates and repairs? Offer loaners (and cost)?
- Compatibility with EMR and IT department (some FEES systems use MacBook while remainder of hospital uses PC/Windows)
- Consider ease of use, portability, customer service, image quality, software capabilities, FDA approved, warranty
- How many scopes will you start off with?
Options for Training

How will you be trained?
Who will be a mentor for supervision with patients after attending a FEES training course?
Does your vendor offer tuition assistance for CEU courses?
Based on State of Illinois requirements, must be ASHA approved CEU course (State of Illinois, 2009)

• FEES courses
  – Carolina FEES
  – Langmore Foundation
  – SA Swallowing Services (SASS)
Confirm Vendor

once finalizing decision on vendor
• Submit for Capital Equipment
• Get SLP/s trained
• Decide competency requirements of the facility
• Write policy and procedures
  – FEES procedure & Disinfection of Endoscope
• Infection control policy MUST follow recommendations of the manufacturer (involve infection control and get their approval for disinfection policy)
Infection Control & Disinfection of the Endoscope

- Get infection control department involved in the beginning and during writing of policy
- High level disinfection required! Not sterilization
- Manual vs. Central processing
  - Some equipment is approved for use with automatic re-processors other require manual soaks
  - Is there a re-processing machine that is available for SLP use?
  - Will central processing complete for you?
  - Investigate what GI or ENT does pertaining to disinfections of endoscopes
- How to transport scope to and from procedure?
  CLEAR markings of CLEAN vs DIRTY when transporting
  Typically all scopes recommend initial wipe down at completion of FEES procedure prior to transport (enzymatic cleaner/metri sponge)
Central processing vs. manual processing considerations

• Who will complete it?
• Rehab tech? SLP? Central processing?
  – Consider turn around time
  – Consideration: If sent to central processing, some turn around time is 24 hours. If there is only one scope, limited to 1 procedure a day
  – On average, manual processing of scope takes ~30 minutes
  – If done in department, can potentially do multiple procedures in a day if only one scope
If manual processing chosen:

- Where will it be completed?
- Ventilation needed (Disinfection Soak Stations)
- Check with endoscopy about their high level disinfection area
- Sink (clear markings to measure water)
  - Ideally stainless steel
  - Ideally multiple sinks if feasible
  - Counter space
- Eye Wash Station
  - According to infection control department at Ingalls Memorial hospital, max 55 feet away or a 10 second walk
- Who will be responsible for cleaning disinfection area including vent system, floor, sink etc.
If manual processing chosen:

– Chemicals needed (consistent with hospital, already in use)
– TEMPERATURES and EXPIRATIONS of chemicals used
– How long a scope can go BETWEEN disinfections without being used?
– KEEP MULTIPLE LOGS within department area where disinfection is taking place
– All staff completing disinfection must have completed competency record on file
<table>
<thead>
<tr>
<th>Date</th>
<th># of days since scope was last disinfected</th>
<th>Air Filter Expiration Date</th>
<th>Water Filter Expiration Date</th>
<th>Cidex Strip Expiration Date</th>
<th>Use strips Within 90 days of opening unless manufact. Expiration occurs sooner</th>
<th>PPE Gown, Gloves, eye wear initials</th>
<th>Date Solution Poured</th>
<th>Date Solution Expires</th>
<th>Temp of Cidex Before Use (minimum 20 degrees Celsius or 68 degrees Fahrenheit)</th>
<th>Dip-Stick Results Pass/fail</th>
<th>Pre-clean, rinsed, dried instruments yes/no</th>
<th>Final Rinse Sterile Water Yes/No</th>
<th>Time In</th>
<th>Time Out</th>
<th>Test When NEW Bottle Open 3 test Strips For OPA &amp; Control Solution Pass/Fail</th>
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FEES Considerations

– Will you use dye to color food/liquid?
  • Food coloring (white, green, blue)
  • prepackaged, pre-measured by pharmacy
  • PhageinBlue
  • Expiration and infection control considerations

– Who will help you with procedure?
  • 2 SLPs, SLP and rehab aide, SLP and SLP student (if applicable), nursing staff, ENT, etc.

– Where will the endoscope be stored?
  • Hang vertically
  • Secured/locked location
Use of Topical Anesthetic

• Will you use anesthesia?
• Can be used but not required
• Studies show no significant differences in patient comfort level regardless of the use of anesthesia
  – (Leder, Ross, Briskin, & Sasaki, 1997)
  – (Singh, Brockbank & Todd, 1997)
  – (O’dea et al., 2015)
• Instead may use lubrication, explain and re-assure during procedure to make patients more comfortable, breathing techniques
• If you want to have option to use, get permission from MD, have it built into order; get permission from pharmacy, written into policy (Similar to SLP providing barium)
  – Watch dosage and clear with pharmacy
  – If facility will not allow SLP to administer, RN can do for you
Charting, Orders & Billing

• Meet with informatics and build evaluation forms into EMR
• Build an order set for procedure
  – Will MD order procedure or will there be standing orders for SLP?
  – Built in orders for lidocaine/afrin included in FEES order
    – “SLP may perform Videofluoroscopic Swallow Study and/or Fiberoptic Endoscopic Evaluation of Swallow (administer oxymetazoline hydrochloride and/or topical lidocaine 2% jelly as needed) as clinically indicated”
• Billing codes for procedure (medical records/billing)
Facility Specific Competencies

• Minimally must meet requirements of State of Illinois to be deemed competent
• Other facility specific competencies repeated yearly or otherwise determined by facility
• Examples of Yearly Competencies
  – ID elements of comprehensive FEES exam
  – Operate, maintain and disinfect equipment needed for FEES exam
  – Use results to make appropriate referrals and recommendations

KEEP A COPY OF ALL COMPLETED COMPETENCIES ON FILE AND UP TO DATE
Staff Education

• Get other staff on board
• Familiarize other staff with procedure
• Invite RNs and MDs to observe procedure at bedside
Marketing

• Contact your hospital marketing Department
• Send information to all email users
• Include article in hospital newsletter regarding launch of program
• Include information on hospital/department website
Quality Measures

Quality/Risk Management Department may require monitoring of quality measures for new procedures

• Quality Measures for FEES at UChicago Ingalls Memorial:
  1) Documentation of Verbal Consent
  2) Negative Outcomes
  3) Need for multiple instrumentals
  4) Turn around time to complete procedure once ordered/recommended
Final thoughts & Suggestions

• This can be a lengthy process not without various challenges
• Be patient
• Be open to suggestions and negotiate with medical team in order to get program off the ground
• Consider listening to Swallow Your Pride Podcast Episode 18 featuring Selena Reese M.S. CCC-SLP, BCS-S
• Use other institutions already practicing FEES as resources
• BE SURE TO HAVE APPROVAL AND SUPPORT
Contact Information

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References


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