University Hospitals of Derby and Burton
NHS Foundation Trust

Standard Operating Procedure

The operating procedure set out below must comply with the Data Quality Principles set out within Trust Data Quality Policy

Title:	**FIBREOPTIC ENDOSCOPIC EVALUATION OF SWALLOWING (FEES)**
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		Date
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SOP Document Controls:

Version Number	Date	Author	Reason for Revision
1.0.0	July 2024	Katy Young	New to Koha

Contents

1. Introduction

The Royal College of Speech and Language Therapists (RCSLT) recognise that Fibreoptic Endoscopic Evaluation of Swallowing (FEES) is within the scope of practice for SLTs. FEES is a SLT-led instrumental assessment and performed as part of multidisciplinary dysphagia management. FEES enables:

- understanding of dysphagia aetiology, severity and prognosis
- management decisions e.g. safety of oral feeding, or need for tube feeding
- dysphagia management evaluation e.g. therapeutic strategies and biofeedback.

FEES is an important aspect of SLT instrumental assessment and management of patients with dysphagia. It should be preceded by a clinical swallowing assessment to determine dysphagia hypothesis, clinical indications and questions, clinical appropriateness and safety. Another instrumental assessment available at UHDB is Videofluoroscopy (UHDB Guidelines for Videofluoroscopy Examination) which uses a different visualisation modality to FEES. Some patients will benefit from both procedures, guided by clinical indications.

2. Purpose

This document describes procedures to support adherence to the RCSLT Position Paper: Fibreoptic Endoscopic Evaluation of Swallowing, 2020. UHDB SLT Department offers FEES clinics for Head and Neck and benign ENT /OMF adult patient populations with varying scopes of practice.

The objective of the SOP is to:

- ensure a safe and consistent delivery of the FEES service
- safeguard patient and staff safety
- provide a framework for service audit

3. Scope

Clinical Staff

4. Abbreviations and Definitions

FEES is defined as assessment of swallowing where a flexible endoscope is inserted via the nose to visualise the naso-/oro- and laryngopharyngeal structures, secretions, sensory response and pharyngeal swallow function on saliva and boluses such as food, liquids or tablet medication.

SLT	*Speech and Language Therapy/Therapist*
ENT	*Ear Nose and Throat*
AP	Advanced Practitioner

5. Responsibilities

FEES Clinic (Suite 5)

Roles	**Responsibilities**
AP SLT	Responsible for general organisation of the FEES service, audit and service review. Flag new pathology to ENT on day of procedure for ENT review or reassurance as appropriate Oversee SLT FEES triage decision-making and audit Leads FEES session as endoscopist / assessor Reports joint findings Carries out regular audit Checks FEES equipment and endoscope are fully functioning and contact DP Medical for service and management Clinic set up Monitor consumables and arrange order to restock
Specialist SLT FEES	Responsible for day-to-day organisation of FEES Clinic Clinic set up Can lead FEES session as endoscopist / assessor Triages referrals with AP SLT Flag new pathology to ENT on day of procedure for ENT review or reassurance as appropriate Reports joint findings Carries out regular audit Checks FEES equipment and endoscope are fully functioning

	and contact DP Medical for service and inform management Prepare and clear away food and drink trials Access to lubricating gel, food dye and local anaesthetic
Treating SLT	Refers the patient to Videofluoroscopy / FEES Clinic Completes relevant pre and post FEES assessment and outcome measures including patient reported outcome measure Actively manages the patient May be the same / different to SLT FEES / AP SLT Communicates findings of report to patient Supports AP & Specialist SLT FEES Takes written consent Supports patient pre/peri/post FEES

6. Procedure

REFERRAL CRITERIA AND PROCESS

Referral

SLTs working with patients with dysphagia will refer patients using a referral form into a FEES clinic based on the referral criteria and indications for FEES below. Where a referring SLT will not be undertaking the FEES themselves, they should notify the SLT undertaking FEES of the reason for referral on the referral form (Appendix A).

Referral Criteria

- Can be safely positioned in a sitting or standing position
- Patient has consented to the referral

A patient will be identified for FEES by the treating SLT, either individually or as a part of multidisciplinary team management / discussion. The reason or aim for the FEES procedure must be concurrent with those outlined in Referral for Instrumental Evaluation of Swallowing.

FEES Indications

SLT's may carry out FEES where there is a clinical need to:

- assess ability to swallow real foods and fluids and / or with medications such as tablets
- provide conservative assessment for e.g. aphagic patients, patients at extremely high aspiration risk or with fragile respiratory status
- assess velopharyngeal sphincter and nasal regurgitation
- assess secretion management and sensory functions within larynx and pharynx
- identify laryngeal and pharyngeal impairments which impact swallowing, including the effect of laryngopharyngeal residue
- identify the impact of swallow fatigue over time which may not be possible within the limits of videofluoroscopy examination
- identify penetration, aspiration and airway protection
- confirm diagnosis of suspected dysphagia in the context of multidisciplinary assessment
- identify specific swallow physiology impairment, severity and functional impact on swallow safety and efficiency. This guides the choice of swallow rehabilitation strategies / exercises; adaptation of diet and fluid consistencies, or compensatory strategies
- determine changes to impairment, severity and swallow function after swallow rehabilitation or deterioration due to e.g. medical/physical condition, surgery or oncological treatment
- provide biofeedback and education for patient and carer to support decision making and / or assist compliance with recommendations without risk of radiation exposure

FEES Risk and Contraindications

The suitability and safety of FEES should be assessed on an individual patient basis with careful consideration of the risks and benefits, paying particular attention to the need for medical assistance for high-risk patients.

FEES is a minimally invasive procedure which carries some risks to the patient and therefore needs to be performed in a safe environment, in an appropriate clinical setting with suitable equipment and two appropriately trained personnel. FEES examinations where contraindications are present should only occur within the SLT competency at Level 3 (Expert FEES Practitioner) associated with training and management of specific patient populations as stipulated in RCSLT FEES (Level 3 – Section 6). Should FEES be considered in the future with high-risk and vulnerable populations then the Fibreoptic Endoscopic Evaluation of Swallowing (FEES) Suitability and Safety Checklist should be used (Appendix B).

High risk and vulnerable patient populations

When considering FEES, the SLT must always consider possible contraindications and risks of the procedure. The rationale for proceeding with an 'at-risk' patient and the risks versus benefits should be documented in the patient record. Failure to do so may constitute a breach of acceptable professional conduct.

When considering FEES for high-risk and vulnerable patients, a discussion should occur with the medical / surgical team and AP/ Lead SLT FEES prior to the referral. The rationale for proceeding with an 'at-risk' patient and the risks versus benefits of the procedure should be documented in the patient record.

An ENT surgeon should be consulted with these patients prior to proceeding and the timing of FEES discussed if a decision is made to proceed. ENT should be present for the FEES as these patients present technical scoping challenges and risk of harm. It may be appropriate to consult Oral and Maxillofacial surgeons in certain cases.

Possible contraindications for FEES due to scoping risks include the following:

- skull base / facial surgery or fracture within the last six weeks
- facial / nasal trauma including recent surgery within the last six weeks
- sino-nasal and anterior skull base tumours / surgery
- nasopharyngeal stenosis
- craniofacial abnormalities
- major or life-threatening epistaxis within the last six weeks
- laryngectomy within the last two weeks
- choanal atresia
- hereditary haemorrhagic telangiectasia

Proceed with caution with the following high-risk patients:

- limited pharyngeal / laryngeal space
- significant airway limitation due to large volume disease e.g. cancer
- severe movement disorder / agitation
- vasovagal history
- bleeding risks
- positioning limitations
- The SLT should consult the appropriate physician prior to proceeding and request their presence if deemed necessary for safe practice.

FEES will currently NOT be carried out on patients with contraindications or described as falling within the high-risk category described above, or who:

- are medically unstable
- have low / variable consciousness
- have positioning problems that limit equipment set-up
- have difficulty co-operating with procedure
- display extreme distress at the prospect of the procedure

- are nil by mouth (for reasons other than dysphagia)
- have a requirement of invasive or non-invasive ventilation
- have symptoms of Covid-19

TRIAGE AND CLINIC BOOKING

Managing Referrals

If the referral is deemed appropriate, the Treating SLT should discuss the referral with the patient, family (if appropriate) and medical team to ensure all understand

- the need for the investigation
- potential for risk
- provide consent for the referral either directly or through best interest discussions

Triage and Clinic Booking

The treating SLT will complete an entry in the patients medical notes if an inpatient and input onto SystmOne for all patrients for instrumental assessment (dysphagia) which guides SLT decision-making regarding patient suitability for videofluoroscopy or FEES. The patient will be added to the Awaiting Appointment Caseload on System One. Triage and booking of the clinic is the responsibility of the SLT FEES AP & Specialist. AP SLT FEES will ensure that two FEES competent SLTs will be available.

Triage: Maximum of 3 patients per clinic prioritised based on clinical need. Once prioritised, appointments should be booked on SystmOne, documentation completed and treating SLT informed Lorenzo for out patients	**AP & Specilaist SLT FEES** **Admin**

Booking the clinic: As soon as prioritisation is completed inform treating SLTs about planned FEES clinic or alternative plan. For outpatients, contact the patient by telephone to confirm attendance, followed up with a letter and patient information leaflet outlining clinic time and location.	**Specialist & AP SLT FEES** **Admin**

PATIENT ENVIRONMENT

Room set up and Equipment

FEES should be performed in an appropriate medical setting e.g. ENT/SLT outpatients, with specialist endoscopic imaging equipment. Access to appropriately

trained medical and nursing staff, decontamination and emergency/resuscitation equipment is essential. It should be performed in a multidisciplinary environment and always with team agreement about reasons for the endoscopic procedure.

FEES is an invasive procedure and therefore may be performed in line with UHDB policies on invasive procedures and nasendoscopy, with suitably trained supporting healthcare professional present in the clinic room e.g. SLT. Scopes will be cleaned and swabbed according to UHBD SOP: use of ENT Nasopharyngoscopes compatible with the Voice Clinic stack usually or Ambu Care and appropriately stored by ENT nursing staff in the scope cases or disposed of correctly.

There must be immediate access to other suitably qualified practitioners in case of unforeseen circumstances or emergency (e.g. tissue trauma, epistaxis, vasovagal episode). In common with other invasive procedures, arrangements are in place to ensure that the FEES procedure is safe for attending patients. Therefore, it is essential that there is immediate access to emergency trained personnel e.g. crash team and fully operational equipment.

Personal Protective Equipment (PPE)

Appropriate protective equipment should be used, in accordance with Public Health England and local guidance. Minimally during Covid-19 outbreak PPE should include FFP3 face masks, eye protection, apron and gloves.

Positioning

Patients will sit upright in a suitable examination chair in SLT or ENT Outpatients. There will be adequate space around the patient for staff and the endoscope stack with access to an electrical socket.

FEES PROCEDURE

FEES Assessment

The flexible endoscope is passed trans-nasally to the hypopharynx where the larynx and pharynx are viewed. The scope tip is positioned slightly above the epiglottis but can be moved closer to the vocal folds for more detailed visualisation. Supra-glottic structures and velo-pharyngeal function are assessed by withdrawing the endoscope into the nasopharynx.

Laryngopharyngeal structure and swallow function are assessed during speech and non-speech tasks and on swallowing saliva. Swallowing may be further assessed using different textures and sizes of food and liquid dyed with food colouring to enable visualisation on the monitor. Varying postures or safe swallow manoeuvres may be trialled. If, during the assessment procedure, the SLT becomes aware of any anatomical or physiological abnormality not already mentioned in the referral, the opinion of ENT will be requested on the same day by email with a copy to ENT Clinical Administrative Officers and text to Surgical Outpatients Matron baton phone. The FEES assessment protocol will be followed (Appendix C).

The professional undertaking this aspect of the FEES examination must be skilled in interpreting the image, understanding physiology and knowing the types of manoeuvres that might elicit the desired changes in behaviour. Advantages of FEES include excellent images of the vocal folds and velopharyngeal structures during swallowing and the use of real food. Disadvantages of FEES include nasal discomfort and triggering the gag reflex. In some instances, topical nasal anaesthesia may be administered in line with UHDB ENT practice.

FEES Complications

FEES is a safe procedure when performed by appropriately trained personnel in a safe environment. There are possible complications outlined below:

- *Patient discomfort*
  Although quite common, discomfort should be mild if the procedure is administered competently.
- *Epistaxis*
  Nose bleeds are unusual despite FEES being performed on many patients on anticoagulant medications
- *Vasovagal response*
  This is unusual and may be related to very high levels of anxiety. Exercise caution if the patient has a history of fainting.
- *Reflex syncope*
  Fainting can occur as a result of direct vigorous stimulation of the nasal/pharyngeal/laryngeal mucosa during endotracheal intubation. The type of stimulation occurring for FEES is much less forceful hence this complication is rare. However, caution must be exercised in patients with unstable cardiac conditions for whom reflex syncope would result in further risk
- *Allergy to topical anaesthesia*
- *Laryngospasm*
  This is unlikely if the nasendoscope is adequately distanced from the larynx
- *Gagging and/or vomiting*

Patient and Carer Information

Patients must be fully informed about the FEES procedure prior to the examination. Consideration should be given to providing information in accessible spoken, written and/or visual formats, including the nature, purpose and likely effects of the examination. Patients will have received relevant Patient Information Leaflets from their Treating SLT (Appendix D, E)

Consent

Consent to a procedure is subject to legal requirements and may be subject to local variations in practice. In most NHS trusts/ Health Boards, it is routine practice to obtain verbal consent prior to FEES rather than written consent. This is in line with UHDB ENT practice.

The treating SLT should support patients with communication and cognitive deficits to engage in discussion using appropriate support materials. If there are doubts as to the patient's capacity to consent to the procedure, the principles of the Mental Capacity Act should be followed, this may include a discussion with the team to make decision in the patient's best interests. The discussion and decision should be documented in SystmOne and the healthcare record. The patient or team can decline the procedure and the reasons and possible risks should be documented, with any alternative plan.

Written consent will also be gained for storage and use of audio-visual materials as per UHDB Patient consent to use of Audio / Visual records.

Image Interpretation and Reporting

Interpretation should be done within a multidisciplinary clinical context, accounting for all aspects of the patient's presentation.

Image interpretation may be influenced by the following factors

- image quality (e.g. flaring / de-misting / use of disposable sheaths)
- quality of the camera equipment
- skill / competency of the endoscopist
- single versus 'team' rating
- availability of slow-motion playback facility on recording equipment.
- Images should be recorded with simultaneous high quality audio input.

All SLTs who report FEES should be aware of reporting software and how to embed clinical photos and process for seeking ENT opinion. Technical issues must be

reported and fixed prior to further clinics. If these issues persist and the FEES service is affected, this must be reported using the DATIX system.
Reports are to be completed on the Trust template (Appendix C) and uploaded to SystmOne. Outpatient reports should be sent on the day of completion to the patient and relevant others (e.g. Consultant / GP).

TRAINING REQUIREMENTS

FEES is an invasive procedure which some risks to the patient. To perform FEES, SLT's must complete training which encompasses passing the flexible endoscope and interpretation of laryngo-pharyngeal anatomy/physiology at rest and during swallowing. Due to the minimally invasive nature and potential risk of choking, SLTs performing FEES must undergo regular training in basic life support and CPR.

RCSLT FEES competency framework and training log describes four levels of competency:

- Level 1 - training SLT
- Level 2A and Level 2B - developmental progressions
- Level 3 - expert practitioner

Each SLT is responsible for maintaining a log of learning and activity. Level 3 SLTs must be fully competent in Endoscopist and Assessor roles as they will act in both roles. Achieving both roles may be governed by training timelines or staffing constraints. Once competency is achieved, SLTs take individual professional responsibility for achieving the appropriate level of training and competency maintenance. SLTs will be subject to regular audit as per standard clinical governance procedures. SLT competencies will be monitored and reviewed according to local policy. Competency will be maintained through regular involvement in clinics, CPD and audit monitored by the AP SLT and Specilaist SLT FEES. Opportunities for continuing professional development will be incorporated at annual appraisal.

The level of knowledge and skills required is dependent on the type of clinic in which the SLT is required to work. Training is currently provided by Level 3 SLT Clinical Lead fo the Head and Neck / Voice SLT Service who is responsible for directing learning, monitoring progress and competency sign-off.

HEALTH, SAFETY AND DATA PROTECTION

Care of substances hazardous to health and control of infection

All staff involved in FEES are responsible for full awareness of health and safety

issues and adhere to national and local policies. This includes care and disposal of substances and consumables hazardous to health (COSHH) as advised by UHDB infection control policy. Staff will adhere to Universal Precautions (Blood Body and Fluid 1984) and UHDB policies on cleaning scopes and isolation precautions.

Topical anaesthesia

Topical anaesthetics (nasal and oropharynx) and nasal decongestants may be used only when patients are intolerant of scope insertion. Staff will know the indications, contra-indications and possible drug interactions with their use, dosage and side-effects. SLTs administer topical anaesthesia and nasal decongestion under UHDB Patient Group Directives: Lidocaine 10mg (10%) spray and 5% Lidocaine in 0.5% phenylephrine HCL spray.

Immediate life support, risk management and incident reporting

Staff will carry out annual basic life support and CPR training and know how to handle an emergency e.g. vaso-vagal response, epistaxis and hyperventilation. Staff will know how to minimise possible risks of passing the endoscope and adverse reactions to topical anaesthesia / nasal decongestants. If an adverse reaction occurs, staff must follow UHDB incident reporting procedures.

AUDIT AND COMPLIANCE

Audits for compliance with key criteria from the FEES SOP will be completed regularly by Lead SLT FEES and overseen by AP SLT. This will include consent and Datix. Additional ad-hoc audits and service evaluations will be completed to evaluate clinical activity and impact. This may include service feedback from patients and other stakeholders to support service improvements.

If ongoing failure against the audit criteria is identified, an investigation will take place to determine whether this is a person / process issue. All individuals involved in any aspect of the FEES service are required to be familiar with the FEES SOP and fulfil their respective responsibilities. Any investigation will be carried out by the Head of Service.

7. Information Governance

Data security and protection

Storage and retrieval of images are subject to legal requirements as interpreted at UHDB. Whilst waiting for endoscopy stack to be networked centrally by UHDB IT, assessment data is stored on the endoscopy stack. A number of video and photographic images are currently transferred from the endoscopy stack to the Trust network via an encrypted data stick. This enables data access for reporting or supervision purposes.

8. References and Associated/Linked Documents

REFERENCES / RELATED DOCUMENTS

Guidelines for Videofluoroscopy Examination (Integrated Care, UHDB)

Wallace S, McLaughlin C, Clayton J, Coffey M, Ellis J, Haag R, Howard A, Marks H, Zorko R. Fibreoptic Endoscopic evaluation of Swallowing (FEES): The role of speech and language therapy. London: Royal College of Speech and Language Therapists (RCSLT) Position paper. 2020 https://www.rcslt.org/wp-content/uploads/2020/06/2505_FEES_position_paper_update.pdf

Speech and language therapist-led endoscopic procedures: considerations for all patients during the COVID-19 pandemic, RCSLT Guidance https://www.rcslt.org/wp-content/uploads/2020/11/RCSLT_COVID-19_SLT-led_endoscopic_procedure_guidance_April21.pdf

Duty of Care Guidelines (RCSLT) https://www.rcslt.org/members/delivering-quality-services/duty-of-care/duty-of-care-guidance/

Standards of Proficiency (HCPC). https://www.hcpc-uk.org/resources/standards/standards-of-proficiency-speech-and-language-therapists/

Fibreoptic Endoscopic Evaluation of Swallowing (FEES) Competency framework and training log (RCSLT Competency Framework) https://www.rcslt.org/wp-content/uploads/media/RCSLT_FEES-Competency-framework_2020_12.pdf

UHDB Patient Group Directives: Lidocaine 10mg (10%) spray and

5% Lidocaine in 0.5% phenylephrine HCL spray.

9. Appendices

APPENDICES

- A: Referral forms and guidelines for referral
- B: Fibreoptic Endoscopic Evaluation of Swallowing (FEES) Suitability and Safety Checklist
- C: FEES Assessment and Reporting Proforma
- D: PIL (standard)
- E: PIL (accessible)

Appendix A: GUIDELINES FOR REFERRAL

Clinical considerations for VF:	Clinical considerations for FEES
Choose VF if - Information is needed regarding swallow physiology	**Choose FEES if information is needed regarding functional swallow outcomes (residue, penetration/aspiration)**
Problem is unclear oral vs pharyngeal vs oesophageal impairments	Assess secretion management
Assess for specific oral, pharyngeal and oesophageal anatomical changes contributing to dysphagia e.g. Zenker's diverticulum, fistula	View integrity and surface anatomy of the larynx and surrounding structures Assess laryngeal and pharyngeal anatomical structure and sensory deficits contributing to dysphagia
Upper oesophageal sphincter issue suspected e.g food sticks at suprasternal notch/globus etc	Concurrent voice changes/dysphonia (laryngeal function/glottic closure)
Cannot visualise airway with endoscopy/reduced space in pharyngeal/laryngeal	Patient cannot attend VF due to logistics (positioning/radiation etc
Comprehensive therapy plan required	Conservative management to avoid aspiration (absent swallow/respiratory issues)
	Longer session to trial compensation strategies and rehab with various bolus types and/or medication (gel caps)
	Repeat examination to monitor progress/bio feedback

Contraindications for VF	Contraindications for FEES
Uncontrolled reflux	Bleeding disorder with high risk of uncontrolled epistaxis
Unable to sit in Mangar chair or to be positioned in an upright posture for VFS	Skull base, facial surgery, facial or nasal trauma/fracture within the last 6 weeks
Obese (weight Limit 127kg)	Craniofacial abnormalities
Potential for rapid deterioration e.g. MND	Nasopharyngeal stenosis
Absent swallow	Limited pharyngeal/Laryngeal spaces
Recent VFS (within 6 weeks)	Significant airway limitation due to large volume disease
Pregnancy	Vasovagal history

Neither examination will be carried out in the following instances:

- Refusing to accept food or fluids
- Reduced or fluctuating alertness
- Medically unstable
- Patients who have not had an SLT Clinical Bedside Swallowing Examination
- Severe cognitive impairment meaning unable to comply with the procedure
- Within 10 weeks of completing radiotherapy for upper aerodigestive tract cancer
- NBM for reasons other than dysphagia
- Recent surgery to head and/or neck
- Suspected fistulae
- Extreme distress, agitation or delirium
- Severe movement disorder
- Positioning problems that limit set up of the equipment
- Require invasive or non invasive ventilation
- Have symptoms of COVID-19.

Reviewed: Feb 2021 SLT VFS Sara Smith

Next Review Date: Nov 2022 by SLT Lead and Lead Radiography Practitioner

Appendix B: Fibreoptic Endoscopic Evaluation of Swallowing (FEES) Suitability and Safety Checklist

A Risk Assessment should be integrated into clinical practice and performed immediately before each FEES procedure prior to seeing the patient. The checklist is intended to encourage dialogue between staff and the use of routine safety checks to minimise adverse events or risk of harm. Boxes marked ! indicate the need for further risk assessment, remedial action prior to starting, or not proceeding with the examination until further advice is sought.

Are there contraindications to SLT performing endoscopy?	Yes	No
• Skull Base/facial surgery or fracture within the last six weeks	!	
• Major/life threatening epistaxis within the last six weeks	!	
• Trauma to nasal cavity secondary to surgery or injury within the last six weeks	!	
• Sino-nasal and anterior skull base tumours/surgery	!	
• Nasopharyngeal stenosis	!	
• Craniofacial anomalies	!	
• Hereditary haemorrhagic telangiectasia	!	
• Laryngectomy surgery the past 2 weeks	!	
Is this considered a 'high risk patient'? (list is non-exhaustive)	Yes	No
• Limited pharyngeal or laryngeal space	!	
• Significant airway limitation due to the presence of large volume disease e.g cancer	!	
• Severe movement disorders and/or severe agitation	!	
• Vasovagal history		
• Bleeding risks		
• Patients with positioning limitations		
Do you have the correct skill mix for the patient's level of care and airway?*		!
Consent	Yes	No
Positive Patient Identification – have you followed the 4 steps to identify the patient?		!
Does the patient have capacity to consent to the procedure?		!
Has patient consent been obtained after explaining the procedure, purpose, risks & benefits?		!
If the patient lacks capacity, have the patient's best interests been fully considered?		!
Has medical approval from the managing team been obtained?		!
Pre-procedure	Yes	No
Is sterility of the endoscope packaging confirmed?		!
Are hand hygiene and ANTT standards being fully adhered to?		!
Are there any known equipment problems, e.g. recording ability?	!	
Does the patient have known food allergies or intolerances?	!	
For patients on supplemental oxygen, is the pulse oximeter attached and functioning?		!
For level 2 and 3 critical care patients, have baseline observations been reviewed?		
Have you anticipated risks associated with endoscope insertion and delivery of food/fluids?		!

Post-procedure	Yes	No
Have you followed the SOP for processing of the used endoscope?		!
Have examination images been saved?		!
Have equipment issues been escalated?		!
Have recommendations and plans been verbalised to nursing and medical teams?		!
Have any concerns following the procedure been alerted to medical and nursing teams, e.g. large volume aspiration, respiratory or cardiac changes?		!
Have any adverse events been reported to the medical team and documented?		!
Have provisional findings been documented in the medical notes pending the formal report?		!

*If in doubt, consult guidance document on shared drive or discuss with Level 3 FEES clinician before starting.

RCSLT FEES Resources https://www.rcslt.org/members/clinical-guidance/fees/#section-3

[1]Adapted from FEES Suitability and Safety Checklist, Lee Bolton, Clinical Lead SLT, Imperial College Healthcare NHS Trust

Speech and Language Therapy Services
University Hospitals of Derby and Burton
ENT/ Head and Neck Outpatients Department
Tel: 01332 783182 Email: dchs.slt-ent@nhs.net

FEES ASSESSMENT SUMMARY

Name:	**DOB:**
Date of Ax:	**NHS No:**
Referrer:	**Hospital No:**

Background Information

FOIS LEVEL, Crary et al 2007

1	2	3	4	5	6	7

MDADI, Chen et al 2001

Global	
Composite	

Reflux Symptom Index, Belafsky et al 2001	**/45**
Voice Handicap Index, Jacobson et al 1997	**/50**

Visualisation and Assessment of Structures and Movement

Nasal anatomy		
Soft palate		
Lateral pharyngeal walls		
Base of tongue		
Valleculae		
Epiglottis/ aryepiglottic folds		
Larynx during respiration		**LPR Y N** **RFS: /26**
Laryngeal function		

Secretions, NZ secretion scale: Hunting & Miles 2018

Location	**0**	**1**	**2**	
Amount Pyr	**0**	**1**	**2**	
Response	**0**	**1**	**2**	**3**
Total				
PAS				

Lymphoedema, Starmer et al 2021

	Nor	Mild	Mod	Sev
Epiglottis				
Valleculae				
PEFs				
AEFs				
Arytenoids				
Pyriforms				
False VFs				
True VFs				

Sensation

Fluid trials: Teaspoon			
IDDSI	**0**	**1**	**2**
Pre sw PAS			
Post sw PAS			
Residue Vall			
Residue Pyr			

Fluid trials: Sips			
IDDSI	**0**	**1**	**2**
Pre sw PAS			
Post sw PAS			
Residue Vall			
Residue Pyr			

Diet Trials:						
IDDSI	**3**	**4**	**5**	**6**	**7**	**7+**
Pre sw PAS						
Post sw PAS						
Residue Vall						
Residue Pyr						

PAS: Rosenbek et al 1996; Residue scales: Neubaher et al 2015

Bolus management

Impairment Findings

Recommendations

Did this examination provide new information?	Y	N
Did this examination progress the patient or progress swallowing rehabilitation?	Y	N
Does this patient require further instrumental assessment or referral? Specify:	Y	N

Next appointment:

SLT signatures _____

Date_____

Appendix C: FEES Assessment/ Report

Speech and Language Therapy Services
University Hospitals of Derby and Burton
ENT/Head & Neck Outpatients Department
Kings Treatment Centre
01332 783182

M D Anderson Dysphagia Inventory (MDAD1)

Patient Name: DOB:

Hosp No: NHS No:

This questionnaire asks about your views on your swallowing. This information will help us to understand how you feel about swallowing. The following statements have been made by people who have problems with swallowing. Some of the statements may apply to you.

Please read each statement and circle the response which best reflects your experience in the past week.

1 = Strongly Agree 2 = Agree 3 = No Opinion 4 = Disagree 5 Strongly Disagree

1	**My swallowing ability limits my day-to-day activities**	**1**	**2**	**3**	**4**	**5**
2	**I am embarrassed by my eating habits**	**1**	**2**	**3**	**4**	**5**
3	**People have difficulty cooking for me**	**1**	**2**	**3**	**4**	**5**
4	**Swallowing is more difficult at the end of the day**	**1**	**2**	**3**	**4**	**5**
5	**I do not feel self-conscious when I eat**	**1**	**2**	**3**	**4**	**5**
6	**I am upset by my swallowing problem**	**1**	**2**	**3**	**4**	**5**
7	**Swallowing takes great effort**	**1**	**2**	**3**	**4**	**5**
8	**I do not go out because of my swallowing problem**	**1**	**2**	**3**	**4**	**5**
9	**My swallowing difficulty has caused me to lose income**	**1**	**2**	**3**	**4**	**5**
10	**It takes me longer to eat because of my swallowing problem**	**1**	**2**	**3**	**4**	**5**
11	**People ask me "Why can't you eat that?"**	**1**	**2**	**3**	**4**	**5**
12	**Other people are irritated by my swallowing problem**	**1**	**2**	**3**	**4**	**5**
13	**I cough when I try to drink liquids**	**1**	**2**	**3**	**4**	**5**
14	**My swallowing problems limit my social and personal life**	**1**	**2**	**3**	**4**	**5**
15	**I feel free to go out to eat with my friends, neighbours and relatives**	**1**	**2**	**3**	**4**	**5**
16	**I limit my food intake because of my swallowing difficulty**	**1**	**2**	**3**	**4**	**5**

17	I cannot maintain my weight because of my swallowing problem	1	2	3	4	5
18	I have low self-esteem because of my swallowing problem	1	2	3	4	5
19	I feel that I am swallowing a huge amount of food	1	2	3	4	5
20	I feel excluded because of my eating habits.	1	2	3	4	5

REFLUX SYMPTOM INDEX (RSI)

Within the last MONTH, how did the following problems affect you?

(0=no problem, 5=severe problem)

1	Hoarseness or problem with voice	0	1	2	3	4	5
2	Clearing your throat	0	1	2	3	4	5
3	Excess throat mucous or postnasal drip	0	1	2	3	4	5
4	Difficulty swallowing food, liquids or pills	0	1	2	3	4	5
5	Coughing after you ate or after lying down	0	1	2	3	4	5
6	Breathing difficulties or choking episodes	0	1	2	3	4	5
7	Troublesome or annoying cough	0	1	2	3	4	5
8	Something sticking in throat or lump in throat	0	1	2	3	4	5
9	Heartburn, chest pain, indigestion	0	1	2	3	4	5

VOICE RELATED QUALITY OF LIFE

1 = None, not a problem 2 = A small amount 3 = A moderate (medium) amount

4 – A lot 5 = Problem is as "bad as it can be"

BECAUSE OF MY VOICE:-

1	I have trouble speaking loudly or being heard in noisy situations	1	2	3	4	5
2	I run out of air and need to take frequent breaths when talking	1	2	3	4	5
3	I sometimes do not know what will come out when I begin speaking	1	2	3	4	5

4	I am sometimes anxious or frustrated	1	2	3	4	5
5	I sometimes get depressed	1	2	3	4	5
6	I have trouble using the telephone	1	2	3	4	5
7	I have trouble doing my job or practicing my profession	1	2	3	4	5
8	I avoid going out socially	1	2	3	4	5
9	I have to repeat myself to be understood	1	2	3	4	5
10	I have become less outgoing	1	2	3	4	5

Kate Young

Jonathan Smyth

Specialist Speech and Language Therapists

April 2022

FEES Recording Consent Form.doc

Speech and Language Therapy
ENT/Head & Neck Outpatient Department
University Hospitals of Derby and Burton
Royal Derby Hospital
Kings Treatment Centre
Tel: 01332 783182
Email: dchst.slt-ent@nhs.net

Date

ASSESSMENT REPORT FOR FLEXIBLE ENDOSCOPIC EVALUATION OF SWALLOWING (FEES)

Name: <Forename> <Surname> **DOB: <Date of birth>**
Address: <Patient address - single line>
Hospital No: **NHS No: <NHS number>:**

GP Action – Information only / Continue to prescribe Gaviscon Advance

Speech and Language Therapist

Background information

Presentation (mobility, required anaesthetic, NG/PEG)

Observation at rest

Observations of movements of the mouth, throat and voice box

Observations of swallow

Summary and recommendations

Not signed, but checked and authorised electronically

Specialist Speech and Language Therapist

Source: Rosenbek, JC, Robbins, J, Roecker EV, Coyle, JL, & Woods, JL. A **Penetration-Aspiration Scale**.(PAS) Dysphagia 11:93-98, 1996.

1. Material does not enter airway.

2. Material enters the airway, remains above the vocal folds, and is ejected from the airway.

3. Material enters the airway, remains above the vocal folds, and is not ejected from the airway.

4 Material enters the airway, contacts the vocal folds, and is ejected from the airway.

5. Material enters the airway, contacts the vocal folds, and is not ejected from the airway.

6. Material enters the airway, passes below the vocal folds, and is ejected into the larynx or out of the airway.

7. Material enters the airway, passes below the vocal folds, and is not ejected from the trachea despite effort.

8. Material enters the airway, passes below the vocal folds, and no effort is made to eject.

Copy

Patient

GP

Consultant

Appendix C: FEES Assessment/ Report

FEES Assessment Report (v8)

Chesterfield Royal Hospital NHS Foundation Trust

PATIENT INFORMATION

Surname:		**Date of Birth:**	**Age:**
First name:		**Gender:**	
NHS Number:		Scope ID:	
Informed verbal consent:		FEES Date:	Location:
Teaching consent:		Referring SLT:	
Consultant:		Endoscopist SLT:	
Specialism:		Assessor SLT:	
Covid-19 screen:	CJD register:	Hx Fainting:	Hx Nose bleeds:

Diagnosis and Relevant Medical History:

Presenting problem & rationale for FEES:

SUMMARY FEES

IMPRESSION OF IMPAIRMENT AND SWALLOWING DIAGNOSIS

RECOMMENDATIONS

Clinical Photographs:

Reporting SLT's: Report Date:
Supervising SLT: Suzanne Slade (SVS Associates)
CC: SLT SystmOne, GP, Patient, Consultant

FEES ASSESSMENT				
Nostril: Left ☐ Right ☐ Unable to pass ☐	Analgesia used: Y ☐ N ☐		Adverse reaction: Y ☐ N ☐	
STRUCTURES				
Nasal anatomy:				
Velo-pharyngeal closure:	☐ *complete*	☐ *incomplete*		
	☐ *symmetrical*	☐ asymmetrical	*R* ☐ *L* ☐	*Bilateral* ☐
Pharyngeal squeeze:	☐ *medialisation present*	☐ *medialisation reduced / absent*	*R* ☐ *L* ☐	*Bilateral* ☐
Base of tongue:	☐ *retraction present*	☐ *retraction reduced / absent*	*R* ☐ *L* ☐	*Bilateral* ☐
Vallecular space:	☐ *present*	☐ *absent*		
Epiglottic retroflexion:	☐ *complete*	☐*reduced / absent / inconsistent*		
Epiglottis, aryepiglottic folds:				
VF and FVF appearance:				
Laryngeal movement:				
Respiratory Rate:	☐ *normal*	☐ *fast / laboured*		
Airway opening:	☐ *adequate*	☐ *reduced*		
Glottic closure:	☐ *complete*	☐ *incomplete*		
Pitch glide:	☐ *present*	☐ *reduced / absent*		
Phonation:				
VF/arytenoid mobility	☐ *complete opening & closing bilaterally*	☐ *reduced / absent*	*R* ☐ *L* ☐	
Voice Quality:	☐*WNL* ☐ *wet* ☐ *rough*	☐ *breathy* ☐ *weak* ☐ *strained*		
SECRETIONS: New Zealand Secretion Scale Rating (0-7):_____				
Location:	Amount:	Response:	PAS:	
Comments e.g. *quality / texture / colour*				
SWALLOW TRIALS:				

__________________________(consistency) **Position of bolus pre-swallow:** valleculae pyriform
Yale Pharyngeal Residue Scale: vallecular___ pyriform___spontaneously cleared? Y N N/A problematic? Y N N/A
Penetration: Y N **Aspiration:** Y N **Response**: N/A no response prompted cough effective cough cough ineffective
Rosenbek PAS rating:___ **Compensatory strategy:** Y N ____
Comments (e.g. trials, pattern):

__________________________(consistency) **Position of bolus pre-swallow:** valleculae pyriform
Yale Pharyngeal Residue Scale: vallecular___ pyriform___spontaneously cleared? Y N N/A problematic? Y N N/A
Penetration: Y N **Aspiration:** Y N **Response**: N/A no response prompted cough effective cough cough ineffective
Rosenbek PAS rating:___ **Compensatory strategy:** Y N ____
Comments (e.g. trials, pattern):

__________________________(consistency) **Position of bolus pre-swallow:** valleculae pyriform
Yale Pharyngeal Residue Scale: vallecular___ pyriform___spontaneously cleared? Y N N/A problematic? Y N N/A
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Comments (e.g. trials, pattern):

__________________________(consistency) **Position of bolus pre-swallow:** valleculae pyriform
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Penetration: Y N **Aspiration:** Y N **Response**: N/A no response prompted cough effective cough cough ineffective

Rosenbek PAS rating:___ **Compensatory strategy:** Y N ____
Comments(e.g. trials, pattern):

_____________________________(consistency) **Position of bolus pre-swalllow:** valleculae pyriform
Yale Pharyngeal Residue Scale: vallecular___ pyriform___spontaneously cleared? Y N N/A problematic? Y N N/A
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Comments (e.g. trials, pattern):

_____________________________(consistency) **Position of bolus pre-swalllow:** valleculae pyriform
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Penetration: Y N **Aspiration:** Y N **Response**: N/A no response prompted cough effective cough cough ineffective
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Comments (e.g. trials, pattern):

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Comments (e.g. trials, pattern):

_____________________________(consistency) **Position of bolus pre-swalllow:** valleculae pyriform
Yale Pharyngeal Residue Scale: vallecular___ pyriform___spontaneously cleared? Y N N/A problematic? Y N N/A
Penetration: Y N **Aspiration:** Y N **Response**: N/A no response prompted cough effective cough cough ineffective
Rosenbek PAS rating:___ **Compensatory strategy:** Y N ____
Comments (e.g. trials, pattern):

Audit and Outcomes (SLT Records only)

Patient Feedback: How helpful was the examination? *Mark with cross/ circle number*

____

1 2 3 4 5 6 7 8 9 10
Not Very Helpful Helpful

Inform management: Yes ☐ No ☐ Change oral intake: Yes ☐ No ☐

Move from NBM to oral intake: Yes ☐ No ☐ PROM QoL Yes ☐ No ☐

APPENDIX

New Zealand Secretion Scale *Miles et al (2017) Dysphagia*	
	Symptom
Location	0 - Nil significant pooled secretions in pyriforms / laryngeal vestibule 1 - Secretions in pyriform fossa 2 - Secretions in laryngeal vestibule
Amount	0-Nil significant pooled secretions in pyriform fossa (0-20%) 1-Secretions in pyriform fossa, not yet full (20-80%) 2-Secretions filling (80-100%) or over spilling pyriforms/interarytenoid space
Response Do not score if no significant secretion pooling	Normal airway response in pharynx / laryngeal vestibule may include spontaneous coughing, throat clearing and/or swallowing 0 - Secretions in pyriform fossa or laryngeal vestibule effectively cleared 1 - Ineffective attempts to clear **OR** no response to secretions in pyriform fossa 2 - Ineffective attempts to clear secretions from the laryngeal vestibule 3 - No response to secretions in laryngeal vestibule
TOTAL SCORE (max 7)	

Yale Residue Rating Scale *Neubauer et al (2015) Dysphagia*				
Score	**Criteria**		**Vallecula**	**Pyriform Sinus**
1	None	0%	No residue	No residue
2	Trace	1-5%	Trace coating of mucosa	Trace coating of mucosa
3	Mild	5-25%	Epiglottic ligament visible	Up wall to quarter full
4	Moderate	25-50%	Epiglottic ligament covered	Up wall to half full
5	Severe	>50%	Filled to epiglottic rim	Filled to aryepiglottic fold
			Other	

Penetration Aspiration Scale *Rosenbek et al. (1996) Dysphagia*	
Score	**Criteria**
1	Material does not enter the airway
2	Material enters the airway, remains above the vocal folds, and is ejected from the airway
3	Material enters the airway, remains above the vocal folds, and is not ejected from the airway
4	Material enters the airway, contacts the vocal folds, and is ejected from the airway
5	Material enters the airway, contacts the vocal folds, and is not ejected from the airway
6	Material enters the airway, passes below the vocal folds, and is ejected into the larynx or out of the airway
7	Material enters the airway, passes below the vocal folds, and is not ejected from trachea despite effort
8	Material enters the airway, passes below the vocal folds, and no effort is made to eject.

The Reflux Finding Score *Belafsky et al (2001) Laryngoscope*							
Pseudosulcus (infraglottic oedema)	**Ventricular obliteration**	**Erythema Hyperemia**	**Vocal fold oedema**	**Diffuse laryngeal oedema**	**Posterior commisure hypertrophy**	**Granuloma**	**Thick endolaryngeal mucus**
0 = None 2 = Present	0 = None 2 = Partial 4=Complete	0 = None 2=Arytenoids 4 = Diffuse	0 = None 1 = Mild 2 = Mod 3 = Severe 4=Polypoid	0 = None 1 = Mild 2 = Mod 3 = Severe 4=Obstruct	0 = None 1 = Mild 2 = Mod 3 = Severe 4=Obstructing	0 = Absent 2 = Present	0 = Absent 2 = Present
TOTAL SCORE (>11 indicates LPR) =							

Appendix D: Patient Information Leaflet (standard)

Patient Information

NHS University Hospitals of Derby and Burton NHS Foundation Trust

A guide to your visit to the FEES Clinic

(FEES - Flexible-Optic Endoscopic Evaluation of Swallowing)

What happens during a FEES procedure?

On arrival a member of staff will welcome you and check your personal details.

During your consultation two speech and language therapists (SLTs) will be present. You may bring a relative or friend with you if you wish.

A case history will be taken and the SLT will explain the procedure to you. You may be asked to sign a consent form to give your permission for the procedure to take place.

During your consultation the SLTs will examine your throat and swallowing with a nasendoscope. A recording on the computer system will be made of the assessment. This is necessary equipment that will assist in making a diagnosis and plan management.

A nasendoscope is a thin flexible tube that is passed through your nose. This will allow a clear view of your throat and movements during the swallowing of food and drink.

The SLTs will ask you to make some sounds. You will be asked to swallow some sips of liquid and small amounts of different foods. What you will be asked to try will depend on the current foods you can manage and the purpose of the assessment.

What are the benefits of having a FEES procedure?

The benefits of having an assessment of swallowing using FEES procedure include:

- A visual assessment the health of your throat and voice box (larynx).
- A visual assessment of the timing of your swallow movements, as expected in a normal swallowing sequence. We are looking particularly at swallowing as food passes over the back of your tongue and through your throat into your upper food pipe (oesophagus).
- Trialling food textures and drinking consistencies to determine the safest recommendations for eating and drinking.
- Identifying whether you can detect food or drink 'going down the wrong way' (aspiration) or entering the top of your airway (airway penetration) and how successfully you can protect your airway and clear the food/drink into your oesophagus.
- The SLTs can trial exercises, strategies, head positions and manoeuvres whilst looking at your throat, to enable you to swallow as efficiently and safely as possible and minimize or remove risk.

What are the risks and alternatives associated with having a FEES procedure?

Most procedures are straightforward, however as with any procedure there is a small chance of side effects or complications such as:

- Discomfort in your nose
- Coughing when attempting to swallow

If you are concerned about any of these risks, or have any further queries, please speak to your speech and language therapist.

Alternatives

Your SLT has recommended this procedure/treatment as being the best option.

However, the alternative to this procedure/treatment is videofluoroscopy in some cases.

There is also the option of not receiving any treatment at all. The consequences of not receiving any treatment are you will not be able to safely manage and improve your swallowing function.

If you would like more information, please speak to your SLT.

What should I expect after my FEES procedure?

After the examination you will be given the opportunity to see the recording of your voice box.

The SLT will then discuss your diagnosis and any further treatment required.

You will receive a Patient Plan; you may take this away with you. It will state your diagnosis and outcome of your consultation. You will receive a copy of your report in the post.

Please do not hesitate to bring any questions or concerns you may have, we will discuss

Objective To provide a framework outlining a sequence of activities adhered to by clinical staff performing decontamination and air leak test of the Nasopharyngoscope.	
Activity	To decontaminate and perform air leak test prior to using the Nasopharyngoscope.
Inclusion criteria	All patients
Activity details	
Prior to first use – If the scope has not been kept in a Plasma bag or a Drying Cabinet.	**Tristel Trio** **Step 1 – Cleaning** The first step in the decontamination procedure of medical devices is cleaning of the surface to remove soil and organic matter prior to high-level disinfection. The Pre-Clean Wipe is impregnated with a triple-enzymatic detergent and surfactant. The Pre-Clean Wipe is CE Marked as a Class I Medical Device (MDD 93/42 EEC) - Disinfect hands and wear gloves when handling disinfectants and medical devices. - Take one Pre-Clean Wipe sachet. - Remove the Wipe from its sachet and lay it out in the palm of your hand. - Wipe the surface of the medical device until soil and organic matter have been visibly removed. In case of heavy soiling more than one Wipe may be used. - Discard the used Wipe and gloves in accordance with local regulations. Do not reuse. If using the Tristel Quality Audit Trail Record Book, keep the empty Wipe sachet for traceability. **Step 2 – Activating & High – Level Disinfecting** The second step in the decontamination procedure is high-level disinfection of the medical device. The Sporicidal Wipe is CE Marked as a Class IIb Medical Device (MDD 93/42 EEC). - Disinfect your hands and put on new gloves. - Take one Sporicidal Wipe sachet. - Remove the Wipe from its sachet and lay it out in the palm of your hand. Note: Activate the Sporicidal Wipe as soon as you have removed it from the sachet and use it immediately.