



**Speech and Language Therapy and
Nasendoscopy for Patients with
Velopharyngeal Dysfunction**

Position Paper 2008

**Royal College of
Speech and Language Therapists**

December 2008

Executive Summary

The Royal College of Speech and Language Therapists (RCSLT) recognises that endoscopic evaluation of the velopharynx (nasendoscopy) is within the scope of practice of specialist speech and language therapists (SLTs) in cleft palate/velopharyngeal dysfunction (VPD). Notwithstanding, it is fully acknowledged that this investigation may also be carried out by cleft surgeons in a multidisciplinary context.

Nasendoscopy procedures are used for the purposes of contributing to the diagnostic process, and providing information about the function and status of the velopharynx before, during and after treatment. It is also used in intervention, as a biofeedback technique or in the fitting of speech prostheses. Nasendoscopy is considered an essential component of a Cleft Service, and is recognised as one of the important aspects of SLT assessment and management of patients with VPD. It should not be used in isolation but in conjunction with, at a minimum, perceptual speech assessment, videofluoroscopy and detailed case history taking.

The purpose of this document is to set out the Royal College's position in relation to this practice. This position paper provides the professional clinical context within which SLTs can practice endoscopic evaluation of the velopharynx and the appropriate procedural protocols that should be observed. The document also provides a structured framework for both the acquisition and maintenance of the knowledge and skills required. In addition, there are statements on professional issues of responsibility and health and safety matters.

It is acknowledged that SLTs also use endoscopic examination techniques for other purposes, for example, in the assessment of swallowing or voice disorders. The specific details of those applications are not covered in this document and are addressed in separate RCSLT initiatives.

** The term "endoscopic evaluation of the velopharynx" involves the use of flexible endoscopy only. Throughout this document it is abbreviated to "nasendoscopy" for ease of reading. Complete definitions are found in Section 1.2.*

Acknowledgements

This position paper was written by an expert panel convened by the Royal College of Speech and Language Therapists in December 2007. The panel members were Debbie Sell (chair), Lorraine Britton, Christine Hayden, Ginette Phippen and Jane Russell. The final document is the result of extensive consultation with specialist SLTs in Cleft Palate/Velopharyngeal Dysfunction (VPD) and a number of other colleagues from related disciplines.

We are most grateful to Paul Carding and his expert panel on voice disorders for their generosity in allowing us to model this document on their guidelines.

Reference this document as:

Sell D., Britton L., Hayden C., Phippen G. and Russell J. (2008)
Speech and Language Therapy and Nasendoscopy for Patients with
Velopharyngeal Dysfunction. Royal College of Speech and Language Therapists
position paper.

Speech and Language Therapy and Nasendoscopy for Velopharyngeal Dysfunction

Section 1: Context

- 1.1 Background and rationale to this document
- 1.2 Definitions of terminology
- 1.3 Scope of practice (Role of SLTs)
- 1.4 Purpose of nasendoscopy by SLTs
- 1.5 Professional context
- 1.6 Benefits and risks of nasendoscopy performed by SLTs
- 1.7 Clinical context
- 1.8 Local arrangements
- 1.9 Facilities and equipment
- 1.10 Training structure

Section 2: Procedural Issues

- 2.1 Detailed definition of the procedure
- 2.2 Patient and carer information
- 2.3 Consent
- 2.4 Image interpretation and reporting

Section 3: Competencies and Training

- 3.1 Knowledge and skills
- 3.2 Acquisition of knowledge and skills
- 3.3 Verification of competency
- 3.4 Maintenance of competency

Section 4: Professional Issues

- 4.1 Medico-legal issues
- 4.2 Duty of care
- 4.3 Audit and research

Section 5: Health, Safety and Data Protection

- 5.1 COSHH
- 5.2 Infection control
- 5.3 Topical anaesthesia and Patient Group Directives: PGDs
- 5.4 First aid training
- 5.5 Risk management
- 5.6 Incident reporting
- 5.7 Data protection

Section 6: References

Section 7: Consensus process

Section 8: Appendices

Appendix A: Knowledge of Normal and Disordered Velopharyngeal Anatomy and Physiology, and Interventions

Appendix B: Reporting Nasendoscopy Findings

Appendix C: Competency Framework

Appendix D: Essential Endoscopic Equipment

Appendix E: Example of a Patient Group Directive

Section 9: Communication Strategy with RCSLT members

Section 1: Context

1.1 Background and rationale to this document

Endoscopy for the evaluation of speech and velopharyngeal function (nasendoscopy) is a procedure that is used by surgeons and SLTs as an assessment, diagnostic and therapeutic tool^{1,7}.

SLTs with both expertise in speech disorders associated with VPD and specialist training in nasendoscopy are able to carry out the procedure for the purpose of assessing and managing velopharyngeal function during speech. This diagnostic procedure may only take place within the context of a multidisciplinary cleft lip and palate team. Interpretation and clinical decision making are undertaken jointly by the SLT and the surgeon. Nasendoscopy is also used in the fitting of speech prostheses³ in conjunction with dental colleagues, in the monitoring of treatment outcomes, as a visual biofeedback tool in therapy^{4, 5, 6} and in the evaluation of excessive nasal airflow for musicians during the playing of wind/brass instruments⁷.

1.2 Definitions of terminology

VPD is an umbrella term to describe a lack of appropriate closure of the velopharyngeal mechanism during speech. It is associated with multiple aetiologies including structural anomalies such as cleft palate (including overt, submucous, occult), post surgical velopharyngeal insufficiency, adenoid atrophy, post-adenoidectomy or removal of nasopharyngeal carcinoma. Neurological disorders and velopharyngeal mislearning may also cause VPD⁸.

Nasendoscopy is defined as an examination of the anatomy and physiology of the velopharynx during speech using a flexible endoscope introduced via the nose.

1.3 Scope of Practice (Role of SLT)

It is the position of the RCSLT that nasendoscopy is within the scope of practice of SLTs specialised in cleft palate and velopharyngeal dysfunction. SLTs play a key role in delivering nasendoscopy services within a multidisciplinary context, as part of the service for investigating and managing speech disorders associated with velopharyngeal dysfunction. RCSLT acknowledges that medical practitioners are the only professionals qualified and licensed to confirm medical diagnoses.

The practice of speech and language therapy is dynamic and changing. The scope of practice grows as advances in technology are made, thereby enabling practitioners to provide new and improved methods of diagnosis and treatment. By identifying nasendoscopy as within the profession's scope of practice, it is not intended to limit any other new or emerging areas from being developed by SLTs in this area of practice. It is also recognised that nasendoscopy by SLTs may result in a stronger evidence base for existing treatment practices.

Indications for Nasendoscopy may include the following:

- Abnormal speech characteristics: hypernasal resonance, excessive nasal airflow including nasal escape and nasal turbulence, and absence of or weak intra-oral air pressure for oral pressure consonants.
- Limited progress with speech therapy to establish oral pressure sounds
- Difficulty maintaining intra-oral air pressure and velopharyngeal closure duration for performing on wind instruments
- Patient has known or suspected abnormality of palate/velopharynx

- Abnormal palatal x-ray during speech
- Patient is being considered for pharyngoplasty, maxillary advancement or speech prostheses.

NB/ Not all services undertake nasendoscopy for such characteristics or situations

1.4 Purpose of Nasendoscopy by SLTs

Specialist SLTs in cleft palate/VPD may carry out nasendoscopy in order to:

- Assess the effects of anatomy and function in the context of speech production
- Identify and describe anatomical structures and their function
- Contribute to the management plan of surgery, therapy and/or prosthetics
- Evaluate speech and velopharyngeal function as a baseline for clinical management and outcome measurement
- Improve patient/carer understanding of the speech disorder and compliance with treatment
- Provide visual biofeedback during therapy
- Facilitate accurate fitting of speech bulb obturator and palatal lift prostheses
- Evaluate velopharyngeal function during the playing of wind instruments
- Evaluate the effectiveness of clinical, surgical and prosthetic intervention(s)

1.5 Professional Context

SLTs should only perform nasendoscopy with the consent of the patient and within the context of a multidisciplinary cleft lip and palate service. It is recognised as an integral part of the process of velopharyngeal investigations in relation to speech. SLTs should only perform nasendoscopy with the full agreement of their surgical colleagues. It can be carried out by either surgeons or SLTs but it is essential that they meet together to discuss findings and management.

NB Endoscopy by SLTs does not override the absolute imperative of the joint review by the surgeon and therapist

1.6 Benefits and Risks of Nasendoscopy performed by SLTs

The possible benefits are:

Service

- Releases consultant time to other areas of clinical management
- Facilitates outreach diagnostic clinics within the managed clinical network
- Reduces costs of investigative procedures
- Facilitates waiting list management within government targets allowing timely and efficient access to diagnostic procedures
- Facilitates development of a team approach to the prosthetic treatment of speech
- Improves service flexibility to coordinate with other objective assessment clinics/videofluoroscopy minimising outpatient appointments, and improving the patient care pathway and user experience

Clinical

- Facilitates diagnostics and interventions and may reduce number of appointments

- Increases opportunity for integration and synthesis of perceptual and structural findings
- Provides potential for increased patient compliance due to factors such as patient familiarity and therapeutic skills
- Allows for biofeedback therapy as a treatment option

Risks:

- Health and safety risks as in all invasive procedures
- Development of inappropriate SLT nasendoscopy services (ie without sufficient levels of SLT expertise, not within an appropriate multi-disciplinary context, or without appropriate Employer approval)

1.7 Clinical Context

It is essential that the referral for nasendoscopy is based upon clinical indicators identified through perceptual speech assessment, carried out by a SLT specialising in cleft palate/VPD. Patients should be seen for this assessment in either a joint multidisciplinary clinic or an SLT led clinic for this purpose.

Detailed endoscopic assessment of the structure and physiology of the velopharynx in conjunction with perceptual, instrumental and case history findings enables the team to plan and deliver treatment effectively and efficiently.

The SLT takes responsibility for the endoscopy procedure. The ultimate medical and legal responsibility for patients is that of the consultant surgeon.

1.8 Local arrangements

SLTs must ensure that approval has been given by the employing organisation for nasendoscopy to be incorporated into SLT practice within the context of the Cleft /VPD service. This should include the development of departmental policies and procedures stating scope and range of practice. A description of responsibilities related to nasendoscopy must be clearly stated in an individual's job description. Clinical competence to undertake the nasendoscopy procedure must be evidenced by additional specialist training eg achieving the RCSLT competency framework in nasendoscopy (see Section 3). Additionally, theoretical knowledge and clinical practice in nasendoscopy must be evidenced within an individualised Knowledge and Skills Framework (KSF) outline and subject to the annual review process.

1.9 Facilities and equipment

Nasendoscopy should only be performed in an appropriate medical setting with specialist endoscopic imaging equipment. Different sized endoscopes should be available to maximise the success of the procedure, as passage of the scope can be difficult in children and/or in patients with structural abnormalities.

Access to appropriately trained medical and nursing staff, sterilisation and emergency/resuscitation equipment is essential.

Arrangements must be in place to ensure that the nasendoscopy procedure is safe. Problems that may occur include epistaxis, vomiting, anaphylaxis, fainting or seizures. It is essential that there is immediate access to emergency trained personnel e.g. crash team and fully operational equipment.

The nasendoscopy procedure must be recorded using equipment that provides high quality images and sound, and recordings should be archived and easily retrievable. Clinical lists and health records must allow for recording of scope/s used, and the recording of single use items such as endosheath batch numbers

and for full recording of decontamination records. These should be subject to routine audit.

1.10 Training structure

Practitioners should only engage in those aspects of the nasendoscopy procedure that are within their competence, considering their level of education, training and experience.

Education and training in nasendoscopy may be obtained by a variety of means.

Skills training in scope passing may take place through a variety of formats including a formal endoscopy course, supervised practice within an ENT/Cleft Lip and Palate Team setting, but should include supervised practice with both children and adults.

Diagnostic and intervention knowledge and skills with the range of cleft and non-cleft aetiologies should be developed over a considerable period of specialisation working within a multidisciplinary team context and with the surgeon, prior to undertaking this type of training and practice.

Some of the training should take place in a clinical setting, where the specialist SLT has the opportunity to work with more experienced colleagues or surgeons, with a wide variety of patients of different ages and with different conditions. SLTs who are in the process of developing nasendoscopy skills will perform different roles within the clinical procedure during the training period. The purpose of the training is to acquire and develop skills to work towards autonomy as an independent and skilled practitioner.

All training should be documented in the Competency Framework Log (Appendix C).

Section 2: Procedural Issues

2.1 Detailed definition of the procedure

Nasendoscopy is a minimally invasive procedure that allows visual observation and analysis of the velopharyngeal mechanism during speech.

Topical anaesthesia is usually applied to one nostril only. Commonly used anaesthetics are Lidocaine Hydrochloride 5% and Phenylephrine Hydrochloride 0.5% topical solution. Usually children require a local anaesthetic in order to ensure compliance with the procedure. Older patients and adults may elect to have the procedure undertaken without anaesthesia. Structural characteristics of the nasal passage are also determinants of the indications for local anaesthesia.

The fiberoptic nasendoscope is passed transnasally to the nasopharynx, where the soft palate, lateral and posterior pharyngeal walls and surrounding structures can be viewed. Ideally the moveable tip should be angled and rotated so that at rest the velopharynx is in full view. In the cleft palate population, structural abnormalities may restrict optimum positioning.

Velopharyngeal structure and function are assessed at rest and during speech and non-speech tasks, using activities designed to elicit specific behaviours of interest, related to speech production (Appendix B). It is essential that the procedure is audio and visually recorded (eg SVHS or DVD) and the data archived appropriately.

Patients are advised regarding eating and drinking in the period following the procedure.

Paediatric Endoscopy

Pertinent background history, case history and perceptual findings are usually included in a referral letter. The appointment letter should be accompanied with a procedural leaflet.

A range of different sized endoscopes should be available for paediatric endoscopy. Some patients will have structural abnormalities of the mid-face or nasal passage, which will prevent passage of a standard endoscope.

Cooperation is essential for paediatric endoscopy. Local anaesthetic administration will be in line with Patient Group Directive (PGD) ^{9, 10}.

Patency of airway should be assessed by sniff test. Spray or anaesthetic delivery should ideally be directed towards the middle meatus. A satisfactory view may be obtained by passing the scope below /above the inferior/middle turbinate.

Positioning for the scoping of children may need to be modified. Both the patient and therapist may use small chairs; the patient may need to be positioned on the parents knee facing forward with back and head supported against the parent's chest ¹¹.

Speech sample and consonants-vowels elicited should be tailored to the patient depending on the perceptual speech assessment.

2.2 Patient and carer information

Patients and their carers must be fully informed about the nasendoscopy procedure prior to the examination. In children it is appropriate to tailor the amount of information, and the timing of this, based on carer guidance and the child's emotional and developmental level. Consideration should be given to providing the information in accessible spoken, written and/or visual formats, including the nature, purpose and likely effects of the procedure.

2.3 Consent

Consent to a procedure is subject to legal requirements ^{12, 13, 14} and there may be local variations in practice. In most Trusts/Health Boards it is routine practice to obtain verbal consent prior to nasendoscopy rather than written consent although this may vary between employing authorities.

It is recommended that SLTs:

- Seek advice as to whether written or verbal consent is appropriate and consistent with local practices.
- Seek guidance from Local Governance Committee, Department of Health/Strategic Health Authority website
- Review consent policy in the light of regular national and local changes

Separate consideration needs to be given to gaining consent in relation to storage and use of audiovisual material (Section 5.7 Data protection: storage of images).

2.4 Image Interpretation and Reporting

Appendix B outlines the features that should be evaluated and this is usually undertaken within a multidisciplinary clinical context, taking into account all aspects of the patient's presentation. Nasendoscopy reporting is subject to generic professional standards as stated in CQ3¹⁵.

Image interpretation may be influenced by the following factors:

- Quality of the image (e.g. flaring/secretions)
- Endoscopic equipment used (eg. size of endoscope)
- Anatomical limitations affecting angle and position of the scope
- Quality of the camera equipment
- Skill/competency of the endoscopist
- Single/uniprofessional vs. multidisciplinary team rating ¹⁶

Section 3: Competencies and Training

3.1 Knowledge and Skills

Core Knowledge and Skills

SLTs with responsibility for an SLT-led nasendoscopy clinic would usually be the Lead therapist for the Cleft/VPD service or a senior specialist therapist within that service.

They should have

- Extensive knowledge and experience in cleft and VPD management within a multidisciplinary context
- Extensive postgraduate training and experience in leading or delivering a VPD service, and in particular a videofluoroscopy service
- Knowledge of the whole range of interventional approaches including surgical approaches to management
- Knowledge of the evidence base for clinical outcomes related to the range of approaches used

The following are required:

Communication and Professional Skills

- Familiarity with the purpose of nasendoscopy in the evaluation and management of nasal speech
- Compliance with the RCSLT position paper on Speech and Language Therapy and Nasendoscopy for Patients with Velopharyngeal Dysfunction
- Knowledge and implementation of Trust/Health Board's requirements for undertaking invasive procedures, sought via the relevant Governance Committee, including
 1. Consultant's and Trust's Medical Directors' written agreements
 2. PGD (Patient Group Directive)
 3. Local decontamination procedures
 4. Documented care pathway
 5. Job description
 6. Other local requirements e.g. consent and incident reporting
- Ability to communicate findings with patients and professional colleagues in a clear and appropriate manner

Clinical skills and knowledge

- Advanced clinical knowledge of the normal and disordered anatomy, physiology and neurology of velopharyngeal function, and interventions (Appendix A)
- Ability to appropriately select patients and to identify when nasendoscopy is contraindicated
- Thorough knowledge of the principles of surgical and prosthetic management, and the indications for biofeedback therapy
- Advanced clinical knowledge of phonetics related to cleft palate/VPD

- Thorough understanding of the relationship between speech cleft type characteristics and velopharyngeal function
- Ability to interpret and describe nasendoscopy findings (Appendix B)
- Ability to know when to request further medical/surgical opinion

Facilities and Equipment

- Ability to assemble, operate and maintain the equipment necessary to perform nasendoscopy
- Awareness of local policies regarding the operation and maintenance of nasendoscopy equipment including data storage and retrieval, health and safety, and risk management
- Understand the need for performing nasendoscopy within an environment with access to medical/nursing support

Examination Technique

- Ability to perform nasendoscopy in a way that minimises risk and discomfort to patient
- Ability to perform nasendoscopy in a manner that yields best quality audiovisual recordings

3.2 Acquisition of Knowledge and Skills

Competency in nasendoscopy may be acquired through a range of learning modalities including:

- Didactic/classroom teaching by both external and internal teachers
- Mentoring
- Supervised clinical experience, including observation and guided practice
- Formal nasendoscopy course

A structured programme should ideally include:

- Attendance at an appropriate nasendoscopy training course
- Structured reading of appropriate literature (suggested core reading is indicated in the reference list of this document)
- Observation of a minimum of 10 nasendoscopy procedures.
- Assistance (eg setting up equipment, storing images, discussing interpretation) with a minimum of 10 nasendoscopy procedures performed by specialist SLT colleague or surgeon
- Successfully performing and interpreting a minimum of 10 nasendoscopy examinations under direct supervision
- Successfully performing and interpreting a minimum of 10 nasendoscopy examinations independently with supervision available
- Training in local decontamination procedures and recording
- PGD training seminar
- Training in waste disposal and critical incident reporting

Professionals who may be involved in skill acquisition include:

- Cleft surgeons and or otolaryngologists
- Experienced SLT Nasendoscopist
- Specialist nurse/Infection Control (i.e. sterilisation/risk management/waste disposal)
- Pharmacy (PGDs)

3.3. Verification of Competency

Competency should be verified by an experienced clinician such as:

- Experienced SLT Nasendoscopist.
- Cleft surgeon or otolaryngologist

A competency checklist is included in Appendix C of this document. Once competency has been verified, the SLT Nasendoscopist may practice the procedure independently, but should be subject to regular audit/peer review as part of standard clinical governance procedures.

3.4. Maintenance of Competency

SLT Nasendoscopists are responsible for maintaining their competency to perform nasendoscopy and to ensure the pre-requisites for practice are in place. It is anticipated this should be on a regular basis. It is recommended that the SLT perform on average 25 procedures per year, consistent with the number believed to be required to achieve baseline competency. This baseline is subject to individual variation and it remains the responsibility of the individual practitioner to work within their competence.

There is a professional responsibility to review competencies for nasendoscopy if the procedure has not been performed for one year.

Section 4: Professional Issues

4.1 Medico-legal issues

This document is the RCSLT's official statement of professional practice for specialist SLTs undertaking nasendoscopy within a Cleft Palate/VPD Service. Adherence to its content and recommendations is the professional responsibility of the individual therapist. Proof and assurance of this adherence will help ensure professional indemnity through the individual's employer. Failure to comply with the details of this position paper may amount to a breach of acceptable professional conduct.

It is not within the scope of this document to discuss at length the medico-legal issues associated with professional practice in general. These issues are covered comprehensively in:

RCSLT's Communicating Quality 3¹⁵

HPC: Managing fitness to practice (<http://www.hpc-uk.org>)

Department of Health website (<http://www.dh.gov.uk>)

RCSLT acknowledges that professional practice continues to grow and develop. Members should contact the RCSLT for advice about any areas of related practice outwith this policy statement.

4.2 Duty of care

As with any clinical procedure, SLTs are subject to the legal requirements of duty of care. It is incumbent on the SLT, in the context of the multi-disciplinary team, to report suspected undiagnosed medical conditions to the surgeon responsible.

4.3 Audit and Research

Nasendoscopy services should be audited on a regular basis in terms of administrative and clinical aspects of the service within a local clinical governance framework (e.g. waiting times, accuracy of interpretation, compliance with recommendations, multi-disciplinary team working, outcomes). Nasendoscopy practice offers an opportunity to SLTs wishing to undertake research into best practice in managing VPD. Therapists are encouraged to be familiar with and pursue developments in research and evidence based practice in this field.

Section 5: Health, Safety and Data Protection

SLTs involved in the performance of nasendoscopy must be fully aware of health and safety issues and adhere to national and local policies and their application.

5.1 COSHH

Use and care of substances hazardous to health (COSHH) training must be obtained and regularly updated if relevant substances are to be used and/or stored within the nasendoscopy clinical area. Any used items of consumable equipment such as gauze, cotton wool buds, sprays, wipes must be disposed of as clinical waste or as advised by local infection control policy.

Full COSHH regulations can be found at <http://www.opsi.gov.uk>

5.2 Control of Infection

Each endoscopic procedure has an associated infection risk, which has been classified as "intermediate risk". Intermediate risk is defined by the MDA¹⁷ as contact with mucous membranes or contaminated with particularly virulent or readily transmittable organisms, or prior to use on an immunocompromised patient. Sterilisation or disinfection may be suitable depending on a risk assessment of the patient and the procedure. Concern about prior disease transmission via medical devices has served to heighten concerns surrounding the use of non-disposable medical equipment. Several methods of flexible endoscope disinfection exist the most common being automated endoscope reprocessor, CIO2 wipes/Tristel wipes and endosheaths. Time and financial costs associated with these disinfection and sterilisation methods vary. Decontamination using TristelTM CIO2 wipes has been found in an audit of nasendoscope disinfection practice to be a satisfactory, cost effective means of both flexible and rigid nasendoscope disinfection¹⁸.

SLTs must operate within local Trust/Board policies for decontamination of reusable medical devices falling into an intermediate risk classification. All endoscopes must be traceable through the decontamination process to the patient. A retrievable record of decontamination/sterilisation must be kept for each patient. Storage of equipment should comply with current infection control procedures. SLTs must have access to guidance and legislation for all aspects of decontamination.

SLTs should comply with appropriate dress code, personal protective equipment, hand washing policies and immunisation status (e.g. HepB) as determined by local policy for clinical procedures¹⁹. General governmental regulations pertaining to infection, disease and public health can be found at <http://opsi.gov.uk>.

In most routine clinical contact no additional precautions are required but patients with known category 3/4 infection status such as MRSA, HIV should be timetabled for the end of the clinic, the nature of the infection documented and decontamination procedures followed for these infections. If indicated, arrangements should be made for special cleaning of the clinical area after the examination, eg MRSA.

5.3 Topical Anaesthesia

SLTs can only administer topical anaesthetic sprays and nasal decongestants under PGD in association with the Pharmacy Department (Department of Health, April 2004 document MLX 294)^{9, 10}. This is subject to local agreement within each Trust/Health Service Executive/Authority for a named individual practitioner. The PGD should detail use of local anaesthetic in Cleft/VPD management. The

practicing SLT must be named in the PGD and the PGD subject to review and updated in line with local trust/Governance policy.

Topical anaesthesia and/or nasal decongestant may be applied to nasal passages if required. SLTs should be aware of the indication, contraindication, and possible drug interactions with the use of topical nasal anaesthetics. This includes knowledge of correct dosage and possible pharmacological side effects as outlined in the PGD (Appendix E).

The use of topical anaesthesia is somewhat controversial, although usually in paediatrics and structural anomalies it is indicated^{20, 21, 22}.

In the case of Ireland where non-medical prescribing/PGD guidance does not exist, it is advised that Health Service Executive and Pharmacy Department advice is sought.

5.4 First Aid Training

Due to the invasive nature of the procedure, SLTs involved in performing nasendoscopy must undergo annual training in first aid and cardio pulmonary resuscitation as part of a Trust's mandatory training requirements. This should include basic life support for adults and children. Resuscitation equipment and trained personnel should be within easy access i.e. within the building and easily contactable.

5.5 Risk Management

The clinician should be aware of and minimise possible risks of passing the endoscope, as well as adverse reactions to topical anaesthesia/nasal decongestants.

Patients should be excluded from the use of nasal anaesthesia if they are using beta blockers (e.g. propranolol, atenolol, labetalol, carvedilol) and if prescribed irreversible monoamine oxidase inhibitors (e.g. phenelzine, isocarboxazid, tranylcypromine). Excluded patient groups should be outlined in the PGD.

Advice should be sought locally in relation to the need for antibiotic cover for patients with cardiac conditions, and those with known 22q11 deletion syndrome where antibiotics are required for dental treatment as NICE Guidance 2008 indicates this is no longer necessary but Trusts may vary in their implementation.

Nasendoscopy should only be performed in an appropriate medical setting with specialist endoscopic imaging equipment. Access to appropriately trained medical and nursing staff, sterilisation and emergency/resuscitation equipment is essential.

Practitioners should be aware of their contractual arrangements in outreach and twin site settings.

A risk assessment should be undertaken at regular intervals for the location in which the clinic is held.

5.6 Incident Reporting

If an adverse reaction occurs, appropriate local incident report procedures should be followed.

5.7 Data protection

Storage and retrieval of images will be subject to legal requirements as interpreted at a local level. These requirements must be incorporated into the local Nasendoscopy Procedures document.

Section 6: References

- ¹ Shprintzen RJ. Instrumental assessment of velopharyngeal valving. In *Cleft Palate Speech Management*. Eds Shprintzen and Bardach. Pub Mosby, London. 1995.
- ² Karnell, M.P. (1994). *Video-endoscopy: From Velopharynx to Larynx*. San Diego: Singular Publishing Group.
- ³ Sell D. Mars M. Worrell E. (2006) A process and outcome study of prosthetic treatment for velopharyngeal dysfunction. *Int J Lang & Comm. Dis.* 41, 5, 495-511.
- ⁴ Siegel-Sadewitz V. and Shprintzen R. Nasopharyngoscopy of the normal velopharyngeal sphincter: an experiment of biofeedback. *Cleft Palate J.* 1982; 19:194-200.
- ⁵ Witzel M. Tobe J Salyer K. The use of videonasopharyngoscopy for biofeedback therapy in adults after pharyngeal flap surgery. *Cleft Palate J.* 1989; 26:29-34.
- ⁶ Brunner M. Stellzig-Eisenhauer A. Proschel U. Verres R. Komposch G. The effect of nasopharyngoscopic biofeedback in patients with cleft palate and velopharyngeal dysfunction. *Cleft Palate-Craniofacial J.* 2005, 42, 6, 649-657.
- ⁷ Mallick D. Moon J. Canady J. Stress Velopharyngeal Incompetence: Prevalence, Treatment, and Management Practices. *Cleft Palate-Craniofacial J.* 2006, 44, 4, 424-433.
- ⁸ Trost-Cardomone J. (1989) Coming to terms with VPI : A response to Loney and Bloom *Cleft Palate Journal* Vol.26 No. 1. 68-70.
- ⁹ Document MLX 294. Sale, Supply and Administration of Medicines by AHPs under Patient Group Directives. Medicines and Healthcare Products Regulatory Agency 2004.
- ¹⁰ Patient Group Directions, NHS Executives, series number HSC 2000/026, 2000.
- ¹¹ Langmore SE. Use of Fees to assess and manage paediatrics. In *Endoscopic evaluation and treatment of swallowing disorders*. In *Endoscopic Evaluation and Treatment of Swallowing Disorders 2001*. 213-234. pub. (Thieme).
- ¹² NHS Executive 2001. Good Practice in Consent, Health Service Circular Series Number HSC 2001/023.
- ¹³ Mental Capacity Act (2005). <http://www.opsi.gov.uk/acts>
- ¹⁴ Adults in Incapacity (Scotland) Act 2000. <http://www.legislation.gov.uk/legislation/scotlnad/acts>
- ¹⁵ Communicating Quality 3 RCSLT's guidance on best practice in service organisation and provision. Royal College of Speech and Language Therapists, London 2006.
- ¹⁶ D'Antonio LL. Marsh JL. Province MA. Muntz HR. And Phillips CJ. (1989) Reliability of flexible fiberoptic nasopharyngoscopy for evaluation of velopharyngeal function in a clinical population. *Cleft Palate J.* 26: 217-225.
- ¹⁷ Medical Devices Agency (1996) Sterilisation, Disinfection and Cleaning of Medical Equipment Guidance on decontamination from the Microbiology Advisory Committee.
- ¹⁸ Street I., Hamann J., Harries M., (2006) Audit of nasendoscope disinfection practice *Surgeon* 4:1; 11-13.
- ¹⁹ Department of Health (DOH) Uniform and Work wear: An Evidence Base for Developing Local Policy (July 2007). <http://www.dh.gov.uk/em/publicationsandstatistics/Publications/publicationsPolicyAndGuidance/DH078433>
- ²⁰ Leder B, Ross D, Briskin KB and Sasaki CT (1997). A prospective, double-blind, randomised study of the use of topical anaesthetic vaso-constrictor and placebo during transnasal flexible fiberoptic endoscopy. *J Speech, Language and Hearing Research* **40**; 1352-1357.
- ²¹ Evans E. (2007) No Topical Anaesthesia Required *Bulletin of the Royal College of Speech & Language Therapists*, March, p.15.
- ²² Sell D. (2007) Ouch my nose...or maybe not? *Bulletin of the Royal College of Speech and Language Therapists*, June, p. 20.

Section 7: Consensus process

This document is the result of expert panel consensus (Debbie Sell, Lorraine Britton, Christine Hayden, Ginette Phippen and Jane Russell) and consultation with SLTs specialising in cleft palate/VPD and other professionals and colleagues in related disciplines.

The authors would like to acknowledge the contributions of all those who took part in the consultation process.

The final document was approved by RCSLT Council in December 2008.

Section 8: Appendices

Appendix A: Knowledge of Normal and Disordered Velopharyngeal Anatomy and Physiology, and Interventions

Core Competencies:

The practitioner should have advanced clinical knowledge of the normal and disordered anatomy, physiology and neurology of the velopharynx.

The practitioner should have advanced clinical knowledge of the impact of different interventions on the appearance and physiology of the velopharynx

Gross appearance, causes, and mechanical properties of

- Structural anomalies
- Neurogenic disorders
- Velopharyngeal mislearning

Principles of Interventions and their impact on the velopharyngeal mechanism

- Surgical philosophies
- Protheses
- Visual biofeedback therapy

Appendix B: Reporting Nasendoscopy Findings

When reporting nasendoscopy findings and interpretation, clinicians should include the following details and parameters as appropriate :

- Patient Identification including hospital number

- Patient History
 - History of presenting problem
 - Medical history
 - Lifestyle issues
 - Previous treatment

- Current perceptual speech assessment and impact of speech on activity and participation

The form below is an example of the type of detail that may be collected. This is likely to be modified according to the surgical philosophy of the team.

Date:
 Tape Number.....
 Cooperation:
 Name:
 Number: Insertion R L
 Age: successful unsuccessful
 Cleft Type: Visualisation Total Partial
 Examiner: Good Poor

ANATOMY:

Soft Palate

Hump: yes / no
 Prominent Musculus Uvulae: yes / no
 Notching: yes / no
 Flat: yes / no
 Fistula: yes / no
 Other abnormality: yes / no

Pharynx:

Adenoid: Large Average Small None
 Irregular Projection Indentation
 Pharyngeal Pulsations: No Yes R L Midline
 Other Abnormality:

Tonsils:

Palatine Tonsils: R Large L R Average L R Small L R None L

FUNCTION:

1. Velopharyngeal Valve:

Closure yes / no
 Consistent Inconsistent

	Marked	Moderate	Slight	None	Symmetrical/ asymmetrical	Consistent/ inconsistent
Soft palate						
LPW						
RPW						
PPW						

Valving Pattern: Coronal Circular Circular + P R Sagittal
 Gap Location: Central R Lateral L Bilateral
 Gap Size: Large Moderate Small Pinhole
 Stimulable: yes / no
 Biofeedback Potential: yes / no

Summary

Definitely Adequate
 Probably Adequate
 Borderline
 Probably Inadequate
 Definitely Inadequate

interpretation for discussion with surgical/prosthetic colleagues				
Able to feedback to patient and family				

EXAMINATION SKILL You might like to cite as evidence: observation, clinical experience, self-directed learning etc.

DRIVING, PARKING AND INTERPRETING

Competency	Describe training	How measured	Signed	Dated
Able to appropriately select patients and to identify when endoscopy is contraindicated				
Able to give a full explanation of the procedure to the patient and its caregivers so that informed consent can be given				
Able to modify patient explanation according to age and anxiety				
Able to perform nasendoscopy in a way that minimises risk to patient				
Able to undertake procedure with minimum discomfort in order to facilitate examination				

Whilst carrying out endoscopic examination, able to adapt speech sample to inform interpretation				
Able to perform flexible endoscopies with resultant high quality video and audio recordings and a satisfactory view				

SPECIALIST KNOWLEDGE AND SKILLS

Competency	Describe training	How measured	Signed	Dated
Advanced clinical knowledge of the anatomy, physiology and neurology of the vocal tract				
Familiarity with medical and anatomical terminology as it pertains to the velopharyngeal mechanism				
High level perceptual skills in order to inform relationship between the visual and auditory findings				
Knowledge and understanding of the management of VPD including speech therapy and biofeedback, prosthetic and surgical				

management				
Able to produce oral/written reports of endoscopy findings and their interpretation for discussion with surgical/prosthetic colleagues				
Able to feedback to patient and family				

Proposed Approach to Achieving Competency

Task	Document outcomes	Signed off
1. Undertake interpretation of endoscopies for full range of patients with VPD through experiential training as specialising or lead clinician in surgeon led endoscopy clinic for VPD	This knowledge base should normally develop over a period of 1-2 years in a high volume joint endoscopy clinic	
2. Prepare patient, family and equipment for the procedure x 10		
3. Demonstration of local policies/guidelines on <ol style="list-style-type: none"> a. Consent b. Decontamination c. Waste disposal d. Cross infection e. Risk management/incident reporting 		
4. Medical Devices Training – Endoscopy stack and recording equipment		
5. PDG training		
6. Clean and disinfect the nasendoscope according to local infection control policies		
7. Administer topical anaesthetic/nasal decongestant when required		
8. Observe and assist with full preparation of patients including local anaesthesia		
9. Undertake 10 supervised endoscopies with focus on driving and parking in different cleft/22q11 types/ages	Combination of formal courses and internal clinical training	

10. Undertake 10 supervised endoscopies with focus on correct angle and distance, interpretation and feedback to family/patient and surgeons		
11. Independently undertake 10 endoscopies with focus on correct angle and distance, interpretation and feedback to family/patient		

- a. If this process is followed, 30 endoscopies would be undertaken.
- b. It would be optimum if the patient cohort included a range of conditions and age.

MAINTENANCE: It is advised that there needs to be regular clinics for maintenance of clinical skills, usually as a minimum, monthly clinics.

Based on Nottingham Voice Disorders EEL Competency Framework Log, and with grateful thanks to Fiona Robertson and her colleagues

Appendix D: Essential Endoscopic Equipment

1. Endoscopes (Flexible)
2. Light Source
3. Cameras/adapters/lenses
4. Video/audio cassette tapes/recorders or Digital storage recorders (and DVDs, CDs) for purposes of retrieval and review
5. Microphone
6. Printers (not essential)
7. Computer assisted systems – for purposes of retrieval and review
8. Sterilising equipment/wipes/endosheaths
9. Gloves
10. Local anaesthetic, tissues, tongue depressor, torch, gauze, cotton wool buds, wipes
11. Clinical waste disposal facility

Appendix E: An Example of a Patient Group Directive

Period during which the direction has effect	From 1.12.06		
Health professional designated <i>in writing</i> to administer medicines under the direction	Specialist Speech & Language Therapists trained in Endoscopy		
Description or class of medicine to which the direction relates	Either Lidocaine-Xylocaine pump spray 10%	Or Lignocaine 4% Adrenaline 1:1000	
Details of any restrictions on the quantity of medicine which may be supplied on any 1 occasion	x 4 sprays	2-4 sprays	
Clinical situations in which the medicine may be used	Speech & Language Therapy Clinic-undertaking endoscopy	-	
Clinical criteria under which a person shall be eligible for treatment	Clinical Assessment of Palate function or Use Visual Biofeedback during therapy	-	
Details of any class of person excluded from treatment under this direction	Reported reactions or hypersensitivity	-	
Details of any circumstances in which further advice should be sought from a doctor	Known previous cardiac disease Patients on anti-arhythmic drugs Epilepsy	-	
Pharmaceutical form(s) and strength in which the medicine is to be administered	10% spray (2-4 sprays)	4% Lignocaine Adrenaline 1:1000	
Applicable dosage and maximum total dosage	2-4 sprays of each	2-4 sprays	
Route	Nasal	Nasal	
Frequency of administration	once	once	
Minimum or maximum period over which medicine should be administered	N/A	N/A	
Relevant warnings	Side effects may last 1hour	Side effects may last 1 hour	
Details of any follow-up action and the circumstances	Document a "no response" or hypersensitivity	-	
Arrangements for referral for medical advice	Contact Registrar or Consultant	-	
Details of the records to be kept of the supply of administration of medicines under the direction	Drug Kardex form in SLT file		
Signature of Pharmacist	Date	Signature of Doctor	Date

Signature of behalf of trust (Assistant director of pharmacy)	Date			Date for Review

Section 9: Communications Strategy to RCSLT members

ALL RCSLT members have access to this full document.

It can be downloaded in PDF format from the RCSLT website (www.rcslt.org/resources)

This updated position paper (2008) supersedes all previous RCSLT documents in this area. Its completion will be announced in *Bulletin* and documented in the Executive Council minutes.