

# The Intercollegiate Surgical Curriculum

*Educating the surgeons of the future*

## Otolaryngology Syllabus

2010

ISCP

INTERCOLLEGIATE  
SURGICAL  
CURRICULUM  
PROGRAMME

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## Overview and objectives of the curriculum

ORL is the third largest surgical specialty in the UK and along with plastic surgery is the most competitive to enter.

ORL deals with the diagnosis and treatment of the whole range of medical and surgical problems affecting the ear, nose and throat.

There has been a trend towards specialisation within ORL. These areas of special interest do not have a separate specialty advisory committee (SAC) within the surgical collegiate structure

The areas of special interest in ORL at the time of writing are as follows:

- Head and neck oncology
- Benign head and neck surgery
- Paediatric otorhinolaryngology
- Otology
- Neuro-otology
- Skull base surgery
- Medical rhinology
- Surgical rhinology
- Facial plastics
- Phoniatics
- Cleft lip and palate

In addition trainees will be expected to pursue activities which support professional development, for example:

- Academic ORL
  - Management
  - Education
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## The Purposes of Training in ORL

The purpose of training in the specialty of ORL surgery is to produce clinicians competent to work as consultant ORL surgeons in the UK.

This includes:

- Competence to manage patients presenting on an unselected emergency ORL 'take', diagnosing, assessing and treating or referring on as appropriate.
  - Competence in the management of patients presenting with a range of symptoms and elective conditions as specified in the core syllabus for ORL.
  - Knowledge of the subject in depth and breadth, which supports accurate diagnosis, assessment and onward referral where appropriate.
  - Competence to manage an additional range of elective and emergency conditions by virtue of appropriate training and assessment opportunities obtained during training.
  - Through appropriate training and experience, to contribute to the development of a body of consultant surgeons capable of delivering the wide range of medical, managerial and educational skills required by the health services in the UK.
  - To impart the professional competences as outlined in the syllabus and derived from the Good Medical Practice framework of the General Medical Council of the UK.
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## The Training Pathway in the Specialty of ORL Surgery

The syllabus is linked with a number of related surgical specialties during the first two years of training (themed training) in core surgical training. These are Neurosurgery, Plastic Surgery, Paediatric Surgery, Upper GI Surgery, Oral and Maxillofacial Surgery and Thoracic Surgery. Thereafter training is conducted solely within the specialty unless interface modules are taken during the final years.

Other specialities will require some competence in ENT during their core training and these areas will be indicated within the syllabus

The minimum objective of training is to produce specialist surgeons who are emergency safe and can manage the common conditions set out in the syllabus, from start to finish. At successful completion of training, CCT holders will also possess a depth and breadth of knowledge that permits accurate diagnosis and assessment of a wide range of conditions and onwards referral as appropriate.

Each trainee should be able to develop an area of special interest to a higher standard. He/she will contribute to the development of the service in its broadest terms in line with the principles laid out in the Good Medical Practice framework of the General Medical Council of the UK.

The **purposes of training in the specialty of ORL surgery** are defined elsewhere.

The syllabus supports a curriculum that is divided into two **Stages**, which together form the training continuum through to the level of a CCT in the Specialty of ORL.

The curriculum is competence based and progress is regulated by the acquisition of specific goals set for each stage. Assessments occur at a national, regional or local level.

Variation in the time to achieve the specified learning outcomes is permitted, but an indicative time-frame is set within each stage and these are conveniently considered as annual periods (i.e. ST1, ST2, etc. to fit with the annual review of competence progression panels.

The indicative time frames for each stage are as follows:

First stage

- The initial stage of training in the specialty of ORL: 2 years
- The final stage of training in the specialty of ORL – 6 years
- Special interest training in a sub-specialty of ORL surgery within the final years

Trainees sit the Intercollegiate FRCS (Otolaryngology) examination, typically from ST6 onwards.

The overall predicted length of training is 8 years for the majority of trainees entering the specialty.

Within the syllabus, related areas of learning and training are integrated in the form of a series of a series of modules designated as Key Topics.

Milestones or competence points which allow trainees to benchmark their progress to CCT are:

- Entry to surgical training - CT1/ST1;
- Passing MRCS Part A
- Passing MRCS(ENT)
- National Selection (or run through in Scotland) to Otolaryngology training – ST3.
- Passing FRCS (ENT)
- Exit at CCT

Milestones or competence points which allow trainees to benchmark their progress to CESR are:

- Obtaining a post with ENT in CT1 or 2
- Generic Surgical competencies to enable MRCS Part A to be passed
- Passing MRCS(ENT)
- Finishing CT without an ST post
- Undertaking LAT posts or moving into SD post
- National Selection towards CCT application to ST4+; if not continue CESR route.
- Gaining competencies in service need subspecialities
- Obtaining the Pay Levels to top of SD Grade
- Top Up Training via LATs, Fellowships, Secondments.
- Passing FRCS(ENT)
- Obtaining CESR (Article 14)

CT1	CT2	Run through to ST3 occurs in Scotland							
<p style="text-align: center;"><b>Early Years</b> <b>Uncoupled/Themed Programmes</b></p> <p>12 months ENT early in CT (6 months minimum 18 months maximum) Additionally 2 or 3 placements over 12 months in a range of related specialties:</p> <ul style="list-style-type: none"> <li>• Plastic Surgery</li> <li>• Oral and Maxillofacial Surgery</li> <li>• General Upper GI Surgery</li> <li>• Neurosurgery</li> <li>• Paediatric Surgery</li> <li>• Cardiothoracic Surgery</li> <li>• Ophthalmology</li> <li>• Accident and Emergency Medicine</li> </ul> <p>The common surgical components are covered in Otolaryngology placements and complementary placements. The ENT components are covered in ENT.</p> <p>A CT2 extension in ENT may be available for trainees who have chosen to change to ENT from generic CST. CT2 extension in generic surgery may also be available for themed ENT trainees who chose to change to another surgical speciality or for trainees who require additional time to pass exams or need a second attempt applying through National Selection.</p> <p>The minimum ENT experience for ST3 application is 6 months and the maximum is 18 months.</p> <p><b>MRCS(ENT) required</b> – Part A MRCS is normally taken in Foundation Year 2. Otolaryngology trainees will be required to complete the MRCS(ENT) examination or the MRCS and the DO-HNS examinations and should do so as early as possible in the initial stage.</p> <p>Those not progressing through national selection at the first attempt should either decide to become SDs and can then move into the LAT/Trust Fellowship grades. Or re-submit the next year for national selection but do non-ENT jobs in the meantime. This will enhance the chances of a career change to another speciality if unsuccessful again.</p>			Training to Consultant/CCT						
			<b>National Selection</b> Early years and specialty training is 'decoupled' except in Scotland which	<b>Final Stage (Special Interest) (Fellowships/Interface)</b>					
				ST3	ST4	ST5	ST6	ST7	ST8
			The trainee will undergo a period of specialty training of 6 indicative years in the broad speciality as defined by the final stage (including special interest) syllabus  General ENT and Emergency Safe Training with or without subspecialist training/fellowships. <b>FRCS (ENT)</b>						
			Working as Speciality Doctor and possible CESR						
			<b>Undertake LATs and Trust Grades or straight into Speciality Otolaryngologist grade</b>						
			Trust grade	LAT	Fellowship	SD	SD	SD	
			The decision to become a Speciality doctor; DO-HNS exam required  Working in General ENT and some sub specialisation as required by the service needs. <b>FRCS or other qualifications will only be required if applying for CESR.</b>						

## The Scope and Standards Of ORL Practice At CCT

This list defines, in general terms the essential skills and levels of clinical expertise expected of an ORL surgeon emerging from training having completed the surgical specialty CCT. It is unlikely that the expertise will be confined to the descriptions that follow as most ORL surgeons will have developed additional interests and competences by the time that they emerge from training. There is flexibility within the curricula to accommodate this.

Where the specialty encompasses areas of special interest that require additional training, these are expressed in lists that build on the essential components of the CCT syllabus.

Those pursuing a career in ORL surgery should undertake further professional development following the acquisition of the CCT. The range and levels of expertise will change in response to the demands of the service, personal aspirations and the needs of patients.

Taking into account the present and future requirements of the service, the ORL surgeon emerging from training at CCT level will expect to deal with patients presenting with a range of problems. As it is used here, the term 'manage' equates to diagnosis, assessment and treatment or referral as appropriate. The levels of expertise expected are further expressed within the detail of the syllabus.

At CCT, the ORL surgeon will be able to:

1. Manage patients presenting with all ORL emergencies including being
  1. Able to diagnose and treat patients presenting with foreign bodies in the ear, nose and throat including the oral cavity and airway
  2. Able to diagnose and treat acute infections inflammations and tumours of the face, head and neck, oral cavity, ear and sinuses. This would include managing the complications and onward referral where appropriate.
  3. Able to manage epistaxis, emergency airway problems, acute dysphagia, sudden hearing loss, facial palsy, facial and neck trauma.
2. Manage paediatric conditions.
  1. Congenital conditions including adenoid obstruction
  2. Obstructive sleep apnoea
  3. Sinusitis and its complications (core training)
  4. Otitis media and its complications (core training)
  5. Hearing and development problems
  6. Upper airway conditions affecting the larynx and pharynx.
3. Manage conditions of the external and middle ear.
  1. Infections of the external and middle ear
  2. Acute and chronic inflammatory conditions including cholesteatoma,
  3. Conditions affecting hearing
  4. Facial nerve palsy (core training)
  5. Tumours of the skin and middle ear mucosa and skull base
  6. Other congenital and vascular abnormalities.
4. Manage conditions of the inner ear.
  1. Deafness due to ageing
  2. Infections
  3. Noise trauma
  4. Ototoxicity and development problems
  5. Meniere's syndrome
  6. Acoustic neuroma and lateral skull base lesions
  7. Benign positional vertigo
  8. Vestibular neuronitis.
5. Manage conditions of the nose and paranasal sinuses.
  1. Acute infections



2. Chronic facial pain
3. Allergic rhinitis
4. Non-allergic rhinitis
5. Nasal polyps
6. Granulomatous rhinitis
7. Nasal, sinus and anterior skull base tumours both benign and malignant
8. Disorders of the sense of smell and occupational rhinitis
9. Structural, traumatic and cosmetic nasal and facial deformities.
6. Manage conditions of the oral cavity
  1. Infections of the oral cavity including tonsillitis, peritonsillar abscess, oral ulceration (core training)
  2. Carcinoma of the oral cavity
  3. Temporomandibular joint dysfunction
  4. Dental conditions
  5. Lesions of the minor salivary glands.
7. Manage conditions of the larynx and pharynx.
  1. Pharyngeal pouches (core training)
  2. Stridor, acute and chronic
  3. Laryngitis
  4. Disorders of the voice
  5. Carcinoma and other tumours of the larynx, nasopharynx, oropharynx and hypopharynx
  6. Lesions of the lower oesophagus and tracheostomy. (core training)
8. Manage conditions of the neck, thyroid and salivary glands.
  1. The differential diagnosis of head and neck lymphadenopathy (core training)
  2. Benign and malignant skin lesions (core training)
  3. Sialadenitis
  4. Benign and malignant salivary lesions (core training)
  5. Thyroid conditions (core training)
9. Professional skills and behaviours
  1. And will demonstrate the professional skills and behaviours associated with consultant practice in the UK (including those outlined in Good Medical Practice). (core training)

At CCT an indication of the requirements is provided. At the time of writing they are:

- Log book including an absolute minimum 10 Mastoid Operations as principle surgeon; 10 major neck operations as principle surgeon; 10 tracheostomies; 10 Paediatric Endoscopies (including flexible) as main surgeon; 10 Septorhinoplasties as main surgeon; 10 FESS as only scrubbed surgeon; 10 removal of Foreign Bodies from airway.(including nasal and fishbones)
- Undertaking 2000 operations during the six years of training.
- Areas of specialist interest demonstrated by advanced surgical or medical experience in logbook. E.g. if otologist special interest 100+ mastoid operations if phonology/laryngology fellowship/courses/ 20 specialist combined clinics.
- Emergency Training. 300 nights on call and managing 1000 emergencies.
- Operative and clinic exposure with all jobs compliant with GMC standards (4 lists and 3 clinics).
- Undertaking training in a hospital with a minimum hospital throughput of 500 operations per annum per trainee of which 300 are major operations.
- Outpatients and Emergency clinics, demonstrate that in each attachment there have been 3 clinics pre week of which one has been a sub specialist clinic. Clinics conform to current ENT UK guidelines for numbers and facilities.
- All the subjects within the ENT curriculum have been trained in. Otology, Neurotology/Skull Base surgery, Paediatrics, Benign Head and Neck, Head and Neck Oncology, Rhinology and Sinus surgery, Facial Plastics.

- Details of Management skills, running rotas, sitting on management committees, Audit including audit of own results, Teaching/Education, Leadership, Research Skills and Team Working.
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## Areas of Special Interest

### Head and Neck Oncology

The majority of the activity in this area involves the management of patients with malignancy of the skin and structures of the head and neck, larynx and pharynx, oral cavity and paranasal sinuses.

The specialist should work in a team comprising oral and maxillofacial surgeons and oncologists as well as supporting and diagnostic staff. Such specialists may well have undertaken an interdisciplinary fellowship either within the UK (interface module) or abroad.

### Benign conditions

Management of benign tumours of the salivary glands, thyroid and other head and neck structures form the main part of the workload.

Surgeons who have developed this area of special interest should work as part of the relevant multidisciplinary team e.g. endocrine services.

### Phoniatrics

This is a developing area focussing on the management of patients with voice disorders, often relating to work their occupation such as professional voice users and performers.

Practice in this area involves working closely with speech therapists and other specialist workers in the field, as there are often other issues such as psychological factors that require consideration and management.

Treatments may range from rehabilitation through to active interventions such as Botox injections into the muscles of phonation or endoscopic surgery.

### Paediatric Otorhinolaryngology

#### General practice

Paediatric ORL accounts for approximately a third of routine ORL practice,

#### Advanced practice

It is recognised that children with congenital lesions, airway problems and developmental conditions including speech and hearing deficits, require more specialist input. The specialist may focus on one area such as paediatric cochlear implantation or airway problems.

These specialists will often work in a multidisciplinary team in order to provide such services.

## **Cleft Lip and Palate**

At the time of writing, in order to provide the UK service there are seven interface training fellowships offered each year for appointment. These are open to ORL, oral and maxillofacial and plastic surgical trainees by application following advertisement.

The ORL surgeon may form part of the team managing the ear and nasal conditions. He or she may compete for a pre-CCT fellowship.

## **Otology**

Complex middle and inner ear surgery and the management of hearing problems, including implanting hearing devices form the major part of practice in this area. There are two further subspecialty areas, neuro-otology and skull base surgery.

## **Neuro-otology**

This specialty focuses on the management of disorders of the cochlea and vestibular apparatus and the rehabilitation of patients thus affected. In this area, the function of the ORL specialist is usually one of investigation and non-operative management, but some specialists will practice skull base surgery in circumscribed areas such as acoustic neuroma.

## **Skull Base Surgery**

Specialists in this area work with neurosurgeons and other colleagues as a member of a multi-disciplinary team, which tackles conditions such as tumours of the lateral and anterior skull base.

Typical work would include repairing cerebrospinal fluid leaks, acoustic neuroma excision and endoscopic pituitary work.

## **Rhinology**

### **Medical Rhinology**

This area involves the management of nasal and sinus conditions, including undertaking the full range of treatments for allergy such as desensitization.

### **Surgical Rhinology**

Although comprising conventional and endoscopic surgery, the surgical specialist in this area will have additional expertise to that required for routine ORL practice. For example the specialist working in this area may undertake surgery in the frontal recess, or more complex rhinoplasty.

Such specialists may work in teams with the neurosurgeons or endocrinologists when undertaking pituitary surgery, anterior skull base surgery or CSF leaks.

## **Facial Plastic Surgery**

The majority of practice in this area involves the selection and management of patients for cosmetic rhinoplasty. Soft tissue face and neck work may form part of the practice such as the surgery for ageing including otoplasty blephroplasty and face lifts. The treatment of facial skin cancers and facial reanimation after facial palsy is undertaken Training may occur outside the NHS in pre-CCT training interface fellowship posts as well as inside the NHS.

## **Phoniatrics**

This is a developing area focussing on the management of patients with voice disorders, often relating to work their occupation such as professional voice users and performers.

Practice in this area involves working closely with speech therapists and other specialist workers in the field, as there are often other issues such as psychological factors that require consideration and management.

Treatments may range from rehabilitation through to active interventions such as Botox injections into the muscles of phonation or endoscopic surgery.

## **Cleft Lip and Palate**

At the time of writing, in order to provide the UK service there are three interface training fellowships offered each year. These are open to ORL, maxillofacial and plastic surgical trainee by application following advertisement.

The ORL surgeon may form part of the team managing the ear and nasal conditions.

## **Academic Surgery**

Academic surgery provides an exciting and challenging career for those who wish to combine clinical surgery with a major commitment to research and undergraduate teaching.

Trainees interested in this career pathway will, in addition to completing clinical training in ORL, acquire a high level of competency in research. After completing their clinical training those committed to an academic career will pursue a position in a university department as senior lecturer with a longer-term view to promotion to a chair in surgery.

Trainees must complete the full requirements of the specialty curriculum in order to gain the CCT.

## **Management**

The importance that all consultants are trained in management and leadership skills is well recognised. Trainees who wish to undertake further development in this area will be encouraged to undertake further studies in parallel with their clinical and professional training, including modular degrees.

## **Education**

It is imperative that the surgical profession maintains its reputation for high quality teaching, training and assessment.

All consultants receive training in this area and there are now available courses that will lead to the acquisition of further qualifications such as Cert. Ed, M.Sc. or Masters in these disciplines for trainees wishing to develop these skills further in parallel with their clinical studies.

## **The Configuration and Delivery of ORL Services**

- The service comprises emergency and elective elements both of which require significant supporting infrastructure in order to deliver them to modern standards.
- Some specialists may work outside the current hospital structure.

- A full range of outpatient diagnostic services such as audiology and diagnostic endoscopy are required. Many of the surgical services may be delivered through short stay facilities.

## **Future Trends in ORL Provision**

- It is likely that the emphasis towards greater subspecialisation will continue, especially in the sphere of elective practice.
  - The government has signalled its intention to devolve the delivery of surgical services for elective conditions into smaller, independent units, including primary care, where at all possible.
  - Other service providers such as diagnostic and treatment centres may provide care in future.
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## Key Topics

The common areas for all specialties will be considered elsewhere in the common areas of core training.

### Key Topics in Otolaryngology

#### Otology

- Congenital and acquired deformity of the ear and temporal bone
- Deafness in adults and children
- Disorders of the external ear
- Acute and Chronic middle ear disease including Otitis media with effusion
- Disorders of equilibrium
- Tinnitus
- Disorders of the facial nerve
- Lateral Skull Base Tumours

#### Rhinology and Facial Plastics

- Rhinitis/Sinusitis ~ including allergy, inflammation and infection
- Congenital and acquired deformities of the facial and nasal skeleton
- Tumours of the nose and paranasal sinuses including skin tumours of the face, head and neck and anterior skull base
- Epistaxis
- Facial pain
- Disorders of the sense of smell
- Surgical Management of epiphora

#### Head and Neck

- Congenital and acquired deformity of the larynx
- Voice disorders
- Disorders of the thyroid and salivary glands
- Head and neck cancer and other causes of neck masses
- Disorders of the pharynx and oesophagus including diseases of the tonsils
- Upper airway obstruction
- Infections of the soft tissues of the Head and Neck
- Sleep apnoea in adults

#### Paediatric Otolaryngology

- Deafness in childhood including congenital deformities of the temporal bone
- Upper airway disorders and sleep apnoea in children
- Neck masses in children
- Acute and chronic ear disease in children
- Disorders and deformity of the external ear
- Drooling

## Initial Stage Overview

The purpose of the initial stage (early years) (CT1 - 3) is to allow the trainee to develop the basic and fundamental surgical skills common to all surgical specialties, together with a few surgical skills relevant to Otolaryngology.

The outcome of early years training is to achieve the competences required of surgeons entering ST3. These competences include:

- Competence in the management of patients presenting with a range of symptoms and elective and emergency conditions as specified in the core syllabus for surgery.
- Competence in the management of patients presenting with an additional range of elective and emergency conditions, as specified by the Otolaryngology specialty component of the early years syllabus.
- Professional competences as specified in the syllabus and derived from Good Medical Practice documents of General Medical Council of the UK

By the end of CT2/3, trainees, (including those following an academic pathway), will have acquired to the defined level:

- Generic skills to allow team working and management of Otolaryngological patients
- The ability to perform as a member of the team caring for surgical patients
- The ability to receive patients as emergencies and review patients in clinics and initiate management and diagnostic processes based on a reasonable differential diagnosis
- The ability to manage the perioperative care of their patients and recognise common complications and either be able to deal with them or know to whom to refer
- To be safe and useful assistant in the operating room
- To perform some simple procedures under minimal supervision and perform more complex procedures under direct supervision

In addition they will have attained the knowledge, skills and behaviour as defined in the following (common) modules of the syllabus:

**Module 1: Basic Science Knowledge relevant to surgical practice** (These can all be contextualised within the list of presenting symptoms and conditions outlined in module 2)

- Anatomy
- Physiology
- Pharmacology - in particular safe prescribing
- Pathological principles underlying system specific pathology
- Microbiology
- Diagnostic and interventional radiology

### **Module 2: Common surgical conditions**

- To assess and initiate investigation and management of common surgical conditions which may confront any patient whilst under the care of surgeons, irrespective of their speciality.
- To have sufficient understanding of these conditions so as to know what and to whom to refer in a way that an insightful discussion may take place with colleagues whom will be involved in the definitive management of these conditions.
- This defines the scope and depth of the topics in the generality of clinical surgery required of any surgeon irrespective of their ST3 defined speciality

### **Module 3 Basic surgical skills**

- To prepare oneself for surgery
- To safely administer appropriate local anaesthetic agents
- To handle surgical instruments safely
- To handle tissues safely
- To incise and close superficial tissues accurately
- To tie secure knots



- To safely use surgical diathermy
- To achieve haemostasis of superficial vessels.
- To use a suitable surgical drain appropriately.
- To assist helpfully, even when the operation is not familiar.
- To understand the principles of anastomosis
- To understand the principles of endoscopy including laparoscopy

#### **Module 4: The principles of assessment and management of the surgical patient**

- To assess the surgical patient
- To elicit a history that is relevant, concise, accurate and appropriate to the patient's problem
- To produce timely, complete and legible clinical records.
- To assess the patient adequately prior to operation and manage any pre-operative problems appropriately.
- To propose and initiate surgical or non-surgical management as appropriate.
- To take informed consent for straightforward cases.

#### **Module 5: Peri-operative care of the surgical patient**

- To manage patient care in the peri-operative period.
- To assess and manage preoperative risk.
- To take part in the conduct of safe surgery in the operating theatre environment.
- To assess and manage bleeding including the use of blood products.
- To care for the patient in the post-operative period including the assessment of common complications.
- To assess, plan and manage post-operative fluid balance
- To assess and plan perioperative nutritional management.

#### **Module 6: Assessment and early treatment of the patient with trauma**

- To safely assess the multiply injured patient.
- To safely assess and initiate management of patients with
- traumatic skin and soft tissue injury
- chest trauma
- a head injury
- a spinal cord injury
- abdominal and urogenital trauma
- vascular trauma
- a single or multiple fractures or dislocations
- burns

#### **Module 7: Surgical care of the paediatric patient**

- To assess and manage children with surgical problems, understanding the similarities and differences from adult surgical patients.
- To understand common issues of child protection and to take action as appropriate.

#### **Module 8: Management of the dying patient**

- To manage the dying patient appropriately.
- To understand consent and ethical issues in patients certified DNAR (do not attempt resuscitation)
- To manage the dying patient in consultation with the palliative care team.

#### **Module 9: Organ and tissue transplantation**

- To understand the principles of organ and tissue transplantation.
- To assess brain stem death and understand its relevance to continued life support and organ donation.

#### **Module 10: Professional behaviour**

- To provide good clinical care
- To be a good communicator
- To teach and to train
- To keep up to date and know how to analyse data
- To understand and manage people and resources within the health environment
- To promote good Health
- To understand the ethical and legal obligations of a surgeon

In addition they will have attained the knowledge, skills and behaviour as defined in the following (Otolaryngology specific) modules of the syllabus:

### **1. Elective otology**

To understand the aetiology, presenting symptoms, signs and management of common conditions including deafness in adults, facial paralysis, tinnitus, trauma, dizziness, middle ear infections, non infective conditions of the external ear and infective conditions of the external ear.

### **2. Paediatric otolaryngology**

To understand the aetiology, presenting symptoms, signs and management of common conditions including neck masses, airway disorders, congenital deformities affecting the head and neck, deafness excluding otitis media and its complications, facial palsy, otitis media and its complications, disorders of the external ear, nose and sinus infections, inflammatory nasal disease, nasal polyps, foreign bodies in the ear nose and throat, epistaxis, trauma to the head and neck, disease of the tonsils and adenoids, oncology and speech and language development.

### **3. Disease of the head and neck**

To understand the aetiology, presenting symptoms, signs and management of common conditions including congenital abnormalities of the head and neck, oral pathology, airway obstruction, voice disorders, disorders of swallowing, sleep related breathing disorders, adenoid and tonsillar pathology, benign and neoplastic salivary gland disease, thyroid and parathyroid disease, malignancies in the upper aerodigestive tract excluding the oral cavity (although they do not necessarily treat these, they will be involved in diagnosis and MDT management), craniocervical trauma in adults, cervical sepsis, lymphadenopathy and other neck lumps.

### **4. Elective Rhinology**

To understand the aetiology, presenting signs, symptoms and management of common conditions including congenital abnormalities, nose and sinus infections and inflammation, nasal polyps, facial pain, epistaxis, nasal trauma and deformity, rhinological oncology, granulomatous conditions, septorhinoplasty including some understanding of the role of cosmetic surgery and reconstruction.

### **5. Emergency otolaryngology**

To understand the aetiology, presenting signs, symptoms and management of common conditions including simple epistaxis, otitis external, foreign bodies in the ear, nose and oropharynx, acute oropharyngeal infections and simple fractures of the facial skeleton. To understand the principles of acute airway obstruction and its management including tracheostomy.

## Initial Stage Topics

Module 1	Basic sciences
Objective	<ul style="list-style-type: none"> <li>• To acquire and demonstrate underpinning basic science knowledge appropriate for the practice of surgery, including:-</li> <li>• Applied anatomy: Knowledge of anatomy appropriate for surgery</li> <li>• Physiology: Knowledge of physiology relevant to surgical practice</li> <li>• Pharmacology: Knowledge of pharmacology relevant to surgical practice centred around safe prescribing of common drugs</li> <li>• Pathology: Knowledge of pathological principles underlying system specific pathology</li> <li>• Microbiology: Knowledge of microbiology relevant to surgical practice</li> <li>Imaging: <ul style="list-style-type: none"> <li>• Knowledge of the principles, strengths and weaknesses of various diagnostic and interventional imaging methods</li> </ul> </li> </ul>
Knowledge	<p>Applied anatomy:</p> <ul style="list-style-type: none"> <li>• Development and embryology</li> <li>• Gross and microscopic anatomy of the organs and other structures</li> <li>• Surface anatomy</li> <li>• Imaging anatomy</li> </ul> <p>This will include anatomy of thorax, abdomen, pelvis, perineum, limbs, spine, head and neck as appropriate for surgical operations that the trainee will be involved with during core training (see Module 2).</p> <p>Physiology: General physiological principles including:</p> <ul style="list-style-type: none"> <li>• Homeostasis</li> <li>• Thermoregulation</li> <li>• Metabolic pathways and abnormalities</li> <li>• Blood loss and hypovolaemic shock</li> <li>• Sepsis and septic shock</li> <li>• Fluid balance and fluid replacement therapy</li> <li>• Acid base balance</li> <li>• Bleeding and coagulation</li> <li>• Nutrition</li> </ul> <p>This will include the physiology of specific organ systems relevant to surgical care including the cardiovascular, respiratory, gastrointestinal, urinary, endocrine and neurological systems.</p> <p>Pharmacology:</p> <ul style="list-style-type: none"> <li>• The pharmacology and safe prescribing of drugs used in the treatment of surgical diseases including analgesics, antibiotics, cardiovascular drugs, antiepileptic, anticoagulants, respiratory drugs, renal drugs, drugs used for the management of endocrine disorders (including diabetes) and local anaesthetics.</li> <li>• The principles of general anaesthesia</li> <li>• The principles of drugs used in the treatment of common malignancies</li> </ul> <p>Pathology: General pathological principles including:</p>

	<ul style="list-style-type: none"> <li>• Inflammation</li> <li>• Wound healing</li> <li>• Cellular injury</li> <li>• Tissue death including necrosis and apoptosis</li> <li>• Vascular disorders</li> <li>• Disorders of growth, differentiation and morphogenesis</li> <li>• Surgical immunology</li> <li>• Surgical haematology</li> <li>• Surgical biochemistry</li> <li>• Pathology of neoplasia</li> <li>• Classification of tumours</li> <li>• Tumour development and growth including metastasis</li> <li>• Principles of staging and grading of cancers</li> <li>• Principles of cancer therapy including surgery, radiotherapy, chemotherapy, immunotherapy and hormone therapy</li> <li>• Principles of cancer registration</li> <li>• Principles of cancer screening</li> <li>• The pathology of specific organ systems relevant to surgical care including cardiovascular pathology, respiratory pathology, gastrointestinal pathology, genitourinary disease, breast, exocrine and endocrine pathology, central and peripheral, neurological systems, skin, lymphoreticular and musculoskeletal systems</li> </ul> <p>Microbiology:</p> <ul style="list-style-type: none"> <li>• Surgically important micro organisms including blood borne viruses</li> <li>• Soft tissue infections including cellulitis, abscesses, necrotising fasciitis, gangrene</li> <li>• Sources of infection</li> <li>• Sepsis and septic shock</li> <li>• Asepsis and antisepsis</li> <li>• Principles of disinfection and sterilisation</li> <li>• Antibiotics including prophylaxis and resistance</li> <li>• Principles of high risk patient management</li> <li>• Hospital acquired infections</li> </ul> <p>Imaging:</p> <ul style="list-style-type: none"> <li>• Principles of diagnostic and interventional imaging including x-rays, ultrasound, CT, MRI. PET, radiounucleotide scanning</li> </ul>
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Module 2	Common Surgical Conditions	
Objective	<p>This section assumes that trainees have general medical competences consistent with a doctor leaving Foundation in the UK. It also assumes an ongoing commitment to keeping these skills and knowledge up to date as laid out in GMP. It is predicated on the value that surgeons are doctors who carry our surgery and require competence.</p> <p>To demonstrate understanding of the relevant basic scientific principles for each of these surgical conditions and to be able to provide the relevant clinical care as defined in modules assessment and management as defined in Modules 1 and 4.</p>	
Topics	<p>Presenting symptoms or syndromes</p> <ul style="list-style-type: none"> <li>• Abdominal pain</li> <li>• Abdominal swelling</li> <li>• Change in bowel habit</li> </ul>	<p>To include the following conditions</p> <ul style="list-style-type: none"> <li>• Appendicitis</li> <li>• Gastrointestinal malignancy</li> <li>• Inflammatory bowel disease</li> </ul>

	<ul style="list-style-type: none"> <li>• Gastrointestinal haemorrhage</li> <li>• Rectal bleeding</li> <li>• Dysphagia</li> <li>• Dyspepsia</li> <li>• Jaundice</li> </ul>	<ul style="list-style-type: none"> <li>• Diverticular disease</li> <li>• Intestinal obstruction</li> <li>• Adhesions</li> <li>• Abdominal hernias</li> <li>• Peritonitis</li> <li>• Intestinal perforation</li> <li>• Benign oesophageal disease</li> <li>• Peptic ulcer disease</li> <li>• Benign and malignant hepatic, gall bladder and pancreatic disease</li> <li>• Haemorrhoids and perianal disease</li> <li>• Abdominal wall stomata</li> </ul>
	<p>Breast disease</p> <ul style="list-style-type: none"> <li>• Breast lumps and nipple discharge</li> <li>• Acute Breast pain</li> </ul>	<p>To include the following conditions</p> <ul style="list-style-type: none"> <li>• Benign and malignant breast lumps</li> <li>• Mastitis and breast abscess</li> </ul>
	<p>Peripheral vascular disease Presenting symptoms or syndrome</p> <ul style="list-style-type: none"> <li>• Chronic and acute limb ischaemia</li> <li>• Aneurysmal disease</li> <li>• Transient ischaemic attacks</li> <li>• Varicose veins</li> <li>• Leg ulceration</li> </ul>	<p>To include the following conditions</p> <ul style="list-style-type: none"> <li>• Atherosclerotic arterial disease</li> <li>• Embolic and thrombotic arterial disease</li> <li>• Venous insufficiency</li> <li>• Diabetic ulceration</li> </ul>
	<p>Cardiovascular and pulmonary disease</p>	<p>To include the following conditions</p> <ul style="list-style-type: none"> <li>• Coronary heart disease</li> <li>• Bronchial carcinoma</li> <li>• Obstructive airways disease</li> <li>• Space occupying lesions of the chest</li> <li>• Pulmonary embolus</li> </ul>
	<p>Genitourinary disease Presenting symptoms or syndrome</p> <ul style="list-style-type: none"> <li>• Loin pain</li> <li>• Haematuria</li> <li>• Lower urinary tract symptoms</li> <li>• Urinary retention</li> <li>• Renal failure</li> <li>• Scrotal swellings</li> <li>• Testicular pain</li> </ul>	<p>To include the following conditions</p> <ul style="list-style-type: none"> <li>• Genitourinary malignancy</li> <li>• Urinary calculus disease</li> <li>• Urinary tract infection</li> <li>• Benign prostatic hyperplasia</li> <li>• Obstructive uropathy</li> </ul>
	<p>Trauma and orthopaedics Presenting symptoms or syndrome</p> <ul style="list-style-type: none"> <li>• Traumatic limb and joint pain and deformity</li> <li>• Chronic limb and joint pain and deformity</li> <li>• Back pain</li> </ul>	<p>To include the following conditions</p> <ul style="list-style-type: none"> <li>• Simple fractures and joint dislocations</li> <li>• Fractures around the hip and ankle</li> <li>• Basic principles of Degenerative joint disease</li> <li>• Basic principles of inflammatory joint disease including bone and joint infection</li> <li>• Compartment syndrome</li> <li>• Spinal nerve root entrapment and spinal cord compression</li> </ul>

		<ul style="list-style-type: none"> <li>• Metastatic bone cancer</li> <li>• Common peripheral neuropathies and nerve injuries</li> </ul>
	Disease of the Skin, Head and Neck Presenting symptoms or syndrome <ul style="list-style-type: none"> <li>• Lumps in the neck</li> <li>• Epistaxis</li> <li>• Upper airway obstructions</li> </ul>	To include the following conditions <ul style="list-style-type: none"> <li>• Benign and malignant skin lesions</li> <li>• Benign and malignant lesions of the mouth and tongue</li> </ul>
	Neurology and Neurosurgery Presenting symptoms or syndrome <ul style="list-style-type: none"> <li>• Headache</li> <li>• Facial pain</li> <li>• Coma</li> </ul>	To include the following conditions <ul style="list-style-type: none"> <li>• Space occupying lesions from bleeding and tumour</li> </ul>
	Endocrine Presenting symptoms or syndrome <ul style="list-style-type: none"> <li>• Lumps in the neck</li> <li>• Acute endocrine crises</li> </ul>	To include the following conditions <ul style="list-style-type: none"> <li>• Thyroid and parathyroid disease</li> <li>• Adrenal gland disease</li> <li>• Diabetes</li> </ul>

Module 3	Basic surgical skills
Objective	<ul style="list-style-type: none"> <li>• Preparation of the surgeon for surgery</li> <li>• Safe administration of appropriate local anaesthetic agents</li> <li>• Acquisition of basic surgical skills in instrument and tissue handling.</li> <li>• Understanding of the formation and healing of surgical wounds</li> <li>• Incise superficial tissues accurately with suitable instruments.</li> <li>• Close superficial tissues accurately.</li> <li>• Tie secure knots.</li> <li>• Safely use surgical diathermy</li> <li>• Achieve haemostasis of superficial vessels.</li> <li>• Use suitable methods of retraction.</li> <li>• Knowledge of when to use a drain and which to choose.</li> <li>• Handle tissues gently with appropriate instruments.</li> <li>• Assist helpfully, even when the operation is not familiar.</li> <li>• Understand the principles of anastomosis</li> <li>• Understand the principles of endoscopy including laparoscopy</li> </ul>
Knowledge	Principles of safe surgery <ul style="list-style-type: none"> <li>• Preparation of the surgeon for surgery</li> <li>• Principles of hand washing, scrubbing and gowning</li> <li>• Immunisation protocols for surgeons and patients</li> </ul> Administration of local anaesthesia <ul style="list-style-type: none"> <li>• Choice of anaesthetic agent</li> <li>• Safe practise</li> </ul> Surgical wounds <ul style="list-style-type: none"> <li>• Classification of surgical wounds</li> <li>• Principles of wound management</li> <li>• Pathophysiology of wound healing</li> <li>• Scars and contractures</li> <li>• Incision of skin and subcutaneous tissue: <ul style="list-style-type: none"> <li>○ Langer's lines</li> <li>○ Choice of instrument</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Safe practice</li> <li>● Closure of skin and subcutaneous tissue: <ul style="list-style-type: none"> <li>○ Options for closure</li> <li>○ Suture and needle choice</li> </ul> </li> <li>● Safe practice</li> <li>● Knot tying <ul style="list-style-type: none"> <li>○ Range and choice of material for suture and ligation</li> <li>○ Safe application of knots for surgical sutures and ligatures</li> </ul> </li> <li>● Haemostasis: <ul style="list-style-type: none"> <li>○ Surgical techniques</li> <li>○ Principles of diathermy</li> </ul> </li> <li>● Tissue handling and retraction: <ul style="list-style-type: none"> <li>○ Choice of instruments</li> </ul> </li> <li>● Biopsy techniques including fine needle aspiration cytology</li> <li>● Use of drains: <ul style="list-style-type: none"> <li>○ Indications</li> <li>○ Types</li> <li>○ Management/removal</li> </ul> </li> <li>● Principles of anastomosis</li> <li>● Principles of surgical endoscopy including laparoscopy</li> </ul>
Clinical Skills	<p>4 Preparation of the surgeon for surgery</p> <ul style="list-style-type: none"> <li>● Effective and safe hand washing, gloving and gowning</li> </ul> <p>4 Preparation of a patient for surgery</p> <ul style="list-style-type: none"> <li>● Creation of a sterile field</li> <li>● Antisepsis</li> <li>● Draping</li> </ul> <p>4 Administration of local anaesthesia</p> <ul style="list-style-type: none"> <li>● Accurate and safe administration of local anaesthetic agent</li> </ul>

Technical Skills and Procedures	<p>4 Preparation of the surgeon for surgery</p> <ul style="list-style-type: none"> <li>• Effective and safe hand washing, gloving and gowning</li> </ul> <p>4 Administration of local anaesthesia</p> <ul style="list-style-type: none"> <li>• Accurate and safe administration of local anaesthetic agent</li> </ul> <p>4 Incision of skin and subcutaneous tissue:</p> <ul style="list-style-type: none"> <li>• Ability to use scalpel, diathermy and scissors</li> </ul> <p>4 Closure of skin and subcutaneous tissue:</p> <ul style="list-style-type: none"> <li>• Accurate and tension free apposition of wound edges</li> </ul> <p>4 Knot tying:</p> <ul style="list-style-type: none"> <li>• Single handed</li> <li>• Double handed</li> <li>• Instrument</li> <li>• Superficial</li> <li>• Deep</li> </ul> <p>3 Haemostasis:</p> <ul style="list-style-type: none"> <li>• Control of bleeding vessel (superficial)</li> <li>• Diathermy</li> <li>• Suture ligation</li> <li>• Tie ligation</li> <li>• Clip application</li> <li>• Transfixion suture</li> </ul> <p>4 Tissue retraction:</p> <ul style="list-style-type: none"> <li>• Tissue forceps</li> <li>• Placement of wound retractors</li> </ul> <p>3 Use of drains:</p> <ul style="list-style-type: none"> <li>• Insertion</li> <li>• Fixation</li> <li>• Removal</li> </ul> <p>3 Tissue handling:</p> <ul style="list-style-type: none"> <li>• Appropriate application of instruments and respect for tissues</li> <li>• Biopsy techniques</li> </ul> <p>4 Skill as assistant:</p> <ul style="list-style-type: none"> <li>• Anticipation of needs of surgeon when assisting</li> </ul>
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Module 4	The assessment and management of the surgical patient
Objective	To demonstrate the relevant knowledge, skills and attitudes in assessing the patient and manage the patient, and propose surgical or non-surgical management.
Knowledge	<p>The knowledge relevant to this section will be variable from patient to patient and is covered within the rest of the syllabus – see common surgical conditions in particular (Module 2).</p> <p>As a trainee develops an interest in a particular speciality then the principles of history taking and examination may be increasingly applied in that context.</p>



Clinical Skills	<p>4 Surgical history and examination (elective and emergency)</p> <p>3 Construct a differential diagnosis</p> <p>3 Plan investigations</p> <p>3 Clinical decision making</p> <p>3 Team working and planning</p> <p>3 Case work up and evaluation; risk management</p> <p>3 Active participation in clinical audit events</p> <p>3 Appropriate prescribing</p> <p>3 Taking consent for intermediate level intervention; emergency and elective</p> <p>3 Written clinical communication skills</p> <p>3 Interactive clinical communication skills: patients</p> <p>3 Interactive clinical communication skills: colleagues</p>
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Module 5	Peri-operative care
Objective	<p>To assess and manage preoperative risk</p> <p>To manage patient care in the peri-operative period</p> <p>To conduct safe surgery in the operating theatre environment</p> <p>To assess and manage bleeding including the use of blood products</p> <p>To care for the patient in the post-operative period including the assessment of common complications</p> <p>To assess, plan and manage post-operative fluid balance</p> <p>To assess and plan perioperative nutritional management</p>
Knowledge	<p>Pre-operative assessment and management:</p> <ul style="list-style-type: none"> <li>• Cardiorespiratory physiology</li> <li>• Diabetes mellitus and other relevant endocrine disorders</li> <li>• Fluid balance and homeostasis</li> <li>• Renal failure</li> <li>• Pathophysiology of sepsis – prevention and prophylaxis</li> <li>• Thromboprophylaxis</li> <li>• Laboratory testing and imaging</li> <li>• Risk factors for surgery and scoring systems</li> <li>• Pre-medication and other preoperative prescribing</li> <li>• Principles of day surgery</li> </ul> <p>Intraoperative care:</p> <ul style="list-style-type: none"> <li>• Safety in theatre including patient positioning and avoidance of nerve injuries</li> <li>• Sharps safety</li> <li>• Diathermy, laser use</li> <li>• Infection risks</li> <li>• Radiation use and risks</li> <li>• Tourniquet use including indications, effects and complications</li> <li>• Principles of local, regional and general anaesthesia</li> <li>• Principles of invasive and non-invasive monitoring</li> <li>• Prevention of venous thrombosis</li> <li>• Surgery in hepatitis and HIV carriers</li> <li>• Fluid balance and homeostasis</li> </ul> <p>Post-operative care:</p> <ul style="list-style-type: none"> <li>• Post-operative monitoring</li> <li>• Cardiorespiratory physiology</li> <li>• Fluid balance and homeostasis</li> </ul>

	<ul style="list-style-type: none"> <li>• Diabetes mellitus and other relevant endocrine disorders</li> <li>• Renal failure</li> <li>• Pathophysiology of blood loss</li> <li>• Pathophysiology of sepsis including SIRS and shock</li> <li>• Multi-organ dysfunction syndrome</li> <li>• Post-operative complications in general</li> <li>• Methods of postoperative analgesia</li> </ul> <p>To assess and plan nutritional management</p> <ul style="list-style-type: none"> <li>• Post-operative nutrition</li> <li>• Effects of malnutrition, both excess and depletion</li> <li>• Metabolic response to injury</li> <li>• Methods of screening and assessment of nutritional status</li> <li>• Methods of enteral and parenteral nutrition</li> </ul> <p>Haemostasis and Blood Products:</p> <ul style="list-style-type: none"> <li>• Mechanism of haemostasis including the clotting cascade</li> <li>• Pathology of impaired haemostasis e.g. haemophilia, liver disease, massive haemorrhage</li> <li>• Components of blood</li> <li>• Alternatives to use of blood products</li> <li>• Principles of administration of blood products</li> <li>• Patient safety with respect to blood products</li> </ul> <p>Coagulation, deep vein thrombosis and embolism:</p> <ul style="list-style-type: none"> <li>• Clotting mechanism (Virchow Triad)</li> <li>• Effect of surgery and trauma on coagulation</li> <li>• Tests for thrombophilia and other disorders of coagulation</li> <li>• Methods of investigation for suspected thromboembolic disease</li> <li>• Principles of treatment of venous thrombosis and pulmonary embolism including anticoagulation</li> <li>• Role of V/Q scanning, CTpulmonary angiography, D-dimer and thrombolysis</li> <li>• Place of pulmonary embolectomy</li> <li>• Prophylaxis of thromboembolism:</li> <li>• Risk classification and management of DVT</li> <li>• Knowledge of methods of prevention of DVT, mechanical and pharmacological</li> </ul> <p>Antibiotics:</p> <ul style="list-style-type: none"> <li>• Common pathogens in surgical patients</li> <li>• Antibiotic sensitivities</li> <li>• Antibiotic side-effects</li> <li>• Principles of prophylaxis and treatment</li> </ul> <p>Metabolic and endocrine disorders in relation to perioperative management</p> <ul style="list-style-type: none"> <li>• Pathophysiology of thyroid hormone excess and deficiency and associated risks from surgery</li> <li>• Causes and effects of hypercalcaemia and hypocalcaemia</li> <li>• Complications of corticosteroid therapy</li> <li>• Causes and consequences of Steroid insufficiency</li> <li>• Complications of diabetes mellitus</li> <li>• Causes and effects of hyponatraemia</li> <li>• Causes and effects of hyperkalaemia and hypokalaemia</li> </ul>
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Clinical Skills	<p>3 Pre-operative assessment and management:</p> <ul style="list-style-type: none"> <li>• History and examination of a patient from a medical and surgical standpoint</li> <li>• Interpretation of pre-operative investigations</li> <li>• Management of co morbidity</li> <li>• Resuscitation</li> <li>• Appropriate preoperative prescribing including premedication</li> </ul> <p>3 Intra-operative care:</p> <ul style="list-style-type: none"> <li>• Safe conduct of intraoperative care</li> <li>• Correct patient positioning</li> <li>• Avoidance of nerve injuries</li> <li>• Management of sharps injuries</li> <li>• Prevention of diathermy injury</li> <li>• Prevention of venous thrombosis</li> </ul> <p>3 Post-operative care:</p> <ul style="list-style-type: none"> <li>• Writing of operation records</li> <li>• Assessment and monitoring of patient's condition</li> <li>• Post-operative analgesia</li> <li>• Fluid and electrolyte management</li> <li>• Detection of impending organ failure</li> <li>• Initial management of organ failure</li> <li>• Principles and indications for Dialysis</li> <li>• Recognition, prevention and treatment of post-operative complications</li> </ul> <p>3 Haemostasis and Blood Products:</p> <ul style="list-style-type: none"> <li>• Recognition of conditions likely to lead to the diathesis</li> <li>• Recognition of abnormal bleeding during surgery</li> <li>• Appropriate use of blood products</li> <li>• Management of the complications of blood product transfusion</li> </ul> <p>3 Coagulation, deep vein thrombosis and embolism</p> <ul style="list-style-type: none"> <li>• Recognition of patients at risk</li> <li>• Awareness and diagnosis of pulmonary embolism and DVT</li> <li>• Role of duplex scanning, venography and d-dimer measurement</li> <li>• Initiate and monitor treatment of venous thrombosis and pulmonary embolism</li> <li>• Initiation of prophylaxis</li> </ul> <p>3 Antibiotics:</p> <ul style="list-style-type: none"> <li>• Appropriate prescription of antibiotics</li> </ul> <p>3 Assess and plan preoperative nutritional management</p> <ul style="list-style-type: none"> <li>• Arrange access to suitable artificial nutritional support, preferably via a nutrition team including Dietary supplements, Enteral nutrition and Parenteral nutrition</li> </ul> <p>3 Metabolic and endocrine disorders</p> <ul style="list-style-type: none"> <li>• History and examination in patients with endocrine and electrolyte disorders</li> <li>• Investigation and management of thyrotoxicosis and hypothyroidism</li> <li>• Investigation and management of hypercalcaemia and hypocalcaemia</li> </ul>
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	<ul style="list-style-type: none"> <li>• Peri-operative management of patients on steroid therapy</li> <li>• Peri-operative management of diabetic patients</li> <li>• Investigation and management of hyponatraemia</li> <li>• Investigation and management of hyperkalaemia and hypokalaemia</li> </ul>
Technical Skills and Procedures	2 Central venous line insertion 4 Urethral catheterisation

Module 6	Assessment and management of patients with trauma (including the multiply injured patient)
Objective	<p>Assess and initiate management of patients</p> <ul style="list-style-type: none"> <li>• Who have sustained chest trauma</li> <li>• who have sustained a head injury</li> <li>• who have sustained a spinal cord injury</li> <li>• who have sustained abdominal and urogenital trauma</li> <li>• who have sustained vascular trauma</li> <li>• who have sustained a single or multiple fractures or dislocations</li> <li>• who have sustained traumatic skin and soft tissue injury</li> <li>• who have sustained burns</li> <li>• Safely assess the multiply injured patient.</li> <li>• Contextualise any combination of the above</li> <li>• Be able to prioritise management in such situation as defined by ATLS, APLS etc</li> </ul>
Knowledge	<p>General</p> <ul style="list-style-type: none"> <li>• Scoring systems for assessment of the injured patient</li> <li>• Major incident triage</li> <li>• Differences In children</li> </ul> <p>Shock</p> <ul style="list-style-type: none"> <li>• Pathogenesis of shock</li> <li>• Shock and cardiovascular physiology</li> <li>• Metabolic response to injury</li> <li>• Adult respiratory distress syndrome</li> <li>• Indications for using uncross matched blood</li> </ul> <p>Wounds and soft tissue injuries</p> <ul style="list-style-type: none"> <li>• Gunshot and blast injuries</li> <li>• Stab wounds</li> <li>• Human and animal bites</li> <li>• Nature and mechanism of soft tissue injury</li> <li>• Principles of management of soft tissue injuries</li> <li>• Principles of management of traumatic wounds</li> <li>• Compartment syndrome</li> </ul> <p>Burns</p> <ul style="list-style-type: none"> <li>• Classification of burns</li> <li>• Principle of management of burns</li> </ul> <p>Fractures</p> <ul style="list-style-type: none"> <li>• Classification of fractures</li> <li>• Pathophysiology of fractures</li> <li>• Principles of management of fractures</li> <li>• Complications of fractures</li> </ul>

	<ul style="list-style-type: none"> <li>• Joint injuries</li> </ul> <p>Organ specific trauma</p> <ul style="list-style-type: none"> <li>• Pathophysiology of thoracic trauma</li> <li>• Pneumothorax</li> <li>• Head injuries including traumatic intracranial haemorrhage and brain injury</li> <li>• Spinal cord injury</li> <li>• Peripheral nerve injuries</li> <li>• Blunt and penetrating abdominal trauma</li> <li>• Including spleen</li> <li>• Vascular injury including iatrogenic injuries and intravascular drug abuse</li> <li>• Crush injury</li> <li>• Principles of management of skin loss including use of skin grafts and skin flaps</li> </ul>
Clinical Skills	<p><b>General</b></p> <p>4 History and examination</p> <p>3 Investigation</p> <p>3 Referral to appropriate surgical subspecialties</p> <p>4 Resuscitation and early management of patient who has sustained thoracic, head, spinal, abdominal or limb injury according to ATLS and APLS guidelines</p> <p>4 Resuscitation and early management of the multiply injured patient</p> <p>3 Specific problems</p> <ul style="list-style-type: none"> <li>• Management of the unconscious patient</li> <li>• Initial management of skin loss</li> <li>• Initial management of burns</li> <li>• Prevention and early management of the compartment syndrome</li> </ul>
Technical Skills and Procedures	<p>2 Central venous line insertion</p> <p>3 Chest drain insertion</p> <p>2 Diagnostic peritoneal lavage</p> <p>4 Urethral catheterisation</p> <p>2 Suprapubic catheterisation</p>

Module 7	Surgical care of the Paediatric patient
Objective	To assess and manage children with surgical problems, understanding the similarities and differences from adult surgical patients To understand the issues of child protection and to take action as appropriate
Knowledge	<ul style="list-style-type: none"> <li>• Physiological and metabolic response to injury and surgery</li> <li>• Fluid and electrolyte balance</li> <li>• Thermoregulation Safe prescribing in children</li> <li>• Principles of vascular access in children</li> <li>• Working knowledge of trust and Local Safeguarding Children Boards (LSCBs) and Child Protection Procedures</li> <li>• Basic understanding of child protection law</li> <li>• Understanding of Children's rights</li> <li>• Working knowledge of types and categories of child maltreatment, presentations, signs and other features (primarily physical, emotional, sexual, neglect, professional)</li> <li>• Understanding of one personal role, responsibilities and appropriate referral patterns in child protection</li> <li>• Understanding of the challenges of working in partnership with children and families</li> </ul> <ul style="list-style-type: none"> <li>• Recognise the possibility of abuse or maltreatment</li> <li>• Recognise limitations of own knowledge and experience and seek appropriate expert advice</li> <li>• Urgently consult immediate senior in surgery to enable referral to paediatricians</li> <li>• Keep appropriate written documentation relating to child protection matters</li> <li>• Communicate effectively with those involved with child protection, including children and their families</li> </ul>
Clinical Skills	3 f History and examination of paediatric surgical patient 3 Assessment of respiratory and cardiovascular status 3 Undertake consent for surgical procedures (appropriate to the level of training) in paediatric patients

Module 8	Management of the dying patient
Objective	<p>Ability to manage the dying patient appropriately.</p> <p>To understand consent and ethical issues in patients certified DNAR (do not attempt resuscitation)</p> <p>Palliative Care: Good management of the dying patient in consultation with the palliative care team.</p>
Knowledge	<p>Palliative Care:</p> <ul style="list-style-type: none"> <li>• Care of the terminally ill</li> <li>• Appropriate use of analgesia, anti-emetics and laxatives</li> </ul> <p>Principles of organ donation:</p> <ul style="list-style-type: none"> <li>• Circumstances in which consideration of organ donation is appropriate</li> <li>• Principles of brain death</li> </ul> <p>Understanding the role of the coroner and the certification of death</p>
Clinical Skills	<p>3 Palliative Care:</p> <ul style="list-style-type: none"> <li>• Symptom control in the terminally ill patient</li> </ul> <p>3 Principles of organ donation:</p> <ul style="list-style-type: none"> <li>• Assessment of brain stem death</li> <li>• Certification of death</li> </ul>

Module 9	Organ and Tissue transplantation
Objective	To understand the principles of organ and tissue transplantation
Knowledge	<ul style="list-style-type: none"> <li>• Principles of transplant immunology including tissue typing, acute, hyperacute and chronic rejection</li> <li>• Principles of immunosuppression</li> <li>• Tissue donation and procurement</li> <li>• Indications for whole organ transplantation</li> </ul>

In addition, in the early years of training, trainees must address early years competencies of the the Professional skills and Leadership syllabus on pages 101-123.

## Requirement to meet the ST3 in Otolaryngology

In order to meet the job specifications of an ST3 trainee an early years trainee must take a clear role in the Otolaryngology team, managing clinic and ward based patients under supervision, including the management of acute admissions. They will need to be able to take part in an outpatient clinic and see both new and old patients themselves with the consultant available for advice.

Therefore in early years training, IN ADDITION to the generic competencies for all surgeons, it is necessary to address the specifics of a developing interest in Otolaryngology during these years. This means spending at least six months and preferably 12 months in Otolaryngology with appropriate sub-specialty experience in a service, which gives trainees access to the appropriate learning opportunities. Experience in specialties complementary to Otolaryngology is also desirable. Also by the time a trainee enters ST3 they need to be familiar with the operating theatre environment both with respect to elective and emergency cases.

Trainees must attend MDT and other Departmental meetings and ward rounds, prepare elective operating lists (both inpatient and day-case), and actually perform some surgery under appropriate supervision. They must manage all patients in the ward environment, both preoperatively and post operatively. This includes recognising and initiating the management of common complications and emergencies, over and above those already laid out in the generic curriculum, particularly module 2.

**The range of conditions a trainee needs to manage is laid out below and in depth as demonstrated in a text book such as *Essential Otolaryngology, Head and Neck Surgery*<sup>1</sup> or *Logan Turner's Diseases of the Nose, Throat and Ear*<sup>2</sup> include**

### 1. Elective otology

To understand the aetiology, presenting symptoms, signs and management of common conditions including deafness in adults, facial paralysis, tinnitus, trauma, dizziness, middle ear infections, non infective conditions of the external ear and infective conditions of the external ear. To understand the principles of audiological assessment.

### 2. Paediatric otolaryngology

To understand the aetiology, presenting symptoms, signs and management of common conditions including neck masses, airway disorders, congenital deformities affecting the head and neck, deafness including otitis media and its complications, facial palsy, otitis media and its complications, disorders of the external ear, nose and sinus infections, inflammatory nasal disease, nasal polyps, foreign bodies in the ear nose and throat, epistaxis, trauma to the head and neck, disease of the tonsils and adenoids, oncology and speech and language development.

### 3. Disease of the head and neck

To understand the aetiology, presenting symptoms, signs and management of common conditions including congenital abnormalities of the head and neck, oral pathology, airway obstruction, voice disorders, disorders of swallowing, sleep related breathing disorders, adenoid and tonsillar pathology, benign and neoplastic salivary gland disease, thyroid and parathyroid disease, malignancies in the upper aerodigestive tract including the oral cavity (although they do not necessarily treat these, they will be involved in diagnosis and MDT management, craniocervical trauma in adults, cervical sepsis, lymphadenopathy and other neck lumps.

### 4. Elective Rhinology

To understand the aetiology, presenting signs, symptoms and management of common conditions including congenital abnormalities, nose and sinus infections and inflammation, nasal polyps, facial pain, epistaxis, nasal trauma and deformity, rhinological oncology, granulomatous

<sup>1</sup> Ed K.J. Lee. McGraw-Hill. ISBN 0-07-137322-5

<sup>2</sup> Wright ISBN 0-7236-0945-4



conditions, septal and rhinoplasty surgery including some understanding of the role of cosmetic surgery and reconstruction. To understand the general concepts behind sinonasal surgery for infection.

### 5. Emergency otolaryngology

To understand the aetiology, presenting signs, symptoms and management of common conditions including simple epistaxis, otitis externa, auricular trauma, foreign bodies in the ear, nose and oropharynx, acute oropharyngeal infections and simple fractures of the facial skeleton. To understand the principles of acute airway obstruction and its management including tracheostomy.

<b>Early Years training in Otolaryngology (ORL)</b>	
<b>Objective</b>	<p><i>Provide experience in the early care of patients with common otolaryngological problems:</i></p> <ul style="list-style-type: none"> <li>• <i>The common emergency problems are simple epistaxis, otitis externa, foreign bodies in the ear, nose and oropharynx, acute oropharyngeal infections and simple fractures of the facial skeleton</i></li> <li>• <i>The common elective problems include otological, rhinological, head and neck and paediatric conditions</i></li> <li>• <i>Provide some operative experience of elective otolaryngology including endoscopic and microscopic examination with biopsy as appropriate of the ears, nose and throat</i></li> <li>• <i>An acquisition of basic surgical skills in disorders of the ears, nose, throat head and neck and upper aerodigestive tract</i></li> </ul>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Basic science relevant to the management of patients with the common elective and emergency problems, (including anatomy, physiology, pharmacology, and radiology)</li> <li>• Clinical presentation and pathology of common elective and emergency conditions.</li> <li>• Principles of management of patients presenting with the common elective and emergency problems</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>• Pre-operative and postoperative assessment of patients with elective and emergency presentations of general surgical conditions. This should include assessment of co-morbidity in the context of the planned surgical procedure.</li> <li>• Management of fluid balance and nutritional support; postoperative analgesia; thromboprophylaxis; wound management.</li> <li>• Assessment and planning investigation of new and follow-up patients in outpatient clinics.</li> <li>• Assessment and management of patients with emergency conditions including primary and secondary survey and determining appropriate investigations.</li> </ul>

<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>• Endoscopic or microscopic examination with biopsy as appropriate of the ears, nose and throat</li> <li>• Nasal cautery</li> <li>• Epistaxis control including packing</li> <li>• Foreign body removal from the ear canal, nose and oropharynx</li> <li>• Microsuction of the ears</li> <li>• Drainage of a quinsy</li> <li>• Reduction of simple nasal fractures</li> </ul>
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<b>Early Years training in Otolaryngology (ORL)</b>	
<b>The drooling child</b>	
<b>Objective</b>	<ul style="list-style-type: none"> <li>• To be competent at assessing a child who presents with the symptom of drooling, and to understand the principles behind management of these patients.</li> </ul>
<b>Knowledge</b>	<p>Anatomy of the major and minor salivary glands            Anatomy of the oral cavity            Physiology of salivation            Know the causes and predisposing factors (including syndromes) for drooling            Understand how multidisciplinary input is used in the management of drooling children.            Understand the principles that inform the non medical, medical and surgical management of drooling children</p>
<b>Clinical Skills</b>	<p>3. Undertake a comprehensive history and examination of a child who presents with drooling            2. Be able to communicate an effective management plan to the patient and his or her carer            2. Work with colleagues from other specialities and disciplines to provide effective care for children presenting with drooling.</p>
<b>Technical Skills and Procedures</b>	<p>2. Tonsillectomy            2. Adenoidectomy            3. Nasendoscopy (LA/GA)            1. Transposition of submandibular ducts            1. Neuromuscular blockade            1. Tympanic neurectomy</p>

The detailed DOHNS syllabus is published as a separate book ref

### **Assessment**

The speciality elements of the early years will all be assessed primarily in the workplace and then scrutinised in the Annual Review of Competency Progression. All these documents would be included in a portfolio which would contribute as evidence in subsequent applications to enter ST3.

Specific evidence includes

Assessment type (1WPBA per week as a minimum)	Subject
DOPS a selection of types and numbers of each type according to learning agreements	Adult Rigid Nasal Endoscopy Aural microsuction Biopsy small oral or skin lesion Changing tracheostomy tube Drainage of peritonsillar abscess Epistaxis Epley Manoeuvre Fine Needle Aspiration Cytology Flexible Nasoendoscopy Flexible nasolaryngoscopy Myringotomy and insertion of grommet Packing of nose Positional Test for diagnosis of vertigo (Dix Hallpike Test) Reduction of simple nasal fractures Removal of foreign body from nose of child
Case Based Discussion	At least two per placement (six per year)
CEX	Clinical assessment of patients with common conditions
PBAs	Elective adult tracheostomy Excision neck node Nasal polypectomy Rigid Laryngoscopy Tonsillectomy Adenoidectomy Myringotomy and VT insertion Pharyngoscopy Rigid laryngoscopy/pharyngoscopy/oesophagoscopy
MSF	
Training Supervisors report	Evidenced by the above WPBAs
ARCP for each specified training interval	As per local Deanery specifications
DO-HNS / MRCS(ENT)	Examination syllabus

### DO-HNS and MRCS(ENT)

From August 2008 acquisition of Part A (written paper) of MRCS and acquisition of Part 1 and Part 2 of the DO-HNS examination has allowed candidates to acquire an Intercollegiate MRCS which is ENT themed and this has been used as part of the essential criteria for recruitment into ST3 which takes place on a national basis (International equivalence is sought where this examination is not accessible).

At a date to be announced following August 2010, Otolaryngology trainees at CT1/2 level in ENT themed core surgical training posts should undertake Part A of MRCS and the Part 2 DO-HNS OSCE which will allow candidates to acquire the Intercollegiate MRCS(ENT) Diploma. The DO-HNS examination still exists as a separate entity but is not a requirement for ST3 unless paired with the MRCS as explained above.

## Final Stage Overview

### Entry into ST3

Entry into ST3 will usually involve a competitive selection process. The current person specifications for entry into ST3 in general surgery are shown on the [Modernising Medical Careers website](#). The essential components are completion of the common component of the core surgical training programme (as evidenced by successful ARCP, WBA and completion of the MRCS examination) and completion of the specialty components of the early years training as evidenced by a successful ARCP and completion of the appropriate WBA.

At the completion of final stage trainees will be competent in all aspects of the operative and non-operative management of patients presenting with the following key conditions (Level 4).

- Adult Upper Airway Obstruction
- Head and Neck and Skull Base Masses
- Disorders of Swallowing
- Sleep Apnoea
- Voice Disorders
- Airway Disorders
- Sore Throat and Tonsillitis
- Cutaneous Lesions of the Head and Neck
- Tinnitus
- Hearing Loss
- Ear Discharge
- Otagia
- Disorders of equilibrium
- Facial nerve disorders and facial pain

By the end of the final stage of training, trainees will be competent in all aspects of the following procedures (Level 4):

- Excision of neck, thyroglossal and branchial cleft cysts and fistulae
- Drainage of superficial and deep neck space infections
- Examination of the neck and upper aerodigestive tract in the clinic and in theatre
- Out patient and in patient endoscopy
- Fine needle aspiration for cytology
- Excision of cervical lymph nodes
- Submandibular gland excision
- Endoscopic assessment of head and neck cancer
- Endoscopic assessment of the airway, intubation, tracheostomy, and foreign body removal
- The removal of foreign bodies from the pharynx and oesophagus
- The drainage of peritonsillar abscess.
- Tonsillectomy and adenoidectomy.
- Endoscopic examination of the neck and upper aerodigestive tract in the outpatient department
- Surgical ventilation of the ears; adenoidectomy
- The drainage of auricular haematomas
- Myringoplasty and ossiculoplasty
- Microscope assessment of the ear/ microsuction and insertion of dressings
- Mastoidectomy for disease and access
- Cortical mastoidectomy

- Functional Endoscopic Sinus Surgery
- Septorhinoplasty
- Septoplasty
- Tracheostomy
- Palatal surgery for OSAS/snoring
- Exploration neck for trauma and Neck Dissection
- Removal foreign bodies from upper aerodigestive tract

Click on [Workplace Based Assessments](#) to view the assessment forms including DOPS and PBAs

ENT trainees are required to use the FHI e-logbook to record their operations

## Final Stage Topics for all trainees

<b>Topic</b>	<b>Foreign bodies in the ear canal, nasal foreign bodies, ingested foreign bodies both swallowed and inhaled</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Foreign bodies in the ear nose and throat
<b>Objective</b>	<i>Safe definitive management of children with suspected and actual foreign bodies in the ear and nose; primary management of inhaled foreign bodies to facilitate safe transfer for tracheobronchoscopy as needed.</i>
<b>Knowledge</b>	4 Recognition of the clinical features of foreign bodies in the ear nose and throat; knowledge of the natural history and the complications associated with treatment.
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 4 Ability to take a thorough history from the child/carer 4 Otoscopy 4 Rhinoscopy  4 Assessment of the airway in the child  DATA INTERPRETATION 3 Assessment of plain radiography at a basic level e.g. recognition of gross abnormalities on chest radiograph 3 Assessment of soft tissue x-ray of the neck  PATIENT MANAGEMENT 3 Emergency airway care
<b>Technical Skills and Procedures</b>	4 Otomicroscopy and removal of FB 4 Removal of nasal foreign body 4 Pharyngo-oesophagoscopy

<b>Topic</b>	<b>Nasal injuries, haematoma of the pinna, trauma to the external, middle and inner ear, neck trauma</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Trauma to the head and neck
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	4 Presentation and management of nasal fractures 4 Nasal septal haematoma 4 Ear trauma 4 Good knowledge of common aetiologies and awareness of the possible presentations of non-accidental injury in the ENT department.
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 4 Ability to take a thorough history from child/parent 4 Assessment of the external nose 4 Assessment of the nasal airway 4 Clinical examination of the ear including otoscopy 4 Assessment of the neck including the airway 4 Otoscopy DATA INTERPRETATION 4 Pure tone audiometry, tympanometry  PATIENT MANAGEMENT

	Emergency airway care see section
<b>Technical Skills and Procedures</b>	4 Nasal fracture manipulation 4 Drainage of septal haematoma 4 Drainage of haematoma of pinna

<b>Topic</b>	<b>Spontaneous epistaxis; epistaxis in children with coagulopathy; epistaxis as a presentation of systematic disease</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Epistaxis
<b>Objective</b>	<i>Optimum recognition and management of children with epistaxis;</i>
<b>Knowledge</b>	4 Thorough knowledge of the pathophysiology, epidemiology, natural history and current approach to treatment of epistaxis to include awareness of the evidence base for current treatment regimens. 4 Understand the role of systemic diseases and their treatments in relation to epistaxis 4 Understand the guidelines for investigations
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 4 Ability to take a thorough history from the child/carer 4 Anterior Rhinoscopy 4 Flexible Nasendoscopy 4 Rigid Nasendoscopy 4 Examination of the neck 4 Otoscopy  DATA INTERPRETATION 4 Interpretation of full blood count; awareness of significance of coagulation tests  PATIENT MANAGEMENT 4 Medical and surgical management of epistaxis
<b>Technical Skills and Procedures</b>	4 Nasal cautery

<b>Topic</b>	<b>Rhinosinusitis; complications of sinus infections</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Nose and Sinus infections
<b>Objective</b>	<i>Optimum recognition and management of children with rhinosinusitis; particularly complicated sinus disease e.g. orbital cellulitis, intracranial sepsis.</i>
<b>Knowledge</b>	4 Thorough knowledge of the pathophysiology, epidemiology, natural history and current approach to treatment of infective rhinitis to include awareness of the evidence base for current treatment regimens. 4 Recognition and emergency management of complications
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 4 Ability to take a thorough history from the child/carer 4 Anterior Rhinoscopy 4 Flexible Nasendoscopy 4 Rigid Nasendoscopy 4 Examination of the neck 4 Otoscopy

	<p>DATA INTERPRETATION 3 Awareness of imaging techniques; assessment of abnormalities on CT scanning of the paranasal sinuses</p> <p>PATIENT MANAGEMENT 4 Medical and surgical management of rhinitis, rhinosinusitis</p>
<b>Technical Skills and Procedures</b>	<p>2 External frontoethmoidectomy 1 Drainage of sphenoid sinus</p>

<b>Topic</b>	<b>Congenital laryngeal pathology including laryngomalacia, subglottic stenosis, acute laryngeal infections</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Airway Disorders
<b>Objective</b>	<i>Safe recognition of main patterns of presentations of children with airway obstruction at birth, in infancy and in later childhood. Includes primary management to enable definitive treatment of main conditions.</i>
<b>Knowledge</b>	4 Clinical feature of airway obstruction, clinical measures to determine severity of obstruction, awareness of spectrum of causes, treatment options and natural history of main conditions at different ages e.g. laryngeal webs in the newborn, laryngomalacia, acute epiglottitis and laryngotracheobronchitis.
<b>Clinical Skills</b>	<p>HISTORY AND EXAMINATION 3 Assessment of the airway in the newborn</p> <p>DATA INTERPRETATION 3 Assessment of pulse oximetry findings, assessment of plain radiography at a basic level e.g. recognition of gross abnormalities on chest radiograph and CT</p> <p>PATIENT MANAGEMENT 4 Medical management e.g. steroids, adrenaline, bronchodilators. 2 Emergency airway care</p>
<b>Technical Skills and Procedures</b>	<p>2 Paediatric panendoscopy both in the outpatients and in theatre 2 Paediatric tracheotomy emergency and elective</p>

<b>Early Years training in Otolaryngology (ORL)</b>	
<b>The drooling child</b>	
<b>Objective</b>	<ul style="list-style-type: none"> <li>To be competent at assessing a child who presents with the symptom of drooling, and to understand the principles behind management of these patients.</li> </ul>
<b>Knowledge</b>	<p>4. Anatomy of the major and minor salivary glands 4. Anatomy of the oral cavity 3. Physiology of salivation</p>



	<p>3. Know the causes and predisposing factors (including syndromes) for drooling</p> <p>1. Understand how multidisciplinary input is used in the management of drooling children.</p> <p>1. Understand the principles that inform the non medical, medical and surgical management of drooling children</p>
<b>Clinical Skills</b>	<p>3. Undertake a comprehensive history and examination of a child who presents with drooling</p> <p>2. Be able to communicate an effective management plan to the patient and his or her carer</p> <p>2. Work with colleagues from other specialities and disciplines to provide effective care for children presenting with drooling.</p>
<b>Technical Skills and Procedures</b>	<p>2. Tonsillectomy</p> <p>2. Adenoidectomy</p> <p>3. Nasendoscopy (LA/GA)</p> <p>1. Transposition of submandibular ducts</p> <p>1. Neuromuscular blockade</p> <p>1. Tympanic neurectomy</p>

<b>Topic</b>	<b>Acute tonsillitis, complications of tonsillitis, adenoids, obstructive sleep apnoea</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Tonsils and adenoids
<b>Objective</b>	<i>Definitive secondary-care management of adenotonsillar disease in otherwise healthy children, Management in syndromic and special needs children is often in a designated children's hospital.</i>
<b>Knowledge</b>	4 Epidemiology, classification, aetiology and natural history of adenotonsillar disease. Thorough understanding of the evidence base that underpins current treatment approaches. Awareness of controversies. Except for the management of very young (under four years) children and those with complex medical needs e.g. syndrmic children.
<b>Clinical Skills</b>	<p>HISTORY AND EXAMINATION</p> <p>4 Ability to take a through history from child/parent.</p> <p>4 Otoscopy</p> <p>4 Examination of the pharynx including endoscopy</p> <p>DATA INTERPRETATION</p> <p>4 Assessment of the adenoids and airway using plain radiography</p> <p>3 Awareness of the principles that underpin sleep studies in children</p> <p>PATIENT MANAGEMENT</p> <p>Comprehensive management including surgery as appropriate</p>
<b>Technical Skills and Procedures</b>	<p>4 Tonsillectomy</p> <p>4 Adenoidectomy</p> <p>4 Arrest of adenotonsillar bleeding as an emergency</p>

<b>Topic</b>	<b>Syndromes with important ORL manifestations, cleft palate and the major malformations of the ears nose and throat</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Congenital deformities affecting the head and neck
<b>Objective</b>	<i>Safe primary management of children with congenital deformities of the head and neck, awareness of the principles that underpin long-term care.</i>
<b>Knowledge</b>	Basic knowledge of the range of deformities that present at birth with an emphasis on awareness of those that affect the airway e.g. choanal atresia, cystic hygroma. Level 2
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 3 Assessment of the airway in the newborn  DATA INTERPRETATION Assessment of pulse oximetry findings, assessment of plain radiography at a basic level e.g. recognition of gross abnormalities on chest radiograph and CT  PATIENT MANAGEMENT 2 Emergency airway care 4 Management of OME in cleft palate children
<b>Technical Skills and Procedures</b>	1 surgical procedures but not required

<b>Topic</b>	<b>Congenital masses e.g vascular malformations, thyroid and thyroglossal duct swellings, acute and chronic infections and granulomatous disorders that cause neck swellings, cervical adenopathy, awareness of the rare malignancies that present with neck masses</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Neck Masses
<b>Objective</b>	<i>Safe recognition of main patterns of presentations of children with neck swellings at birth, in infancy and in later childhood. Includes primary management to enable definitive treatment of common conditions.</i>
<b>Knowledge</b>	3 Classification of vascular malformations, awareness of treatment options 3 applied embryology of thyroid gland descent and awareness of commoner causes of swellings related to the thyroid gland and thyroglossal duct 3 applied anatomy of the neck spaces and awareness of the presentation, clinical features and primary management of abscesses and collections in these spaces 4 Knowledge of the range of causes and natural history of cervical adenopathy, good grasp of the evidence base which guides the selection of children for neck node biopsy
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 4 Assessment of the neck, ability to take a thorough history from child/parent.  DATA INTERPRETATION 3 Assessment of plain radiography at a basic level e.g. recognition of gross abnormalities on chest radiograph. Awareness of the range of imaging

	options available e.g. sonography, CT, MR scanning.  PATIENT MANAGEMENT 3 Emergency airway care 3 The role of surgery
<b>Technical Skills and Procedures</b>	4 Flexible endoscopy 4 Incision drainage neck abscess 4 Biopsy neck node 3 Other surgical procedures depending on experience gained

<b>Topic</b>	<b>Speech delay, disorders of articulation</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Speech and language development
<b>Objective</b>	<i>Awareness of the epidemiology and presentation of delayed speech and its relevance to ENT disorders. Awareness of the main disorders of articulation e.g hyponasal and hypernasal speech.</i>
<b>Knowledge</b>	3 The normal developmental milestones with an emphasis on speech and language acquisition. Major causes of delayed speech 4 Pathology that underlies hyponasal and hypernasal speech. Role of the adenoids
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 4 Ability to take a thorough history from child/parent 3 Ability to distinguish hyponasal and hypernasal speech i.e clinical assessment of speech 4 Otoscopy 4 Flexible endoscopy  DATA INTERPRETATION 4 Pure tone audiometry 3 Hearing tests in pre-school child  PATIENT MANAGEMENT  3 Multidisciplinary teams in the management of children with speech and other developmental problems
<b>Technical Skills and Procedures</b>	4 Flexible endoscopy, examination of the nasopharynx 4 Division of tongue tie

<b>Topic</b>	<b>Main cancers that affect the head and neck in children, including lymphoma</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Oncology
<b>Objective</b>	<i>Awareness of the epidemiology presentation and principles of management of malignant disease in the head and neck.</i>
<b>Knowledge</b>	3 Classification of the main malignancies, knowledge of typical presentations, understanding of the natural history of childhood cancers with an emphasis

	on differences between adult and childhood disease. Awareness of issues relating to the management of the child and family with cancer including palliative care e.g. management of epistaxis.
<b>Clinical Skills</b>	<p>HISTORY AND EXAMINATION</p> <ul style="list-style-type: none"> <li>4 Ability to take a thorough history from child/parent</li> <li>4 Examination of the neck</li> <li>4 Examination of the cranial nerves</li> <li>4 Otoscopy</li> <li>4 Flexible endoscopy</li> </ul> <p>DATA INTERPRETATION</p> <ul style="list-style-type: none"> <li>3 Awareness of the range of diagnostic tests available particularly imaging</li> </ul> <p>PATIENT MANAGEMENT</p> <ul style="list-style-type: none"> <li>4 Initial diagnosis and liaison with colleagues</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Flexible endoscopy,</li> <li>4 Examination of the nasopharynx</li> <li>4 Neck node biopsy</li> <li>4 Biopsy of tumours</li> </ul>

<b>Topic</b>	<b>Congenital lesions including cysts, sinus's and fistulas; abnormalities of the pinna; inflammatory disease of the ear canal</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Disorders of the external ear in children
<b>Objective</b>	<i>Recognition and classification of the principle congenital anomalies; management of otitis externa; management of uncomplicated lesions of the pinna e.g. accessory auricles, sebaceous cysts</i>
<b>Knowledge</b>	4 Recognition of the clinical features of foreign bodies in the ear nose and throat; knowledge of the natural history and the complications associated with treatment.
<b>Clinical Skills</b>	<p>HISTORY AND EXAMINATION</p> <ul style="list-style-type: none"> <li>4 Ability to take a thorough history from the child/carer</li> <li>4 Inspection of the external ear and recognition of main anomalies; Otoscopy</li> </ul> <p>DATA INTERPRETATION</p> <ul style="list-style-type: none"> <li>4 Age-appropriate assessment of hearing; Tympanometry; Awareness of the imaging techniques and principle findings in microtia.</li> </ul> <p>PATIENT MANAGEMENT</p> <ul style="list-style-type: none"> <li>3 Rehabilitation of hearing loss in microtia; selection of children for referral for ear reconstruction/prostheses; Counselling of families but not definitive management of microtia and other major anomalies of the external ear.</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Otomicroscopy</li> <li>4 Excision of simple lesions in and around the external ear</li> <li>3 Surgery for prominent ears requires specific training</li> </ul>

<b>Topic</b>	<b>Congenital deafness, classification of causes, investigation and rehabilitation</b>
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<b>Category</b>	Paediatric
<b>Sub-category:</b>	Deafness excluding otitis media and its complications
<b>Objective</b>	<i>Awareness of the epidemiology and presentation of deafness, good knowledge of range of causes, awareness of diagnostic and investigative strategies and knowledge of the principles that underpin rehabilitation including amplification and cochlear implantation</i>
<b>Knowledge</b>	3 Applied embryology of the ear including congenital deformities of the ear and their relationship to deafness 3 Differential diagnosis 3 Genetic, syndromic and non-syndromic deafness 3 The principles of audiometric screening 3 The principles of audiological testing and the range of tests available 3 Rehabilitation of the deaf child with an emphasis on hearing aids 3 Cochlear implantation
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 4 Ability to take a through history from child/parent. 4 Otoscopy  DATA INTERPRETATION 3 Awareness of the range of investigative options available especially the principles of genetic testing e.g connexin measurements, imaging e.g. sonography, CT, MR scanning  PATIENT MANAGEMENT As above
<b>Technical Skills and Procedures</b>	4 Microscopic examination of the ear 2 All other surgical procedures but the nature will depend on the training available

<b>Topic</b>	<b>Acute otitis media, recurrent acute otitis media, otitis media with effusion (OME), chronic otitis media, mastoiditis, intracranial sepsis</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Otitis media and its complications
<b>Objective</b>	<i>Definitive secondary-care management of inflammatory middle –ear disease and its complications</i>
<b>Knowledge</b>	4 Epidemiology, classification, aetiology and natural history of each variant of otitis media. 4 Thorough understanding of the evidence base which underpins current treatment approaches. 4 Except for the surgical management of cholesteatoma and the use of bone-anchored hearing aids trainees are expected to progress to level 4.
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 4 Ability to take a through history from child/parent 4 Otoscopy 4 Examination of the cranial nerves 3 Neurological examination DATA INTERPRETATION 4 Pure Tone Audiometry 4 Tympanometry 3 Diagnostic imaging e.g. ST scan, MRI

	3 Laboratory investigations e.g. blood tests, lumbar puncture and bacteriology results  PATIENT MANAGEMENT 4 Comprehensive management including surgery as appropriate 4 Referral and team working for children with complications of acute otitis media
<b>Technical Skills and Procedures</b>	4 Otomicroscopy 4 Tympanostomy tubes 4 Tympanoplasty 4 Cortical Mastoidectomy 3 Other procedures depending on experience and exposure

<b>Topic</b>	<b>Congenital and acquired causes of facial palsy that are of particular importance in children and the principles of management and rehabilitation with an emphasis on how these differ in children</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Facial Palsy
<b>Objective</b>	<i>Safe primary management of children with facial palsy, recognition of clinical pathologies that present with facial palsy.</i>
<b>Knowledge</b>	4 Basic knowledge of the range of aetiologies, the natural history of the main causes, and the evidence base that underpins current investigation and management (This section complements the adult curriculum)
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 4 Ability to take a history from child/parent 4 Otoscopy 4 Examination of the head and neck 4 Assessment of the cranial nerves in children  DATA INTERPRETATION 2 Awareness of the range of diagnostic tests and the principles that govern their use e.g. electroneuronography, imaging of the facial nerve  PATIENT MANAGEMENT 4 Principles of pharmacological management (e.g steroids, anti-viral agents) 4 Emergency care 4 Eye protection
<b>Technical Skills and Procedures</b>	4 Myringotomy (3 to 4) 4 Drainage of mastoid abscess

<b>Topic</b>	<b>Rhinitis, allergic rhinitis</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Inflammatory nasal disease (including allergic rhinitis)
<b>Objective</b>	<i>Optimum recognition and management of children with rhinitis.</i>
<b>Knowledge</b>	4 Thorough knowledge of the pathophysiology, epidemiology, natural history and current approach to treatment of allergic rhinitis to include awareness of the evidence base for current treatment regimens.
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 4 Ability to take a thorough history from the child/carer 4 Anterior Rhinoscopy 4 Flexible Nasendoscopy

	4 Rigid Nasendoscopy 4 Examination of the neck 4 Otoscopy  DATA INTERPRETATION 4 Skin tests for allergies; Blood tests for allergies; 3 Awareness of imaging techniques; assessment of abnormalities on CT scanning of the paranasal sinuses 3 Knowledge of immunological tests, ciliary function tests/nasal biopsy.  PATIENT MANAGEMENT 4 Medical and surgical management of rhinitis
<b>Technical Skills and Procedures</b>	4 Submucous diathermy

<b>Topic</b>	<b>Inflammatory nasal polyposis; nasal masses e.g. encephalocele, rare nasal tumours</b>
<b>Category</b>	Paediatric
<b>Sub-category:</b>	Nasal Polyps in Children
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	4 Recognition of the aetiology and clinical features of foreign nasal polyps including cystic fibrosis and the contents of the anterior cranial fossa presenting as nasal polyps 4 Knowledge of the natural history and the complications associated with treatment 4 The relationship to other respiratory disease including those in the lower respiratory tract
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 4 Ability to take a thorough history from the child/carer 4 Anterior Rhinoscopy 4 Flexible Nasendoscopy 4 Rigid Nasendoscopy 4 Examination of the neck 4 Otoscopy  DATA INTERPRETATION 3 Awareness of imaging techniques; assessment of abnormalities on CT scanning of the paranasal sinuses 3 Knowledge of immunological tests, ciliary function tests/nasal biopsy  PATIENT MANAGEMENT 4 Medical and surgical management of nasal polyposis Investigation of nasal masses (2 to 4)
<b>Technical Skills and Procedures</b>	4 Nasal Polypectomy either endoscopically or with direct vision 1 Anterior ethmoidectomy in children 2 Middle meatal antrostomy

<b>Topic</b>	<b>Adenoid and tonsillar pathology in adults</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	<i>None</i>

<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of benign adenotonsillar and pharyngeal disease. This module gives some indication of the breadth and depth of required knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Demonstrate a detailed knowledge of the anatomy, physiology, pathology &amp; microbiology of the oro and nasopharynx incl relevant anatomical relationships</li> <li>4 Know the presenting signs and symptoms of benign adenotonsillar &amp; pharyngeal disease</li> <li>4 Know the complications of adenotonsillar infection.</li> <li>4 Understand the investigation, differential diagnosis and complications of adenotonsillar hypertrophy</li> <li>4 Know the 'red flag' indicators of malignant disease of the pharynx</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Demonstrate expertise at eliciting an appropriate clinical history and physical signs of benign adenotonsillar and pharyngeal disease and the complications of treatment including those involving the airway</li> <li>4 Diagnosis and medical management of post-operative haemorrhage following adenotonsillar surgery</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Incision and drainage of peritonsillar abscess.</li> <li>4 Manage the compromised airway due to hypertrophy</li> <li>4 Tonsillectomy and adenoidectomy in adults and children</li> <li>4 Surgical management of post-operative bleeding following adenotonsillar surgery</li> </ul>

<b>Topic</b>	<b>Airway obstruction in adults</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of patients presenting with upper airway disorders in the emergency situation in adults. This module gives some indication of the breadth and depth of required. Knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Demonstrate a detailed knowledge of the anatomy &amp; physiology of the larynx, trachea, pharynx and oral cavity</li> <li>4 Understand the microbiology and pathology of disorders of the upper aerodigestive tract.</li> <li>4 Understand the classification of diseases that may present with airway obstruction.</li> <li>4 Understand the principles of patient management of patients presenting with airway obstruction.</li> <li>4 Know the different methods of securing an airway safely (surgical &amp; non surgical) in an emergency setting</li> <li>3 Understand the indications &amp; techniques for surgical debulking of upper airway malignancies</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Be able to elicit an appropriate clinical history and correctly interpret physical signs.</li> <li>4 be aware of the role of appropriate investigation in the management of airway obstruction</li> <li>4 Demonstrate the ability to work effectively with anaesthetists and those involved in critical care who manage the 'shared airway'.</li> <li>4 Demonstrate expertise in the safe assessment of patients with critical airways.</li> </ul>



<b>Technical Skills and Procedures</b>	<p>4 Be competent at performing the following diagnostic procedures; fiberoptic nasopharyngoscopy, direct laryngoscopy, microlaryngoscopy, bronchoscopy, pharyngo oesophagoscopy</p> <p>3 Be competent at performing endotracheal intubation</p> <p>4 Be proficient at performing a surgical tracheostomy in the elective &amp; emergency setting both under general and local anaesthesia</p> <p>4 Be competent at foreign body removal from the airway in adults</p> <p>3 Debulking procedures (laser/microdebrider)</p>
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<b>Topic</b>	<b>Aetiology and management of the craniocervical trauma in adults</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of a patient with craniocervical trauma. This module gives some indication of the breadth and depth of required knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<p>4 Understand the anatomy of the head and neck</p> <p>4 Understand the pathophysiological effects of blunt, penetrating and high and low velocity projectile trauma to the bones and soft tissues of the head and neck</p> <p>4 Understand the Le Fort classification of facial fractures and their effects.</p> <p>3 Understand the classification of fractures of the mandible and their effects</p> <p>4 Understand the classification of fractures of the temporal bone and their effects.</p> <p>4 Understand the consequences and potential complications of injury to structures in the neck, in the 3 horizontal entry zones of the neck.</p> <p>4 Understand the principles underpinning the appropriate investigation of a patient with a penetrating injury of the neck</p> <p>4 Understand the principles of the Glasgow Coma Scale and the management of the patient with an altered level of consciousness.</p> <p>4 Understand the principles of management of traumatic injury to the head and neck, including the indications for urgent surgical exploration and the priorities underpinning the planning of investigation and management.</p> <p>4 Understand the need for a multidisciplinary approach to management of craniocervical trauma</p>
<b>Clinical Skills</b>	<p>4 Be able to elicit and appropriate clinical history from a patient with craniocervical trauma (or from a third party witness).</p> <p>4 Be able to demonstrate the relevant clinical signs from a patient with craniocervical trauma.</p> <p>4 Be able to appropriately order and interpret the results of investigations in a patient with craniocervical trauma.</p> <p>4 Be able to coordinate the assembly of an appropriate multidisciplinary team to manage a patient with craniocervical trauma.</p>
<b>Technical Skills and Procedures</b>	<p>4 Be able to secure the airway through intubation or tracheostomy</p> <p>4 Be able to explore the traumatized neck and secure bleeding vessels.</p> <p>4 Be able to manage penetrating injury to the viscera of the upper aerodigestive tract</p> <p>3 Be able to undertake microsurgical reanastomosis of divided nerves where appropriate</p>

<b>Topic</b>	<b>Disorders of swallowing</b>
<b>Category</b>	Head and Neck

<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of common disorders of swallowing, including dysphagia, globus pharyngeus, neurological swallowing disorders, odynophagia and aspiration. This module gives some indication of the breadth and depth of required knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Understand the anatomy of the pharynx, and physiology of swallowing.</li> <li>4 Understand causes of odynophagia.</li> <li>4 Understand the various hypotheses relating to the aetiology of dysphagia.</li> <li>4 Understand the investigation and imaging of a patient with dysphagia.</li> <li>4 Understand the principles of medical and surgical management of dysphagia</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Elicit an appropriate clinical history and clinical signs.</li> <li>4 Be able to examine the pharynx and oesophagus with mirrors and endoscopes in outpatients</li> <li>4 Be able to work in cooperation with Speech &amp; language therapists in the management of dysphagia</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Flexible fiberoptic nasopharyngolaryngoscopy</li> <li>4 Interpretation of videofluoroscopic swallowing studies</li> <li>4 Fiberoptic endoscopic evaluation of swallowing studies</li> <li>4 Endoscopic examination of pharynx, larynx and oesophagus under general anaesthesia</li> <li>4 Removal of foreign bodies from the pharynx, larynx and oesophagus under general anaesthesia</li> <li>3 Be able to perform competently endoscopic and open pharyngeal pouch surgery</li> </ul>

<b>Topic</b>	<b>Aetiology and management of cervical sepsis</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of a patient with cervical sepsis. This module gives some indication of the breadth and depth of required knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Understand the anatomy of the fascial compartments of the neck.</li> <li>4 Understand the pathogenesis(including congenital abnormalities) and clinical presentation of deep neck space infections.</li> <li>4 Know the microbiology of deep neck space infections.</li> <li>4 Understand the principles of medical and surgical management of deep neck space infection, including image guided drainage procedures.</li> <li>4 Understand the complications of deep neck space infections and their management.</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Be able to elicit an appropriate history from a patient with deep cervical sepsis.</li> <li>4 Be able to demonstrate the relevant clinical signs from a patient with deep cervical sepsis.</li> <li>4 Be able to order and interpret the results of appropriate investigations, including imaging and microbiological cultures, in a patient with deep cervical sepsis.</li> <li>4 Be able to undertake treatment of a patient with deep cervical sepsis or complications thereof.</li> </ul>

<b>Technical Skills and Procedures</b>	<p>4 Be proficient in rigid endoscopic examination of the upper aerodigestive tract</p> <p>4 Be proficient in management of the compromised upper airway in deep cervical sepsis, including tracheostomy.</p> <p>4 Manage the patient in conjunction with anaesthetists/intensivists</p> <p>4 Be competent in the open incision and drainage of a deep cervical abscess, as well as demonstrating awareness of the complications of such procedures.</p>
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<b>Topic</b>	<b>Aetiology and management of congenital abnormalities of the head and neck affecting adults</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of a patient with congenital abnormality of the head and neck. This module gives some indication of the breadth and depth of required knowledge and surgical skills. This section complements the paediatric section as most of the problems will present there. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<p>4 Understand the embryology of the head and neck.</p> <p>4 Understand the anatomy of the neck.</p> <p>4 Understand the morphology and classification of pharyngeal diverticulae.</p> <p>4 Understand the pathophysiological effects of pharyngeal diverticulae and the principles underlying their management</p> <p>4 Understand the theories relating to the pathogenesis of branchial arch abnormalities including branchial cyst, collaural fistula, external ear malformations, thyroglossal duct related malformations, cervical sinuses and fistulae.(ie branchial cleft abnormalities)</p> <p>4 Understand the principles of management of branchial arch abnormalities including branchial cyst, collaural fistula, external ear malformations, thyroglossal duct related malformations, cervical sinuses and fistulae.</p> <p>3 Know of syndromes associated with congenital abnormalities of the head and neck</p> <p>3 Understand the morphology and classification of dentoalveolar malformations and the principles underlying their management.</p> <p>4 Understand the morphology and classification of congenital abnormalities of the larynx, trachea and oesophagus and the principles underlying their management.</p> <p>3 Understand the morphology, classification of and pathophysiological effects of cleft lip and palate, and the principles of management thereof.</p> <p>4 Understand the investigation of congenital abnormalities of the head and neck including imaging and examination under anesthesia.</p> <p>3 Understand the principles of genetic counselling of patients or the parents of children with congenital abnormalities of the head and neck.</p>
<b>Clinical Skills</b>	<p>4 Be able to elicit an appropriate history from a patient with a congenital abnormality of the head and neck.</p> <p>4 Be able to demonstrate the relevant clinical signs from a patient with a congenital abnormality of the head and neck.</p> <p>4 Be able to undertake appropriately ordered investigation of a congenital abnormality of the head and neck.</p> <p>4 Be able to interpret imaging of congenital abnormalities of the head and neck.</p> <p>4 Understand the role of a multidisciplinary team in the management of congenital abnormalities of the head and neck.</p>

<b>Technical Skills and Procedures</b>	<p>4 Be able to perform appropriately directed examination under anaesthesia , including endoscopic assessment of a congenital abnormality of the head and neck.</p> <p>4 Be able to excise a pharyngeal diverticulum using open and endoscopic techniques.</p> <p>4 Be able to perform surgery to remove abnormalities of the thyroglossal duct.</p> <p>4 Be able to perform a tracheostomy under general and local anaesthesia.</p> <p>4 Be able to excise a branchial cyst.</p> <p>3 Be able to excise a branchial fistula</p>
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<b>Topic</b>	<b>Cervical lymphadenopathy in adults</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting symptoms &amp; signs and management of patients presenting with cervical lymphadenopathy. This module gives some indication of the breadth and depth of required knowledge and surgical skills. The list should not be considered to be fully inclusive and exhaustive.</i>
<b>Knowledge</b>	<p>4 Demonstrate knowledge of the aetiology &amp; pathology of cervical lymphadenopathy including manifestations of systemic disease.</p> <p>4 The need for endoscopic assessment of a neck mass this comes in under demonstrating knowledge of aetiology &amp; pathology therefore</p> <p>4 Be able to order the appropriate investigations of neck masses</p> <p>4 Understand the anatomy of the neck, and distribution of cervical lymph nodes. Classify the lymphatic levels of the neck according to the MSK classification.</p> <p>4 Demonstrate knowledge of the differing histology and microbiological causes of cervical lymphadenopathy.</p> <p>4 Presentation, aetiology, investigations and pattern of metastatic spread of upper aerodigestive tract, salivary gland, cutaneous and thyroid malignancies. 4 Demonstrate knowledge of the presentation, aetiology, investigations and principles of management of lymphoreticular disease as it applies to the head and neck.</p> <p>4 Principles of management of patients with cervical lymphadenopathy.</p> <p>4 Demonstrate knowledge of the indications for medical &amp; surgical management and the complications of management.</p>
<b>Clinical Skills</b>	4 Be able to take a relevant detailed history and interpret clinical signs correctly.
<b>Technical Skills and Procedures</b>	<p>4 Fine needle aspiration cytology</p> <p>4 Out patient and in-patient endoscopy of the UADT.</p> <p>4 Excision of cervical lymph nodes and deal with the complications</p> <p>2 Block dissections of lymph nodes</p>

<b>Topic</b>	<b>Head and neck malignancies in the upper aerodigestive tract excluding the oral cavity</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology of head and neck malignancies in the upper</i>

	<i>aerodigestive tract, presenting signs, symptoms and management of patients presenting with HNC. This module gives some indication of the breadth and depth of required. Knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive</i>
<b>Knowledge</b>	<p>4 Understand the classification of head and neck malignancies in particular squamous carcinoma as it is the commonest type (HNC) and know the principles of TNM staging.</p> <p>4 Know the pathology of HNC</p> <p>4 Understand the presenting signs and symptoms of head and neck cancer.</p> <p>4 Understand the various hypotheses relating to the aetiology of squamous cell cancer including the cellular basis of oncogenesis.</p> <p>4 Understand the pattern of spread of malignant disease.</p> <p>4 Understand how HNC is managed in the multidisciplinary setting.</p> <p>4 Know the indications for imaging in HNC and the use of relevant imaging modalities.</p> <p>3 Understand the functional consequences of head and neck cancer, and its treatment.</p> <p>4 Understand the principles involved in and evidence for the various medical and surgical methods of treatment available for head and neck cancer.</p> <p>3 Understand the role of surgical and medical treatment in palliative management of patients</p> <p>3 Understand the indications for reconstructive and rehabilitative surgery (including surgical voice restoration) in HNC</p> <p>3 Know the various reconstructive options available in HNC</p>
<b>Clinical Skills</b>	<p>4 Elicit a relevant clinical history and clinical signs including being able to perform an appropriate examination.</p> <p>4 Be able to work within the MDT, and recognise the contributions made by all team members.</p> <p>4 Demonstrate good communication skills with other professionals.</p> <p>4 Be able to break bad news sensitively and appropriately to patients and their families</p>
<b>Technical Skills and Procedures</b>	<p>4 Be able to perform the following diagnostic procedures; microlaryngoscopy, pharyngo-oesophagoscopy, tonsillectomy, examination of postnasal space, bronchoscopy, Fine Needle Aspiration Cytology (FNAC)</p> <p>3 Total Laryngectomy</p> <p>4 Comprehensive and selective neck dissection</p> <p>3 Partial laryngectomy</p> <p>4 Transoral laser surgery</p> <p>4 Reconstructive surgery with myocutaneous (pedicled) flaps</p> <p>3 Reconstructive surgery with free flaps</p> <p>4 Be able to manage safely acute complications of Head &amp; Neck surgery</p> <p>4 Be able to replace a tracheoesophageal valve in clinic.</p>

<b>Topic</b>	<b>Investigation and management of the neck and lump</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting symptoms &amp; signs and management of patients presenting with a neck lump. This module gives some indication of the breadth and depth of required knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<p>4 Understand the anatomy of the neck, and distribution of cervical lymph nodes. Classify the lymphatic levels of the neck.</p> <p>4 Know the differential diagnosis of a neck lump.</p>

	<p>4 Demonstrate knowledge of the aetiology &amp; pathology of cervical lymphadenopathy including manifestations of systemic disease.</p> <p>4 Understand the presentation, aetiology, investigations and pattern of metastatic spread of upper aerodigestive tract, salivary gland, cutaneous and thyroid malignancies.</p> <p>4 Understand the appropriate investigation of neck masses</p> <p>4 Demonstrate knowledge of the presentation, aetiology, investigations and principles of management of lymphoma and leukaemia as it applies to the head and neck.</p> <p>4 Understand the principles of medical and surgical management of patients with a neck lump</p> <p>4 Demonstrate knowledge of the potential complications of management.</p>
<b>Clinical Skills</b>	<p>4 Be able to take a relevant detailed history, perform appropriate examination and interpret clinical signs correctly..</p> <p>4 Demonstrate a rational approach to investigation of a neck lump</p>
<b>Technical Skills and Procedures</b>	<p>4 Perform (FNAC)</p> <p>4 Out patient and in patient endoscopy of the Upper aerodigestive tract</p> <p>4 Perform excision biopsy of cervical lymph nodes and deal with the complications.</p> <p>4 Branchial cyst excision and management of complications</p>

<b>Topic</b>	<b>Neoplastic salivary gland disease</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of neoplastic salivary gland disease. This module gives some indication of the breadth and depth of required knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<p>4 Know the anatomy &amp; physiology of the major &amp; minor salivary glands &amp; their relations.</p> <p>4 Know the anatomy of the neck.</p> <p>4 Know the anatomy of the oral cavity.</p> <p>4 Know the pathology of salivary gland tumours.</p> <p>4 Understand the classification of salivary gland tumours.</p> <p>4 Understand inflammatory swellings</p> <p>4 Know the presenting symptoms &amp; signs of salivary gland tumours.</p> <p>4 Understand the modalities (cytological &amp; imaging) available for investigating salivary gland tumours</p> <p>4 Know the differential diagnosis of salivary gland tumours and inflammatory swellings.</p> <p>4 Understand the principles of management of salivary gland tumours.</p> <p>4 Understand the potential consequences of salivary gland surgery and the complications of surgery</p> <p>3 Understand the principles of management (surgical &amp; non surgical) of malignant salivary gland disease</p> <p>3 Understand the role of reconstructive and palliative surgery in the management of malignant salivary gland disease</p>
<b>Clinical Skills</b>	<p>4 Be able to elicit an appropriate clinical history and interpret physical signs correctly</p> <p>4 Demonstrate the ability to detect 'red flag' symptoms &amp; signs of malignant disease.</p> <p>4 Order the most appropriate imaging modality</p> <p>4 Manage patients with malignant disease in a multidisciplinary team</p>

<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 FNAC</li> <li>4 Be able to perform a submandibular gland excision</li> <li>4 Biopsy of a minor salivary gland tumour</li> <li>4 Be able to perform a superficial parotidectomy</li> <li>4 Total parotidectomy</li> <li>4 Selective &amp; comprehensive neck dissection</li> <li>3 Facial nerve grafting &amp; facio-hypoglossal anastomosis</li> </ul>
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<b>Topic</b>	<b>Benign salivary gland disease</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of benign salivary gland disease. This module gives some indication of the breadth and depth of required. Knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Know the anatomy and physiology of the major and minor salivary glands.</li> <li>4 Understand the pathological processes, both local &amp; systemic, that can affect the salivary glands.</li> <li>4 Understand the classification of benign salivary gland disease including infection, inflammatory diseases, drugs and benign tumours</li> <li>4 Know the various imaging modalities for investigation of benign salivary gland disease.</li> <li>4 Understand the principles of patient management.</li> <li>4 Know the medical and surgical management of salivary gland disease, and the complications of surgery</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Be able to elicit an appropriate clinical history and interpret clinical signs correctly.</li> <li>4 Be able to order the appropriate special investigations and correctly interpret images including plain radiographs, computerized tomography and Magnetic resonance imaging.</li> <li>4 Be able to counsel patients on the particular risks of salivary gland surgery.</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Be able to excise a submandibular calculus</li> <li>4 Be able to perform submandibular gland excision</li> <li>4 Total parotidectomy for inflammatory disease</li> </ul>

<b>Topic</b>	<b>Thyroid and parathyroid disease</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of Thyroid and Parathyroid disorders. This module gives some indication of the breadth and depth of required knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Understand the embryology, physiology, biochemistry and anatomy of the thyroid gland.</li> <li>4 Understand the embryology, physiology, biochemistry and anatomy of the parathyroid glands.</li> <li>4 Understand the pathophysiology of endocrine dysfunction of the thyroid and parathyroid glands.</li> </ul>

	<p>4 Understand the classification of thyroid neoplasia.</p> <p>4 Understand the principles of investigation of a patient with endocrine dysfunction of the thyroid gland.</p> <p>4 Understand the principles of investigation of a patient with endocrine dysfunction of the parathyroid glands.</p> <p>4 Understand the principles of investigation of a patient with a parathyroid or thyroid mass</p> <p>4 Understand principles of medical and surgical management of endocrine dysfunction of the thyroid and parathyroid glands, including the peri operative management of thyrotoxicosis.</p> <p>4 Understand principles of medical and surgical management of neoplasia of the thyroid and parathyroid glands, including post operative complications.</p>
<b>Clinical Skills</b>	<p>4 Be able to elicit an appropriate clinical history from a patient with thyroid or parathyroid gland disease.</p> <p>4 Be able to demonstrate relevant clinical signs in a patient with thyroid or parathyroid gland disease</p> <p>4 Be able to obtain appropriate samples for fine needle cytology or microtrephine biopsy from a patient with a thyroid or parathyroid mass.</p>
<b>Technical Skills and Procedures</b>	<p>4 Be able to perform thyroid surgery.</p> <p>3 Be able to perform surgical exploration of the neck for parathyroid disease.</p> <p>2 Be able to explore the superior mediastinum for thyroid and parathyroid neoplasia.</p>

<b>Topic</b>	<b>Oral pathology</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of patients presenting with disorders of the oral cavity. This module gives some indication of the breadth and depth of required knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<p>4 Understand the anatomy of the oral cavity</p> <p>4 Know the normal flora of the oral cavity and how oral disease can alter oral flora</p> <p>4 Understand the physiology of the oral phases of swallowing</p> <p>4 Know the physiology of salivary function</p> <p>4 Understand the consequences of oral disease on swallowing</p> <p>4 Understand the consequences of salivary gland dysfunction on oral health</p> <p>4 Know the causes of drooling and the principles of management thereof.</p> <p>3 Understand the aetiology, pathophysiology, presenting symptoms and signs of dental caries</p> <p>3 Know the pathophysiology, presenting symptoms &amp; signs and management of mucosal oral disease including infection, inflammation, soft tissue and bony conditions</p>



	<ul style="list-style-type: none"> <li>4 Understand the aetiology of oral cancer</li> <li>4 Know the presenting symptoms and signs of oral cancer</li> <li>4 Understand the principles of management of oral cancer</li> <li>4 Understand the long and short term effects of chemotherapy and radiotherapy on oral health</li> <li>4 Understand the appropriate modalities for imaging oral disease</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Be able to elicit an appropriate clinical history and interpret physical signs correctly</li> <li>4 Demonstrate the ability to detect 'red flag' symptoms &amp; signs of malignant disease.</li> <li>4 Order the most appropriate imaging modality</li> <li>4 Be able to interpret plain images of the oral cavity and associated bony structures</li> <li>3 Manage patients with malignant disease in a multidisciplinary team</li> <li>4 be able to diagnose dental related sepsis presenting in the neck or paranasal sinuses</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Perform a biopsy of an oral lesion</li> <li>4 Remove and treat benign oral lesions</li> <li>2 Partial glossectomy</li> <li>2 Submandibular gland transposition for drooling</li> <li>3 Simple dental extractions</li> <li>3 Closure of oroantral fistulae</li> <li>2 Mandibulotomy and excision of floor of mouth lesion</li> <li>2 Total glossectomy</li> </ul>

<b>Topic</b>	<b>Sleep related breathing disorders</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of sleep related breathing disorders . This module gives some indication of the breadth and depth of required knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Know the aetiology, presenting signs and symptoms of sleep related breathing disorders, including snoring, obstructive sleep apnoea / hypopnoea and central sleep apnoea in adults.</li> <li>4 Know of the pathophysiological sequelae of sleep related breathing disorders including snoring, obstructive sleep apnoea / hypopnoea and central sleep apnoea</li> <li>4 Understand the principles of assessment and investigation of sleep related breathing disorders, including sleep nasendoscopy and sleep studies / polysomnography.</li> <li>4 Understand the principles of management of sleep related breathing disorders including CPAP, mandibular advancement prostheses, nasal and pharyngeal surgery, tracheostomy and drug therapy.</li> <li>4 Understand the principles of midface and mandibular advancement surgery.</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Be able to elicit an appropriate clinical history and identify relevant clinical signs in a patient with a sleep related breathing disorder.</li> <li>4 Be able to make a correct diagnosis from the results of assessment and investigation of a patient with a sleep related breathing disorder, and synthesise an appropriate plan for their clinical management.</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Be able to perform palatal surgery for snoring/OSAS</li> <li>4 Be able to perform surgery to correct nasal airway obstruction.</li> <li>4 Be able to perform sleep nasendoscopy and out patient flexible fiberoptic</li> </ul>

	nasendoscopy
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<b>Topic</b>	<b>Voice disorders</b>
<b>Category</b>	Head and Neck
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of common voice disorders. This module gives some indication of the breadth and depth of required knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Understand the physics of sound</li> <li>4 Understand the embryology of the larynx and congenital malformations of the larynx</li> <li>4 Understand the maturational / developmental changes of the larynx</li> <li>4 Understand the anatomy, neuroanatomy and movements of the larynx</li> <li>4 Understand the physiology of phonation and articulation</li> <li>4 Understand the classification of dysphonias and the various hypotheses relating to the aetiology of dysphonias.</li> <li>4 Understand the classification of disorders of articulation</li> <li>4 Understand principles of videostroboscopic examination of the larynx, laryngography and analysis of pitch and periodicity of speech. (including photodocumentation)</li> <li>4 Understand the principles of the medical and surgical management of patients with dysphonia (including instrumentation).</li> <li>4 Know the principles of Speech and Language Therapy</li> <li>4 Know about inflammatory and neoplastic laryngeal disorders</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Elicit an appropriate clinical history from and demonstrate clinical signs in a dysphonic patient</li> <li>4 Communication skills with Speech &amp; Language therapists and ability to work in a multidisciplinary team.</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Laryngeal examination with mirrors and flexible fiberoptic endoscope in an outpatient setting</li> <li>4 Microlaryngoscopy</li> <li>4 Videostroboscopic laryngoscopy in an outpatient setting</li> <li>4 Microscopic / endoscopic laryngeal surgery and intralaryngeal injection techniques</li> <li>4 Laryngeal framework surgery</li> <li>2 Laryngeal electromyography</li> </ul>

<b>Topic</b>	<b>Acquired lesions including osteoma, exostosis and atresia, dermatological conditions, benign and malignant lesions, affect of</b>
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	<b>ionizing irradiation on the temporal bone. Trauma and foreign bodies.</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Non infective conditions of the external ear
<b>Objective</b>	<i>To understand the aetiology, pathology, presentation and management of non-infective conditions of the external ear.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 systemic conditions affecting external ear</li> <li>4 dermatological conditions of the external ear</li> <li>4 pharmacology of medications used in treatment</li> <li>4 aetiology, pathology, presentation and management of benign and malignant disease</li> <li>3 aetiology of acquired atresia of the external auditory meatus</li> <li>3 pathogenesis of effects of ionizing radiation of the ear and temporal bone</li> <li>4 aetiology, pathology, presentation and management of osteoma / exostosis</li> <li>4 management of foreign bodies</li> <li>4 understand the implications and management of trauma to the ear</li> </ul>
<b>Clinical Skills</b>	<p><b>HISTORY AND EXAMINATION</b></p> <ul style="list-style-type: none"> <li>4 obtain appropriate history</li> <li>4 clinical examination</li> <li>4 Otoscopy</li> <li>4 microscopy</li> </ul> <p><b>DATA INTERPRETATION</b></p> <ul style="list-style-type: none"> <li>3 interpretation of audiological</li> <li>3 awareness and interpretation of radiological investigations</li> </ul> <p><b>PATIENT MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>Medical management</li> <li>Comprehensive management including surgery as appropriate</li> <li>4 Referral and team working</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Aural toilet including microsuction and application of dressings</li> <li>4 Biopsy of lesion of external ear</li> <li>4 Wedge excision</li> <li>4 Oncological and reconstructive surgery</li> <li>4 Meatoplasty</li> <li>4 Removal of osteoma / exostosis</li> <li>4 Otomicroscopy and removal of FB's</li> <li>4 Drainage of haematoma of pinna</li> <li>4 Suturing of pinna</li> </ul>

<b>Topic</b>	<b>Comprehensive management of otitis externa, furunculosis, otomycosis, myringitis granular and benign, herpetic lesions and malignant otitis externa</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Infective conditions of the external ear including otitis externa, furunculosis, otomycosis, myringitis granular and benign/herpetic
<b>Objective</b>	<i>To understand the aetiology, pathology, presentation and management of infective conditions of the external ear.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Anatomy, physiology and pathology of the external ear and relationship of disease to the temporal bone.</li> <li>4 Microbiology of external ear</li> <li>4 Knowledge of antimicrobial and antiviral agents and pharmacology of medications used in treatment</li> </ul>

	<ul style="list-style-type: none"> <li>4 The pathogenesis of disorders of the external ear.</li> <li>4 Differential diagnosis and management of inflammatory conditions</li> <li>4 Necrotising otitis externa.</li> </ul>
<b>Clinical Skills</b>	<p><b>HISTORY AND EXAMINATION</b>  History taking, clinical examination including neuro – otological</p> <ul style="list-style-type: none"> <li>4 Interpret audio vestibular tests.</li> <li>4 Understand principles of patient management.</li> </ul> <p><b>DATA INTERPRETATION</b>  Awareness and interpretation of radiological investigations inc bone scanning  microbiological reports</p> <ul style="list-style-type: none"> <li>4 interpretation of laboratory investigations</li> </ul> <p><b>PATIENT MANAGEMENT</b>  Medical management  Indications for surgical intervention</p>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Microscopy</li> <li>4 suction clearance</li> <li>4 biopsy of lesion of external ear</li> </ul>

<b>Topic</b>	<b>Trauma</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Trauma
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of trauma of the external, middle and inner ear including the temporal bone. This module gives some indication of the breadth and depth of required knowledge and surgical skills.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Anatomy, physiology and pathology of the ear and auditory pathways.</li> <li>4 The effects of trauma on the pinna, ear canal, tympanic membrane, middle ear, otic capsule and temporal bone.</li> <li>4 The effects and assessment of poly-trauma and neurological injury.</li> <li>4 The effects of barotrauma</li> <li>4 The surgical and non-surgical management of trauma of the external, middle and inner ear.</li> </ul>
<b>Clinical Skills</b>	<p><b>HISTORY AND EXAMINATION</b>  4 History taking, clinical examination,  4 Audiological and vestibular assessment  4 Neurophysiological assessment of facial nerve</p> <p>3 Significance of radiological findings.  4 Interpret audio-vestibular tests.  4 Principles of patient management</p> <p><b>DATA INTERPRETATION</b>  4 objective and subjective audiological and vestibular tests  3 Radiological imaging of the temporal bone, head and neck  4 Laboratory investigations</p> <p><b>PATIENT MANAGEMENT</b>  Demonstrate communication skills and empathy  4 Be able to advise the patient of the treatment options, discuss risks and potential benefits, potential complications</p>

	<p>4 To work where appropriate in a multidisciplinary team liaise with other professional and organisations</p> <p>4 The importance of teamwork in managing critically ill patients</p>
<b>Technical Skills and Procedures</b>	<p>Microscopy</p> <p>Suction clearance of ear</p> <p>3 Meatoplasty</p> <p>4 Drainage of haematoma of pinna</p> <p>4 Suturing of pinna</p> <p>4 Exploratory tympanotomy</p> <p>4 Myringoplasty</p> <p>3 Ossiculoplasty</p> <p>3 Facial nerve decompression / anastomosis</p> <p>3 Repair of perilymph leak</p>

<b>Topic</b>	<b>Acute otitis media including mastoiditis, skull base infection, chronic otitis media and sequelae</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Middle ear
<b>Objective</b>	<p><i>Demonstrate communication skills and empathy.</i></p> <p><i>To understand the aetiology, presenting signs, symptoms and management of infection of the middle ear. This module gives some indication of the breadth and depth of required knowledge and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i></p>
<b>Knowledge</b>	<p>4 Anatomy, physiology and pathology of the ear and temporal bone</p> <p>4 The microbiology related to acute and chronic ear infections.</p> <p>4 Complications of acute otitis media.</p> <p>4 Principles and practice of audiology including pure tone audiometry, tympanometry</p> <p>4 Principle and practice of objective tests of hearing</p> <p>4 Interpretation of radiological investigations</p> <p>4 Pharmacology of medications used in medical treatment</p>
<b>Clinical Skills</b>	<p><b>HISTORY AND EXAMINATION</b></p> <p>4 Otological and neuro-otological examination</p> <p>4 Audiological assessment</p> <p>4 History taking, clinical examination,</p> <p>4 Understand principles of patient management</p> <p>4 Microscope assessment of the ear</p> <p><b>DATA INTERPRETATION</b></p> <p>4 Principle and practice of objective tests of hearing</p> <p>3 Interpretation of radiological investigations</p> <p><b>PATIENT MANAGEMENT</b></p> <p>medical and surgical treatments of acute infection to the middle ear and temporal bone</p>
<b>Technical Skills and Procedures</b>	<p>4 suction clearance</p> <p>4 microsuction and myringotomy</p> <p>4 myringotomy and grommet</p> <p>4 T tube insertion</p> <p>4 Grommet removal</p> <p>4 Myringoplasty</p> <p>4 Cortical mastoidectomy and access mastoidectomy</p> <p>4 Modified radical mastoidectomy</p>

<b>Topic</b>	<b>Management of adult deafness presenting as sudden or progressive conductive, mixed and sensorineural hearing loss</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Deafness in adults
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of adults who present with conductive, mixed, progressive or sudden onset of sensorineural deafness. This module gives some indication of the breadth and depth of required knowledge, clinical and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Embryology of the ear</li> <li>4 Anatomy, physiology and pathology of the ear and auditory pathways. Principles of acoustics and measurement of sound.</li> <li>4 Principles and practice of audiology including pure tone audiometry, speech audiometry and electrophysiological tests and other objective tests of hearing including oto-acoustic emissions</li> <li>3 Radiological imaging of the inner ear and central vestibular pathways</li> <li>3 The genetics of otological diseases</li> <li>4 The aetiology, pathogenesis and management of disorders of the ear and hearing; including both benign and malignant disease</li> <li>4 Noise induced hearing loss; preservation of hearing</li> <li>3 Central auditory processing disorders, auditory neuropathy, obscure auditory dysfunction</li> <li>3 Auditory rehabilitation including the use of hearing aids and other assistive devices.</li> <li>4 Social and psychological issues of deafness</li> <li>3 Principles of non-auditory communication</li> <li>4 Principles of surgical reconstruction.</li> <li>4 Management of severe/ profound hearing loss.</li> </ul>
<b>Clinical Skills</b>	<p><b>HISTORY AND EXAMINATION</b></p> <ul style="list-style-type: none"> <li>4 History taking, clinical examination inc neuro-otological</li> <li>4 Objective and subjective audiological assessment</li> <li>4 Principles of a holistic approach to the management of hearing loss</li> <li>4 Vestibular assessment, including electro physiological testing, and clinical examination</li> <li>3 Radiological assessment</li> <li>3 genetic counseling</li> </ul> <p><b>DATA INTERPRETATION</b></p> <ul style="list-style-type: none"> <li>4 audiological and vestibular tests</li> <li>3 Radiological imaging of the temporal bone , head and neck</li> <li>4 Laboratory investigations</li> </ul> <p><b>PATIENT MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>Demonstrate communication skills and empathy</li> <li>4 Be able to advise the patient of the treatment options, discuss risks and potential benefits, potential complications</li> <li>4 To work where appropriate in a multidisciplinary team Liaise with other professional and organisations</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Microscopy</li> <li>4 Suction clearance of ear</li> <li>4 Aural polypectomy</li> <li>4 Myringotomy +/- grommet</li> </ul>

	<ul style="list-style-type: none"> <li>3 Exploratory tympanotomy</li> <li>4 Myringoplasty</li> <li>3 Tympanoplasty</li> <li>3 Open and closed mastoidectomy</li> <li>3 Ossiculoplasty</li> <li>2 Stapedotomy / stapedectomy</li> <li>2 Cochlear implantation</li> <li>2 Middle ear implantation</li> <li>3 Insertion of Bone anchored hearing aid abutment</li> <li>3 closure of perilymph leak</li> <li>1 The surgical approaches to the CP angle</li> </ul>
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<b>Topic</b>	<b>Objective and subjective tinnitus</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Tinnitus
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of tinnitus. This module gives some indication of the breadth and depth of required knowledge, clinical and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Anatomy, physiology and pathology of the ear and auditory pathways.</li> <li>4 The pathogenesis of disorders of the ear and hearing</li> <li>4 Principles and practice of audiology including pure tone audiometry, speech audiometry and electrophysiological tests and other objective tests of hearing including oto-acoustic emissions</li> <li>3 Psycho-acoustical tests, pitch and loudness match, minimum masking level, residual inhibition</li> <li>4 The various hypotheses relating to the aetiology of tinnitus both objective and subjective</li> <li>4 The psychological effects of tinnitus</li> <li>3 Principles of tinnitus retraining and rehabilitation and the principles of support and counselling</li> <li>3 function of hearing aid(s) and masking</li> </ul>
<b>Clinical Skills</b>	<p>HISTORY AND EXAMINATION</p> <ul style="list-style-type: none"> <li>4 History taking, clinical examination including neuro-otological</li> <li>4 Otoscopy</li> <li>4 Microscopy</li> <li>3 Significance of radiological findings</li> </ul> <p>DATA INTERPRETATION</p> <ul style="list-style-type: none"> <li>4 Interpretation of neuro-otological radiology</li> <li>4 Interpretation of neuro-physiological tests</li> </ul> <p>PATIENT MANAGEMENT</p> <ul style="list-style-type: none"> <li>4 Principles of patient management</li> <li>4 Demonstrate communication skills and empathy.</li> <li>4 Be able to advise the patient of the treatment options, discuss risks and potential benefits.</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>3 Perform pure tone audiometry, tympanometry</li> <li>2 Pitch matching and masking</li> </ul>

<b>Topic</b>	<b>Upper and lower motor neuron disease of the facial nerve</b>
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<b>Category</b>	Otology
<b>Sub-category:</b>	Facial Paralysis
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of facial nerve palsy. This module gives some indication of the breadth and depth of required knowledge, clinical and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	4 The anatomy and physiology of facial nerve and related structures 4 The aetiology classification and neuro-physiology of facial paralysis 2 The relevant clinical neurological, vascular, radiological, biochemical, serological and electrophysiological investigations Per-operative facial nerve monitoring 2 Principles of rehabilitation for facial paralysis 1 Understand the psychological effects of facial disfigurement
<b>Clinical Skills</b>	HISTORY AND EXAMINATION 4 The anatomy and physiology of facial nerve and related structures 4 The aetiology classification and neuro-physiology of facial paralysis 3 The relevant clinical neurological, vascular, radiological, biochemical, serological and electrophysiological investigations 4 Principles of rehabilitation for facial paralysis 4 Understand the psychological effects of facial disfigurement  DATA INTERPRETATION 4 neuro-physiological tests of inner ear function and facial nerve 4 Neuro-otological radiological tests 4 Laboratory investigations  PATIENT MANAGEMENT 4 Demonstrate communication skills and empathy 4 Be able to advise the patient/parents or carers of the treatment options, discuss risks and potential benefits, potential complications and obtain informed consent. Liaise with other health care professionals.
<b>Technical Skills and Procedures</b>	3 Tarsorrhaphy 4 Cortical mastoidectomy 4 Modified radical mastoidectomy 3 Decompression of facial nerve 3 Facial nerve anastomosis

<b>Topic</b>	<b>Dizziness</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Dizziness
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of patients with disordered balance. This module gives some indication of the breadth and depth of required knowledge, clinical and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	4 Anatomy, neuro-anatomy and physiology of related to maintenance of balance [this was to encompass all this vestibular system, visual, locomotor and cardiovascular systems ] 4 Pathology and pathogenesis of diseases of the ear 4 The pathology and various hypotheses relating to the aetiology and management of sudden vestibular failure, Ménière's disease, benign paroxysmal vertigo, vestibular schwannoma, pharmacological and metabolic side effects



	<p>4 The handicaps related to age related sensory and proprioceptive degeneration psychological aspects of dizziness</p> <p>3 The relevant clinical neurological, vascular, radiological, biological, immunological and serological investigations</p> <p>4 The relationship of vestibular disorders to legislation relating to employment and driving</p> <p>4 The principles of vestibular rehabilitation</p> <p>4 The principles of particle repositioning manoeuvres</p> <p>4 Treatment options both non-surgical and surgical</p>
<b>Clinical Skills</b>	<p>HISTORY AND EXAMINATION</p> <p>4 History and clinical examination</p> <p>4 Vestibular assessment, including electro physiological testing</p> <p>DATA INTERPRETATION</p> <p>4 Interpret audio-vestibular tests</p> <p>4 Interpret neuro-physiological tests</p> <p>3 Interpret neuro-otological radiological investigations</p> <p>PATIENT MANAGEMENT</p> <p>4 Demonstrate communication skills and empathy</p> <p>4 Be able to advise the patient of the treatment options, discuss risks and potential benefits, potential complications and obtain informed consent</p>
<b>Technical Skills and Procedures</b>	<p>4 Perform particle re-positioning maneuvers</p> <p>4 Microscopy</p> <p>4 Myringotomy and grommet</p> <p>4 Cortical mastoidectomy</p> <p>2 Decompression of endolymphatic sac</p> <p>3 Closure of perilymph fistula</p> <p>4 Surgical procedures for Ménière's disease, vestibular schwannoma</p> <p>3 Removal of lesions of the IAM and cerebro-pontine angle</p>

<b>Topic</b>	<b>Disorders of equilibrium including Meniere's disorder</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Disorders of equilibrium including Meniere's disorder
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of common ORL conditions. This module gives some indication of the breadth and depth of required knowledge, clinical and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<p>Clinical anatomy, neuro-anatomy and physiology of the vestibular system, locomotor, CVS and cardiovascular systems and vision.</p> <p>Pathology and pathogenesis of diseases of the ear.</p> <p>The pathology and various hypotheses relating to the aetiology of Meniere's Disease.</p> <p>The relevant clinical neurological, vascular, radiological, biochemical, immunological and serological investigations.</p> <p>The relationship of vestibular disorders to legislation relating to employment</p>

	and driving. 4 The principles of vestibular rehabilitation.
<b>Clinical Skills</b>	Vestibular assessment, including electro physiological testing, and clinical examination  Elicit clinical history and clinical signs.  Perform relevant audio vestibular tests  Interpret audio vestibular tests  Interpret neurophysiological tests  4 Principles of patient management
<b>Technical Skills and Procedures</b>	3 Labrinthectomy

<b>Topic</b>	<b>Disequilibrium of ageing.</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Disorders of equilibrium including Meniere's disorder
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of common ORL conditions. This module gives some indication of the breadth and depth of required knowledge, clinical and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	Clinical anatomy, neuro-anatomy and physiology of the vestibular system, locomotor, CVS and cardiovascular systems and vision  Pathology and pathogenesis of diseases of the ear  The relevant clinical neurological, vascular, radiological, biological, immunological and serological investigations  The relationship of vestibular disorders to legislation relating to employment and driving  The principles of vestibular rehabilitation  4 The handicaps related to age related sensory and proprioceptive degeneration
<b>Clinical Skills</b>	Vestibular assessment, including electro physiological testing, and clinical examination  Elicit clinical history and clinical signs.

	<p>Perform relevant audio vestibular tests</p> <p>Interpret audio vestibular tests</p> <p>Interpret neurophysiological tests</p> <p>4 principles of patient management</p>
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Neurological and Vascular causes of vertigo</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Disorders of equilibrium including Meniere's disorder
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of common ORL conditions. This module gives some indication of the breadth and depth of required knowledge, clinical and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<p>Clinical anatomy, neuro-anatomy and physiology of the vestibular system, locomotor, CVS and cardiovascular systems and vision</p> <p>Pathology and pathogenesis of diseases of the ear</p> <p>The relevant clinical neurological, vascular, radiological, biological, immunological and serological investigations</p> <p>The relationship of vestibular disorders to legislation relating to employment and driving</p> <p>4 The principles of vestibular rehabilitation</p>
<b>Clinical Skills</b>	<p>Vestibular assessment, including electro physiological testing, and clinical examination</p> <p>Elicit clinical history and clinical signs</p> <p>Perform relevant audio vestibular tests.</p> <p>Interpret audio vestibular tests</p> <p>Interpret neurophysiological tests</p> <p>4 principles of patient management</p>
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Vestibular Schwannoma</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Disorders of equilibrium including Meniere's disorder
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of common ORL conditions. This module gives some indication of the breadth</i>

	<i>and depth of required knowledge, clinical and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<p>Clinical anatomy, neuro-anatomy and physiology of the vestibular system, locomotor, CVS and cardiovascular systems and vision</p> <p>Pathology and pathogenesis of diseases of the ear</p> <p>The relevant clinical neurological, vascular, radiological, biological, immunological and serological investigations</p> <p>The relationship of vestibular disorders to legislation relating to employment and driving</p> <p>The principles of vestibular rehabilitation</p> <p>The genetics of vestibular schwannomas and genetic counselling.</p> <p>The surgical and non-surgical management options.</p> <p>4 The surgical approaches to the CP angle</p>
<b>Clinical Skills</b>	<p>Vestibular assessment, including electro physiological testing, and clinical examination</p> <p>Elicit clinical history and clinical signs</p> <p>Perform relevant audio vestibular tests</p> <p>Interpret audio vestibular tests</p> <p>Interpret neurophysiological tests</p> <p>4 principles of patient management</p>
<b>Technical Skills and Procedures</b>	3 The surgical approach for trans labyrinthine and other surgical approaches to resection

<b>Topic</b>	<b>Benign Paroxysmal Positional Vertigo</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Disorders of equilibrium including Meniere's disorder
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of common ORL conditions. This module gives some indication of the breadth and depth of required knowledge, clinical and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<p>Clinical anatomy, neuro-anatomy and physiology of the vestibular system, locomotor, CVS and cardiovascular systems and vision</p> <p>Pathology and pathogenesis of diseases of the ear</p> <p>The relevant clinical neurological, vascular, radiological, biological, immunological and serological investigations</p> <p>The relationship of vestibular disorders to legislation relating to employment and driving</p>

	<p>The principles of vestibular rehabilitation</p> <p>Treatment options both non-surgical and surgical</p> <p>4 The pathology and various hypotheses relating to the aetiology of BPPV</p>
<b>Clinical Skills</b>	<p>Vestibular assessment, including electro physiological testing, and clinical examination</p> <p>Elicit clinical history and clinical signs</p> <p>Perform relevant audio vestibular tests</p> <p>Interpret audio vestibular tests</p> <p>Interpret neurophysiological tests</p> <p>4 principles of patient management</p> <p>1 The surgical approach for trans labyrinthine and other surgical approaches to resection</p>
<b>Technical Skills and Procedures</b>	<p>4 Perform particle re-positioning manoeuvres</p>

<b>Topic</b>	<b>Acute vestibular failure</b>
<b>Category</b>	Otology
<b>Sub-category:</b>	Disorders of equilibrium including Meniere's disorder
<b>Objective</b>	<i>To understand the aetiology, presenting signs, symptoms and management of common ORL conditions. This module gives some indication of the breadth and depth of required knowledge, clinical and surgical skills. The list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<p>Clinical anatomy, neuro-anatomy and physiology of the vestibular system, locomotor, CVS and cardiovascular systems and vision</p> <p>Pathology and pathogenesis of diseases of the ear</p> <p>The various hypotheses relating to the aetiology of sudden vestibular failure</p> <p>The relevant clinical neurological, vascular, radiological, biological, immunological and serological investigations</p> <p>The relationship of vestibular disorders to legislation relating to employment and driving</p> <p>4 The principles of vestibular rehabilitation</p>
<b>Clinical Skills</b>	<p>Vestibular assessment, including electro physiological testing, and clinical examination</p> <p>Elicit clinical history and clinical signs</p> <p>Perform relevant audio vestibular tests</p> <p>Interpret audio vestibular tests</p>

	Interpret neurophysiological tests 4 principles of patient management
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Epistaxis</b>
<b>Category</b>	Rhinology
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, presenting symptoms and signs and management of epistaxis. There should be detailed understanding of the presenting features, complications, diagnosis, and management of these infections.</i>
<b>Knowledge</b>	4 Understanding of local and systemic aetiologies of epistaxes 4 Detailed knowledge of the anatomy and physiology of nasal vasculature 4 Detailed understanding of the presenting symptoms and signs of epistaxes 4 Detailed knowledge of management including first aid measures, nasal cautery, packing and operative techniques in the management of epistaxes 4 Know the complications of epistaxes and the management of them.
<b>Clinical Skills</b>	4 Demonstrate expertise in taking an appropriate clinical history. 4 Ability to elicit physical signs both local and systemic if appropriate 4 Awareness of relevant haematological and imaging investigations. 4 Awareness of management principles in patient with epistaxis 4 Ability to resuscitate critically ill patient
<b>Technical Skills and Procedures</b>	4 Diagnostic nasendoscopy 4 Packing of nose 4 Removal of nasal packing 4 Cautery of nasal septum 4 Ethmoid Artery ligation 4 Sphenopalatine artery ligation

<b>Topic</b>	<b>Nasal trauma and deformity</b>
<b>Category</b>	Rhinology
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the presenting features, diagnosis, complications and management of nasal trauma and deformity. This module gives some idea of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	4 Understanding of the anatomy of the nose, paranasal sinuses and facial skeleton. 4 Understanding of the mechanisms of trauma responsible for nasal and facial injuries. 4 Knowledge of the appropriate imaging techniques 4 Knowledge of the specific complications of nasal trauma 4 Knowledge of the management of nasal trauma 4 Knowledge of the management of nasal deformity
<b>Clinical Skills</b>	4 Ability to take a relevant history and perform an appropriate clinical examination 4 Knowledge of the relevant special investigations and correct interpretation

	4 Ability to adequately resuscitate the critically ill patient
<b>Technical Skills and Procedures</b>	4 Fracture nose reduction 4 Packing of nose 4 Ethmoid artery ligation 4 Sphenopalatine artery ligation 4 Septoplasty 4 Septorhinoplasty

<b>Topic</b>	<b>Nose and sinus infections</b>
<b>Category</b>	Rhinology
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, pathophysiology, and microbiology. There should be detailed understanding of the presenting features, complications, diagnosis, and management of these infections. This module gives some idea of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	4 Detailed knowledge of anatomy and physiology of the nose and paranasal sinuses 4 Know the microbiology of acute and chronic rhinosinusitis 4 Knowledge of rarer pathogens responsible for rhinosinusitis 4 understanding of special investigations to inform the diagnosis 4 Understanding of the differences in management between acute and chronic rhinosinusitis. 4 Knowledge of the indications for and techniques of surgical management 4 Knowledge of the complications of sinusitis and their management.
<b>Clinical Skills</b>	4 Demonstrate an ability to take an appropriate history and perform a nasal examination with a speculum and endoscope. 4 Awareness of the indications for imaging including CT and MRI 4 Awareness of indications for other special investigations including microbiology, immunology etc
<b>Technical Skills and Procedures</b>	4 nasendoscopy 4 antral washout – direct vision 4 inferior meatal antrostomy – direct vision + endoscopic 4 middle meatal antrostomy – endoscopic 4 nasal polypectomy – endoscopic 4 uncinectomy – endoscopic 4 uncinectomy + bulla – endoscopic 4 Anterior ethmoidectomy - endoscopic 3 Caldwell-Luc – direct vision 4 Intranasal ethmoidectomy – direct vision

<b>Topic</b>	<b>Nose and sinus inflammation including allergy</b>
<b>Category</b>	Rhinology
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology and pathophysiology of nasal &amp; paranasal sinus inflammation. There should be detailed understanding of the presenting features, complications, diagnosis, and management of these infections. This module gives some idea of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive.</i>

<b>Knowledge</b>	<p>4 Detailed knowledge of anatomy and physiology of the nose and paranasal sinuses</p> <p>4 Understanding of the aetiologies underlying inflammation of the nose and sinuses.</p> <p>4 Know the role of allergy in the pathophysiology of inflammation of the nose and sinuses.</p> <p>4 Understanding of the special investigations used in the assessment of nasal allergy.</p> <p>4 Understanding of the imaging modalities to assess the nose and sinuses</p> <p>4 Knowledge of the role of management of allergy, and drug treatment in nasal and sinus inflammation.</p> <p>4 Understand the place of surgery in management of nasal and sinus inflammation</p>
<b>Clinical Skills</b>	<p>4 Ability to take an appropriate history and perform a relevant examination of the nose and sinuses.</p> <p>4 Ability to perform nasendoscopy</p> <p>4 Ability to interpret the result of allergy testing including skin prick testing</p> <p>4 Know which haematological investigations &amp; radiological imaging are appropriate.</p>
<b>Technical Skills and Procedures</b>	<p>4 nasendoscopy</p> <p>4 turbinate cautery</p> <p>4 turbinate surgery</p> <p>4 antral washout – direct vision</p> <p>4 inferior meatal antrostomy – direct vision + endoscopic</p> <p>4 middle meatal antrostomy – endoscopic</p> <p>4 nasal polypectomy – endoscopic</p> <p>4 uncinectomy – endoscopic</p> <p>4 uncinectomy + bulla – endoscopic</p> <p>4 Anterior ethmoidectomy - endoscopic</p> <p>3 Caldwell-Luc – direct vision</p> <p>4 Intranasal ethmoidectomy – direct vision</p>

<b>Topic</b>	<b>Congenital abnormalities</b>
<b>Category</b>	Rhinology
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, clinical features and management of congenital nasal abnormalities. To understand how these may be associated with other syndromes. This module gives some idea of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<p>4 Knowledge of the anatomy and physiology of the nose and paranasal sinuses.</p> <p>4 Knowledge of the embryology of the nose and sinuses.</p> <p>4 Knowledge of those conditions associated with congenital nasal abnormalities.</p> <p>4 Understanding of how to manage congenital nasal abnormalities in both the elective &amp; emergency settings.</p>
<b>Clinical Skills</b>	<p>4 Ability to take an appropriate history form the parent and child and perform relevant examination.</p> <p>4 Nasendocopy if appropriate</p>
<b>Technical Skills and Procedures</b>	<p>4 Nasendoscopy</p> <p>4 Examination under anaesthesia</p>



<b>Topic</b>	<b>Facial pain</b>
<b>Category</b>	Rhinology
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiologies, characteristics and management of conditions presenting with facial pain, including those causes not arising in the upper aerodigestive tract</i>
<b>Knowledge</b>	4 Anatomy and physiology of the face, including the TMJ, dentition and cervical spine 4 Understand the differential diagnosis of facial pain including organic and functional causes 4 Understand the various treatment modalities, both medical and surgical 4 Awareness of the multidisciplinary approach to management
<b>Clinical Skills</b>	4 Ability to take a relevant history of facial pain 4 Ability to perform an appropriate ENT, neurological and locomotor examination 4 Understanding of the appropriate radiological investigations 4 Appropriate management to include pharmacological, surgical and counselling therapies
<b>Technical Skills and Procedures</b>	4 Outpatient endoscopy of upper aerodigestive tract 4 Examination under anaesthesia 4 Biopsy - external nose 4 Biopsy – internal nose

<b>Topic</b>	<b>Nasal polyps</b>
<b>Category</b>	Rhinology
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiologies, pathophysiology and clinical features of nasal polyps. There should be a detailed knowledge of the diagnostic features, management and complications. This module gives some idea of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	4 A detailed understanding of the aetiologies and conditions associated with nasal polyps. 4 Knowledge of the clinical features of nasal polyps 4 Understand the medical and surgical management options of nasal polyps 4 Understand the clinical significance of unilateral nasal polyps
<b>Clinical Skills</b>	4 Ability to take an appropriate history and perform an examination including nasal endoscopy. 4 Awareness of imaging techniques
<b>Technical Skills and Procedures</b>	4 nasal polypectomy 4 nasendoscopy 4 antral washout – direct vision 1 inferior meatal antrostomy – direct vision + endoscopic 4 middle meatal antrostomy – endoscopic 4 uncinectomy – endoscopic 4 uncinectomy + bulla – endoscopic 4 anterior ethmoidectomy - endoscopic 4 Caldwell-Luc – direct vision

	4 Intranasal ethmoidectomy – direct vision
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<b>Topic</b>	<b>Granulomatous conditions</b>
<b>Category</b>	Rhinology
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, classification, clinical features and management of granulomatous conditions of the nose. This module gives some idea of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Understanding of the classification of nasal granulomatous conditions</li> <li>4 Knowledge of the Pathophysiology of these conditions</li> <li>4 Knowledge of the microbiology of specific nasal granulomatous conditions</li> <li>4 Knowledge of the features of non specific granulomatous conditions eg sarcoidosis and Wegener's granulomatosis.</li> <li>4 Understanding of methods of diagnosis.</li> <li>4 Knowledge of management of these conditions.</li> <li>4 Awareness of differential diagnosis</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Ability to take a relevant history and perform an appropriate clinical examination</li> <li>4 Knowledge of the relevant special investigations and correct interpretation of them.</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 diagnostic nasendoscopy</li> <li>4 examination under anaesthesia</li> <li>4 biopsy – external</li> <li>4 biopsy - internal</li> </ul>

<b>Topic</b>	<b>Rhinological oncology</b>
<b>Category</b>	Rhinological Oncology
<b>Sub-category:</b>	None
<b>Objective</b>	<i>To understand the aetiology, clinical presentation and management of tumours of the nose and paranasal sinuses. This module gives some idea of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Knowledge of the anatomy of the nose and paranasal sinuses.</li> <li>4 Knowledge of the distribution of cervical lymph nodes</li> <li>4 Understanding of the pattern of spread of malignancy in the head and neck</li> <li>4 Knowledge of the different histological types of malignancy in the nose and paranasal sinuses.</li> <li>4 Understanding of the principles of medical and surgical management of malignancy of the nose and sinuses.</li> <li>4 Knowledge of the complications of both the disease and its management.</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Ability to take a relevant history, perform an appropriate examination and interpret clinical findings correctly</li> <li>4 Demonstrate a rational approach to special investigations</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Examination of nose under anaesthesia</li> <li>4 Biopsy of nose - external</li> <li>4 Biopsy of nose – internal</li> <li>3 Anterior skull base approaches</li> </ul>

<b>Topic</b>	<b>Septorhinoplasty</b>
<b>Category</b>	Rhinology
<b>Sub-category:</b>	Facial Plastics
<b>Objective</b>	<i>To understand the presenting features, assessment, management and complications of nasal and septal deformity. This module gives some idea of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Understanding of the anatomy of the nose, paranasal sinuses and facial skeleton.</li> <li>4 Understanding the embryology of the nose</li> <li>4 Understanding of the mechanisms of trauma responsible for nasal and facial injuries.</li> <li>4 Understanding methods of assessment of the facial skeleton</li> <li>4 Knowledge of the specific complications of nasal surgery</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Ability to take a relevant history and perform an appropriate clinical examination</li> <li>4 Ability to assess photographs and devise a surgical plan</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Septoplasty</li> <li>4 Septorhinoplasty</li> <li>4 Packing of nose</li> <li>4 Sphenopalatine artery ligation</li> </ul>

<b>Topic</b>	<b>Congenital abnormalities</b>
<b>Category</b>	Rhinology
<b>Sub-category:</b>	Facial Plastics
<b>Objective</b>	<i>To understand the aetiology, clinical features and management of congenital facial abnormalities. To understand how these may be associated with other syndromes. This module gives some idea of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Knowledge of the anatomy and physiology of the facial structures.</li> <li>4 Knowledge of the embryology of the face including the nose, palate and neck.</li> <li>4 Knowledge of those conditions associated with congenital facial abnormalities.</li> <li>4 Understanding of how to manage congenital facial abnormalities in both the elective &amp; emergency settings.</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Ability to take an appropriate history from the parent and child and perform relevant examinations.</li> <li>4 Nasendoscopy if appropriate</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Examination of external nose</li> <li>4 Examination of internal nose with headlight</li> <li>4 Nasendoscopy</li> <li>4 Examination under anaesthesia</li> <li>4 Resection of nasal lesion NEC</li> <li>4 Excision skin lesion</li> </ul>

<b>Topic</b>	<b>Cosmetic Surgery</b>
<b>Category</b>	Rhinology
<b>Sub-category:</b>	Facial Plastics
<b>Objective</b>	<i>To understand the presentation and analysis of cosmetic deformity of the face. This involves a detailed understanding of the anatomy of the skin and deeper structures and knowledge of the different facial aesthetic units. This module gives some idea of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Understanding of the anatomical areas and aesthetic units that make up the face.</li> <li>4 Understanding of the blood supply and innervation of the face.</li> <li>4 Knowledge of the planes of dissection available.</li> <li>4 Knowledge of the methods used to analyse facial features.</li> <li>4 Knowledge of the various procedures used in cosmetic facial surgery.</li> <li>4 Knowledge of the limitations and complications of cosmetic facial surgery</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Ability to take a relevant history and perform an appropriate clinical examination</li> <li>4 Ability to assess facial deformity and devise a management plan</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Examination of external nose</li> <li>4 Examination of internal nose with headlight</li> <li>4 Resection of nasal lesion</li> <li>4 Flaps used in reconstruction</li> <li>4 SMR</li> <li>4 Septoplasty</li> <li>4 Excision skin lesion</li> </ul>

<b>Topic</b>	<b>Reconstruction</b>
<b>Category</b>	Rhinology
<b>Sub-category:</b>	Facial Plastics
<b>Objective</b>	<i>To understand the methods available for facial reconstruction involving, skin, muscle, cartilage, bone and implants. This involves a detailed understanding of the anatomy of the skin and deeper structures and in particular the blood supply of the tissues involved. Knowledge of the basic types of skin grafts, local flaps, regional flaps and free flaps is necessary. This module gives some idea of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive.</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Understanding of the anatomical areas of the face</li> <li>4 Understanding of the blood supply and innervation of the face and of local, regional and free grafts.</li> <li>4 Knowledge of the different types of flap available and the indications for their use</li> <li>4 Knowledge of the implants and prosthetic devices available.</li> </ul>
<b>Clinical Skills</b>	<ul style="list-style-type: none"> <li>4 Ability to take a relevant history and perform an appropriate clinical examination</li> <li>4 Ability to assess facial defects and devise a management plan</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Resection of nasal lesion</li> <li>4 Lip- wedge resection</li> <li>4 Excision skin lesion</li> </ul>

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	4 Suture skin
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## Special Interest Stage

### Cleft Lip and Palate

#### Overview

- This special interest module in cleft lip and palate surgery is aimed at trainees in the disciplines of plastic surgery, otolaryngology and maxillofacial surgery who wish to pursue a career with a major interest in cleft lip and palate surgery.
- The module gives the trainee access to high quality training interacting with three disciplines of surgery simultaneously.
- The training covers the essential requirements of the special interest; the breadth and depth of which will vary according to parent specialty of the trainee.
- It is open to applicants already in specialist surgical training and may be taken at any time after the intercollegiate examination has been successfully achieved and a satisfactory ARCP obtained.
- Entry is by application and selection against a published person specification.
- The appointment process is usually conducted at national level. Scotland is a full member of the scheme and the appointment process, although not the funding is fully integrated.
- Every effort is made to accommodate trainees within a reasonable distance of their base deanery but this is not guaranteed and the process is one of 'secondment'.
- It is recognised that trainees entering the programme will start from a variable base of competence depending upon their previous experience and achievements. The period of training, therefore, is somewhat dependent on the learning and training needs of the trainee. It will comprise a minimum of a year and a maximum of 2 years.
- It is anticipated that trainees enrolling in the module intend to apply for consultant posts in centres that provide a regional or sub-regional service in cleft lip and palate surgery.
- Those wishing further information should consult the JCST website [www.jcst.org.uk](http://www.jcst.org.uk).

#### The Purpose of Training in the Interface Discipline of cleft lip and palate surgery

- To train a small number of surgical trainees from the relevant surgical specialties in advanced techniques in the management of cleft lip and palate patients.
- To train surgeons in the relevant specialties to be effective, full members of an interdisciplinary team.
- To understand the soft and hard tissue deformities of the mid face and the commonest congenital oro-facial congenital disorder whose degree is variable.
- To collaborate with other medical and dental disciplines, and non-medical health professionals,

- To correct respiratory, hearing, feeding, speech and facial growth disorders and facial deformity.
- To be involved with early diagnosis and care of cleft patients and their families which may start before birth.
- To understand and be a part of multidisciplinary teams that span cleft lip and palate treatment from paediatric presentation through to adulthood.
- To cover the full range of primary and secondary cleft surgical procedures and some of the related procedures that the advanced trainee (and later the consultant) depending on their parent speciality (e.g. insertion of grommets, aspects of dental surgical management).

### **Description of Training in cleft lip and palate surgery**

- This takes place in a number of placements throughout the UK, which have been approved through the JCST mechanism. At the time of writing in October 2008, there are seven approved posts in the United Kingdom.
- By the time that the appointment is taken up the trainee will have discussed his/her learning requirements with the lead surgeon for the module, who will act in the capacity of local programme director for the whole module.
- This dialogue will result in the construction of a learning agreement that will apply to the whole module and will outline the placements and the general direction of travel. The specific essential requirements are set down in the syllabus.
- During each placement, the trainee will relate to an Assigned Educational Supervisor (AES) in the usual way for the purposes of mentoring, monitoring and the end of placement summative report to the ARCP panel. The cleft lip and palate interface team provide an external mentor to ensure that progress is satisfactory.
- It may be appropriate for the lead surgeon role and the AES roles to be combined if the local geography and working permit.
- The lead surgeon will be responsible for all the liaison functions, i.e. with the Interface Group of the JCST, the ARCP panels both base and home, the relevant programme director in the trainee's speciality.

### **Regulation**

- At the time of writing, the module is not recognised as a 'subspecialty' for the purposes of entry onto the Specialist Register, but as an area of 'Special Interest' within the parent speciality.
- The module is competence based and successful completion depends upon achieving the essential requirements for completion as laid out in the syllabus.
- Assessment during the module is through the ARCP process. This is carried out through the local (host) deanery or school of surgery on behalf of the (base) deanery with whom the trainee is registered. The host deanery will liaise carefully with the base deanery.
- Selection occurs through the parent deanery (Severn). These posts are advertised through the British Medical Journal and appointed by a committee involving the three

parent specialties. The training programme director has to provide a structured report of the trainees' suitability for the post prior to interview. Appointments are usually made in January.

- The Interface Committee for the special interest will monitor the overall progress of trainees taking the module and the workings of the placements, on behalf of the JCST.
- CCT will be deferred until the essential syllabus for both the parent specialty and the interface modules have been successfully completed.
- Trainees judged to have completed the module successfully by their host deanery ARCP panel will be recommended for the CCT to their base deanery through the usual channels. The Chairman of the Interface Committee of the JCST will write to acknowledge this.
- The CCT will be issued in the specialty with which the trainee is registered.
- Those trainees judged not to have completed the requirements of the module successfully within the time frame set or sooner should their progress be unsatisfactory, will be informed of this by the host ARCP panel and referred back to their base deanery.
- Upon completion of the module, the trainee will transfer back to the base deanery in his/her specialty programme. Experience has shown that most trainees leave the module having completed the essential requirements and successfully achieved a consultant appointment.

### **The Scope and Standards of Practice for the Completion of the Training Module in cleft lip and palate surgery**

Upon successful completion of this module, the surgeon will be able to:

- Comply with all the professional requirements of the CCT in the specialty with which he/she is registered. These are based on the domains outlined in CanMEDS and in Good Medical Practice of the GMC and are listed elsewhere.
- Provide effective counselling for patients and their relatives at the onset and presentation of cleft lip and palate patients, and for the duration of care.
- Deliver the care outlined in the purpose of interface training in cleft lip and palate surgery
- Act as an effective member of the MDT for cleft lip and palate patients.

### **Essential Syllabus**

The core syllabus is common across all three specialties and by the end of the module the trainee will have the following:

- Basic sciences knowledge in relation to cleft lip and palate patients in particular the embryology and anatomy.
- The ability to initiate, perform and interpret appropriate investigative techniques for the management of cleft lip and palate patients.



- A working knowledge of multi-disciplinary teams which includes: multi-disciplinary clinics, the development of inter-personal skills with patients and families, and the inter-relationship with speech and language therapists, dental and prosthetic care, physiotherapists, dieticians, psychologists, specialist audiology services and paediatric developmental services.
- Knowledge of and clinical and technical skills in the principles of management of cleft lip and palate patients including both primary and subsequent treatments.
- The principles and practice of rehabilitation: includes restorative dental techniques, speech rehabilitation, swallowing and nutrition.
- Data Management
  - Understanding of data sets
  - Understanding of outcome measures

The essential operative competencies that the trainee will need to achieve by the end of the module are shown in the table below. The levels are as follows:

1. has observed
2. can do with assistance
3. can do whole but may need assistance
4. competent to do without assistance, including complications

### Assessment strategy

Progress will be monitored through the ARCP (previously RITA by the parent specialty)

Basic knowledge will have been assessed by the specialty exit exam prior to entry

Knowledge and decision making skill will be assessed through reports generated throughout the training.

Summary assessment forms will be agreed between the Assigned Educational Supervisor and fellow every three months and will be returned to the interface panel (to be submitted later)

Surgical e-logbook summaries will be presented six monthly during training to the interface panel

Click on [Workplace Based Assessments](#) to view the assessment forms including DOPS and PBAs

### Special Interest Topics

<b>Topic</b>	<b>Basic sciences</b>
<b>Category</b>	Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
<b>Sub-category:</b>	Basic science as applied to Cleft surgery
<b>Objective</b>	<i>To understand basic sciences in relation to cleft lip and palate patients</i>
<b>Knowledge</b>	4 Process and timing of facial (including dental), branchial arch and otological development during pregnancy and their relationship to investigations and their limitations 3 Teratogenesis and genetics 4 Common syndromes

	<ul style="list-style-type: none"> <li>3 Relationship to other syndromes</li> <li>4 Pathogenesis and aetiological risks</li> <li>4 Normal anatomy and the variations found in cleft lip and palate patients</li> <li>4 Cardio-respiratory physiology of newborn, energy requirements, growth, development milestones in the first year of life, IV fluid management, principles of resuscitation</li> <li>4 Feeding mechanisms, swallowing, relation of infant feeding and later speech mechanisms, nasal and Eustachian tube and middle ear physiology</li> <li>3 Speech and language development</li> </ul>
<b>Clinical Skills</b>	<p>History and Examination:</p> <ul style="list-style-type: none"> <li>4 Applies above principles</li> </ul> <p>Data Interpretation:</p> <ul style="list-style-type: none"> <li>4 Evaluates diagnostic imaging (CT and MRI) in light of the anatomy and its variations</li> <li>4 Applies physiological principles to laboratory and other investigations to patient care</li> </ul> <p>To integrate the previous sections into <a href="#">patient management</a></p>
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Patient management and family care</b>
<b>Category</b>	Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
<b>Sub-category:</b>	
<b>Objective</b>	<i>To apply the principles of patient care, develop team working and liaise with the family and other carers</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Understanding the expertise and role of other disciplines in cleft management</li> <li>4 Fitness and principles of anaesthesia in relations to problems encountered here</li> <li>4 Principles and techniques of primary and secondary cleft surgery of lip and palate, including unilateral alveolar bone graft</li> <li>4 Ethical issues around management</li> <li>4 Post-operative management, including introduction of feeding</li> <li>3 Evidence based medicine and audit</li> <li>3 Principles of biomedical research and clinical care</li> </ul>
<b>Clinical Skills</b>	<p>History and Examination:</p> <ul style="list-style-type: none"> <li>4 Elicit relevant history including difficult circumstances</li> <li>4 Elicit pregnancy history</li> <li>4 Obtains information from the family</li> <li>4 Examine the head and neck using diagnostic endoscopic equipment if necessary</li> <li>4 Communicates effectively with patient and other members of the team</li> </ul> <p>Data Interpretation:</p> <ul style="list-style-type: none"> <li>4 Interpret haematological, biochemical and other relevant investigations</li> <li>4 Evaluate diagnostic imaging (CT and MRI) in light of the anatomy and its variations</li> </ul>

	<p>Patient Management:</p> <ul style="list-style-type: none"> <li>4 Empathizes with family</li> <li>4 Prioritise patient's needs</li> <li>4 Assess patient needs prior to theatre</li> <li>4 Fluid balance</li> <li>4 Anti microbial and other drug therapy</li> <li>4 Taking consent</li> <li>4 Team working with medical and other workers such as dieticians, speech therapists</li> <li>4 Records and presents data accurately</li> </ul>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 APLS/PALS</li> <li>3 Diagnostic fiberoptic endoscopy</li> <li>4 Applies basic principles of surgery and uses instruments and other modalities as listed in the logbook</li> <li>3 Involved with research and audit</li> </ul>

<b>Topic</b>	<b>Surgical skills</b>
<b>Category</b>	Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
<b>Sub-category:</b>	
<b>Objective</b>	<i>To integrate knowledge and behaviour with the developing surgical skills</i>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>4 Details and variations of the primary surgical procedures. These include surgical anatomy, pathological anatomy, techniques and timing, rationale of different sequences</li> <li>4 Details and variations of the secondary surgical procedures. These include surgical anatomy, pathological anatomy, techniques and timing, rationale of different sequences</li> <li>4 Preparation for bone grafting, correct assessment of evolution of secondary dentition,</li> <li>3 Understands orthodontic investigations and treatment.</li> <li>3 Understands planning, surgical principles in orthognathic appliances and their usage, including methods of distraction osteogenesis</li> <li>4 Understands the surgery required to correct and repair the nasal deformities</li> </ul>
<b>Clinical Skills</b>	Please refer to <a href="#">Patient management and family care</a>
<b>Technical Skills and Procedures</b>	<ul style="list-style-type: none"> <li>4 Operative skill to repair the lip, palate and appropriate other structures according to Unit protocol</li> <li>4 Ability to make appropriate lip revision, ability to make appropriate fistula closure</li> <li>4 Assessing appropriateness of referral for speech investigations, assessing likely co-operation of patient, basic interpretation of results for repair of velo-pharyngeal dysfunction</li> <li>3 Ability to undertake alveolar bone grafting and orthognathic surgery</li> <li>4 Ability to undertake septorhinoplasty with and without augmentation</li> </ul>

<b>Topic</b>	<b>Team working</b>
<b>Category</b>	Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months

<b>Sub-category:</b>	Multidisciplinary management
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Understanding the expertise and role of other disciplines in cleft management
<b>Clinical Skills</b>	Effective communication with other disciplines Presentation of clinical cases
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Communication</b>
<b>Category</b>	Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
<b>Sub-category:</b>	Multidisciplinary management
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Methods and timing of involvement of other disciplines in cleft care
<b>Clinical Skills</b>	Appropriate involvement of other professionals
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Empathy and sensitivity, ethics, consent</b>
<b>Category</b>	Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
<b>Sub-category:</b>	Multidisciplinary management
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Range of patient and parent reaction to cleft deformity and its consequences Knowledge of ethical issues in cleft management
<b>Clinical Skills</b>	Identifying patients and parents concerns Take consent effectively for primary cleft operations Ability to discuss ethical issues and potential complications
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Antenatal diagnosis</b>
<b>Category</b>	Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
<b>Sub-category:</b>	Multidisciplinary management
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Possibilities and limitations of antenatal diagnosis Likelihood of undiagnosed coexistent abnormalities
<b>Clinical Skills</b>	Ability to ascertain details of antenatal diagnosis Ability to prioritise information Ability to use simple language in discussing diagnoses
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Organisation and planning</b>
<b>Category</b>	Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
<b>Sub-category:</b>	Multidisciplinary management
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Systematic approach to patient management
<b>Clinical Skills</b>	Starting with important tasks Improvement of efficiency Discussing prioritisation with colleagues in the team
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Data and record management</b>
<b>Category</b>	Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
<b>Sub-category:</b>	Multidisciplinary management
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Understand how data are recorded by different specialties in cleft management
<b>Clinical Skills</b>	Contribute accurate records Understand significance of data recorded by others
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Audit/Evidence based medicine</b>
<b>Category</b>	Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
<b>Sub-category:</b>	Multidisciplinary management
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Principles of EBM Important clinical trials in cleft management Ongoing audit in cleft management
<b>Clinical Skills</b>	Critically appraise evidence Competent use of paper and electronic data sources Ability to discuss evidence with parents and patients at appropriate level Ability to carry out audit project
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Research</b>
<b>Category</b>	Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
<b>Sub-category:</b>	Multidisciplinary management

<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Place of research in aiding patient management Different methods of research and application of these
<b>Clinical Skills</b>	Involvement in departmental research project Using critical analysis skills to determine research questions
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Embryology</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Core knowledge
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Process and timing of facial, branchial arch and otological development Teratogenic effects
<b>Clinical Skills</b>	Ability to relate deformity/anomaly to embryology
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Genetics, syndromes</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Core knowledge
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Genetics of cleft lip and palate Cleft syndromes Common cranio-facial syndromes Cleft syndromes with risk of disability in other systems
<b>Clinical Skills</b>	Sensitive discussion of new findings Use of clinical genetics inputs
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Growth and development in infant/child nutrition</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Core knowledge
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Cardio-respiratory physiology of newborn Energy requirements Growth Development milestones in the first year of life IV fluid management Principles of resuscitation (APLS/PALS)  Feeding mechanisms, swallowing, relation of infant feeding and later speech mechanisms, nasal and Eustachian tube and middle ear physiology
<b>Clinical Skills</b>	Use of growth charts, recognising growth/development exceptions in

	syndromic patients, appropriate referral of developmental delay, learning difficulties, childhood disability
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Speech Development</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Core knowledge
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Feeding mechanisms, swallowing, relation of infant feeding and later speech mechanisms, nasal and Eustachian tube and middle ear physiology Range of normal speech development mechanisms at risk in cleft, effect of otitis media with effusion, speech skills at school entry
<b>Clinical Skills</b>	Effective liaison with Speech Therapists, effective liaison with ENT, appropriate interventions in pre-school child and school child
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Peri-operative Management</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Core knowledge
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Range of normal pre-operative parameters in children, significant dangers for anaesthetics and operation, principles of post-operative fluid management, antibiotic policy
<b>Clinical Skills</b>	Appropriate examination, liaison with Anaesthetics and Ward staff, counselling of parents, post-operative fluids and feeding management, thresholds for Intensive Care interventions
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Antenatal management</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Antenatal management
<b>Objective</b>	N/A
<b>Knowledge</b>	Possibilities and limitations of antenatal diagnosis, likelihood of undiagnosed coexistent abnormalities
<b>Clinical Skills</b>	Ability to ascertain details of antenatal diagnosis, ability to prioritise information, ability to use simple language in discussing diagnoses Ability to conduct ante-natal counselling, demonstrate appropriate liaison with Fetal Medicine Department
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Airway</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Post natal management
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Airway in Pierre Robin, choanal and laryngeal anomalies
<b>Clinical Skills</b>	Airway management in collaboration with other professionals
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Feeding</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Post natal management
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Energy requirements and preferred methods of feeding in clefts, feeding problems in syndromic and premature babies
<b>Clinical Skills</b>	Liaise with other professionals on optimisation of cleft patients' feeding
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Counselling</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Post natal management
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Understanding of techniques and priorities of informing parents of new patients
<b>Clinical Skills</b>	Counselling parents of new patients, ability to use simple language, ability to demonstrate priorities to parents
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Principles of pre-surgical orthodontics</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Post natal management
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Awareness of orthodontic preferences, awareness of situations indicating pre-surgical orthodontics
<b>Clinical Skills</b>	Appropriate discussion with Orthodontic colleagues
<b>Technical Skills and Procedures</b>	N/A



<b>Topic</b>	<b>Primary lip repair</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Primary surgery
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Surgical anatomy, pathological anatomy, techniques and timing, rationale of different sequences
<b>Clinical Skills</b>	<b>N/A</b>
<b>Technical Skills and Procedures</b>	Operative skill to repair the lip and appropriate other structures according to Unit protocol

<b>Topic</b>	<b>Primary Palate repair</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Primary surgery
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Surgical anatomy, pathological anatomy, techniques and timing, rationale of different sequences
<b>Clinical Skills</b>	<b>N/A</b>
<b>Technical Skills and Procedures</b>	Operative skill to repair the palate and appropriate other structures according to Unit protocol

<b>Topic</b>	<b>Lip revision and fistula closure</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Secondary surgery
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Appropriate assessment of lip/fistula disability, awareness of patient perceptions
<b>Clinical Skills</b>	None
<b>Technical Skills and Procedures</b>	Ability to make appropriate lip revision, ability to make appropriate fistula closure

<b>Topic</b>	<b>Investigation of velo-pharyngeal function</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Secondary surgery
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Indications for speech investigations, methods and limitations, radiation protection
<b>Clinical Skills</b>	<b>N/A</b>
<b>Technical Skills and Procedures</b>	Assessing appropriateness of referral for speech investigations, assessing likely co-operation of patient, basic interpretation of results Full interpretation of the results and formation of clinical plan

<b>Topic</b>	<b>Secondary palatal surgery, surgical management of VPI</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Secondary surgery
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Anatomy and physiology of palatal function and abnormalities after cleft closure, pathophysiology of VPI
<b>Clinical Skills</b>	<b>N/A</b>
<b>Technical Skills and Procedures</b>	Judgement on correct operations for secondary repair and control of VPI, skilful dissection of palate after previous repair, surgical skills in speech surgery, pharyngoplasty

<b>Topic</b>	<b>Alveolar bone graft</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Secondary surgery
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Preparation for bone grafting, correct assessment of evolution of secondary dentition, understanding of orthodontic investigations and treatment
<b>Clinical Skills</b>	None
<b>Technical Skills and Procedures</b>	Surgical skills in alveolar bone grafting, correct peri-operative management

<b>Topic</b>	<b>Rhinoplasty</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Secondary surgery
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Anatomy and pathological anatomy of the cleft nose, understanding of corrective procedures
<b>Clinical Skills</b>	None
<b>Technical Skills and Procedures</b>	Demonstrate surgical skills in cleft rhinoplasty, management of cleft airway and nasal septum

<b>Topic</b>	<b>Cleft related orthognathic surgery</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Secondary surgery
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Understanding of anatomy and pathological anatomy, understanding of planning, surgical principles in orthognathic appliances and their usage, methods of distraction osteogenesis
<b>Clinical Skills</b>	None
<b>Technical Skills and Procedures</b>	Ability to perform orthognathic surgery under supervision

<b>Topic</b>	<b>Basic Otology and hearing assessment</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Multidisciplinary teamworking
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Interpretation of audiogram and tympanometry study, understanding the principles of brain stem evoked response audiometry
<b>Clinical Skills</b>	Ability to refer from appropriate history and audiogram
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Orthodontics</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Multidisciplinary teamworking
<b>Objective</b>	N/A
<b>Knowledge</b>	Understanding of orthodontic role in cleft care, planning AGB, planning orthognathic surgery, orthodontic measurement of mid-facial growth
<b>Clinical Skills</b>	Appropriate liaison with Orthodontists
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Speech and language therapy</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Multidisciplinary teamworking
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Speech and language therapy input into cleft management, tools for examining speech development, surgical and orthodontic assistance to speech therapy
<b>Clinical Skills</b>	Appropriate liaison with Speech and language therapists, partaking in policy formation for patients concerning speech managementbg
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Paediatric and restorative dentistry</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Multidisciplinary teamworking
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Understanding of the role of Paediatric Dentists, understanding basics of oral and dental hygiene, understanding principles of restorative dentistry
<b>Clinical Skills</b>	Appropriate referral to Paediatric and Restorative Dentist
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Child and adolescent psychology</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Multidisciplinary teamworking
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Awareness of the role of Psychologists in childhood and adolescence, understanding of situations requiring psychology therapy
<b>Clinical Skills</b>	Care in selection of appropriate patients/families for referral
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Children with disabilities</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Multidisciplinary teamworking
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Understanding the role of Community Paediatrics and associated professionals, special needs teaching, awareness of communication disorders
<b>Clinical Skills</b>	Appropriate liaison with community agencies, ability to write relevant reports
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Ethical issues</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Multidisciplinary teamworking
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Understanding of consent in older children and adolescents, Gillick competence, ethics of new procedures
<b>Clinical Skills</b>	Ability to take consent from older children and adolescents, ability to communicate medical ethics to parents and older children
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>General paediatric issues</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Multidisciplinary teamworking
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Understanding resuscitation of children Understanding issues of non-accidental injury and child protection
<b>Clinical Skills</b>	Maintenance of APLS/PALS skills Ability to recognise signs of NAI, risk factors, family pathology, awareness of NAI referral pathways to child protection
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Management of residual cleft deformity in adults</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Multidisciplinary teamworking
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Understanding of situation at cessation of facial growth, basic understanding of nasal septal deformity, understanding of adult self-image problems, understanding of adult communication problems
<b>Clinical Skills</b>	Ability to assemble appropriate professionals to solve adults' concerns
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Children with disabilities</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Multidisciplinary teamworking
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Understanding the role of Community Paediatrics and associated professionals, special needs teaching, awareness of communication disorders
<b>Clinical Skills</b>	Appropriate liaison with community agencies, ability to write relevant reports
<b>Technical Skills and Procedures</b>	N/A

<b>Topic</b>	<b>Rhinoplasty</b>
<b>Category</b>	Cleft Lip and Palate Stage 2 Objectives to be Achieved within 18 months
<b>Sub-category:</b>	Secondary surgery
<b>Objective</b>	<i>None</i>
<b>Knowledge</b>	Anatomy and pathological anatomy of the cleft nose, understanding of corrective procedures
<b>Clinical Skills</b>	None
<b>Technical Skills and Procedures</b>	Demonstrate surgical skills in cleft rhinoplasty, management of cleft airway and nasal septum