The Iraqi Board for medical specialties
Scientific Council of Otolaryngology

ENT SURGICAL CURRICULUM PROGRAMME

2020

Otolaryngology Curriculum

Updated from curriculum 2016

Acknowledgements

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1. Introduction

The Otolaryngology curriculum provides the approved framework for the training of doctors to the level of independent specialist practice in Otolaryngology surgery, addressing the requirements of patients, the population, and the strategic health services.

Mission

The Otolaryngology Council of the Iraqi Board for Medical Specializations through its (5 Years) program aiming at certifying high quality, safe ENT specialists who can work in Iraq and competing with their counterpart outside by complying with regional and global standard.

- The program will be outcome-focused, emphasis on clinical training, acquisition of surgical skills under the supervision of experienced faculty supported by core theoretical background delivered in interactive, deep, and learner-centered approach supported by advanced IT technology, which provides blended distal learning and assessment.
- The program will offer trainees the chance to develop their research capabilities, leadership, and academic development.
- The trainee after completing the program will demonstrate excellence in safe, appropriate, compassionate, and cost-effective provision of patients' health care as well as a high standard of professionalism, team working and lifelong learning.

2. Purpose

2.1 Purpose of the curriculum

The purpose of the curriculum is to produce, at certification, specialist Otolaryngology surgeons with the generic and specialty-specific professional capabilities needed to manage patients presenting with the full range of acute conditions and general elective conditions as well as to develop a special interest within Otolaryngology.

This section of the curriculum defines the scope of practice of Otolaryngology, what has to be learned, the levels of performance expected to complete training, how the curriculum is delivered and how it is assessed.

Patient safety and competent practice are both essential and the curriculum has been designed so that the learning experience itself should not negatively affect patient safety. Patient safety is the first priority of training demonstrated through safety-critical content, expected levels of performance, critical progression points, required breadth of experience, and levels of trainer supervision needed for safe and professional practice. Upon satisfactory completion of training programs, trainees are expected to be able to work safely and competently in the defined area of practice and to be able to manage or mitigate relevant risks effectively. A feature of the curriculum is that it promotes and encourages excellence through the setting of high-level outcomes, supervision levels for excellence, and tailored assessment and feedback, allowing trainees to progress at their own rate.

Training is divided into two phases, the first one that lasts for 1 year divided between general surgery and three other related specialties.

The second phase for the other four years of training should cover the major areas in otolaryngology.

The curriculum ensures that trainees at certification, have both a special interest skill and good general emergency and elective skills. Six special interest areas are offered:

1. Otology including (Audiology and Vestibulogy)
2. Rhinology
3. Head and Neck
4. Thyroid and Parathyroid
5. Laryngology
6. Pediatric otolaryngology

2.2 Rationale and development of a new curriculum:

The Otolaryngology curriculum will produce a workforce fit for the needs of patients, producing doctors who are more patient-focused, more general and who have more flexibility in their career structure. All the shared Capabilities in Practice are transferable to other surgical specialties and some may be transferable to non-surgical specialties. In addition, core knowledge and skills gained in any surgical specialty training programme are transferable for entry into Otolaryngology. Trainees who choose to move to or from a different specialty training programme having previously gained skills transferable to Otolaryngology, therefore, may be able to have a shorter than usual training pathway in their new training programme. While most of the specialty syllabus is not transferable because the knowledge and detailed technical skills are specific to Otolaryngology, some limited areas of the syllabus may be transferable e.g. Thyroid and Parathyroid surgery could be transferred to the Endocrine Surgery special interest within General Surgery. This flexible approach, with acquisition of transferable capabilities, allows surgical training to adapt to current and future patient and workforce needs and change in the requirements of surgery with the advent of new treatments and technologies.

2.3 The training pathway and duration of training

Trainees enter Otolaryngology training via a national selection process, having successfully completed the curriculum for 1 year ENT Senior clinical fellow (SHO) training and been successful at ENT written exam with minimum 70% score.

Duration of training in otolaryngology specialty is five years divided as follows:

Phase I

One year divided as follows:

6 months general surgery
2 months of plastic surgery
2 months neurosurgery
2 months maxillofacial surgery

Phase II

Four years otolaryngology

In phase one the trainee should follow the core surgical training curriculum, and at end of this phase should pass a primary written examination in principles and basic knowledge of general surgery and basic science in otolaryngology.

During phase 2, trainees must gain the knowledge and clinical skills in general Otolaryngology to the level of independent practice expected at certification.

At certification, trainees must be able to manage a wide range of general Otolaryngology elective and emergency procedures in both children and adults which should be documented by logbook Yearly.

A thesis should be achieved in the Otolaryngology specialty and should be accepted by the committee at the end of 3rd year.

A mid examination should be passed at the end of the 4th year.

On successful completion of final written and clinical examination in general otolaryngology at the end of the 5th year, trainees become eligible for certification and for recommendation to enter the specialist register.

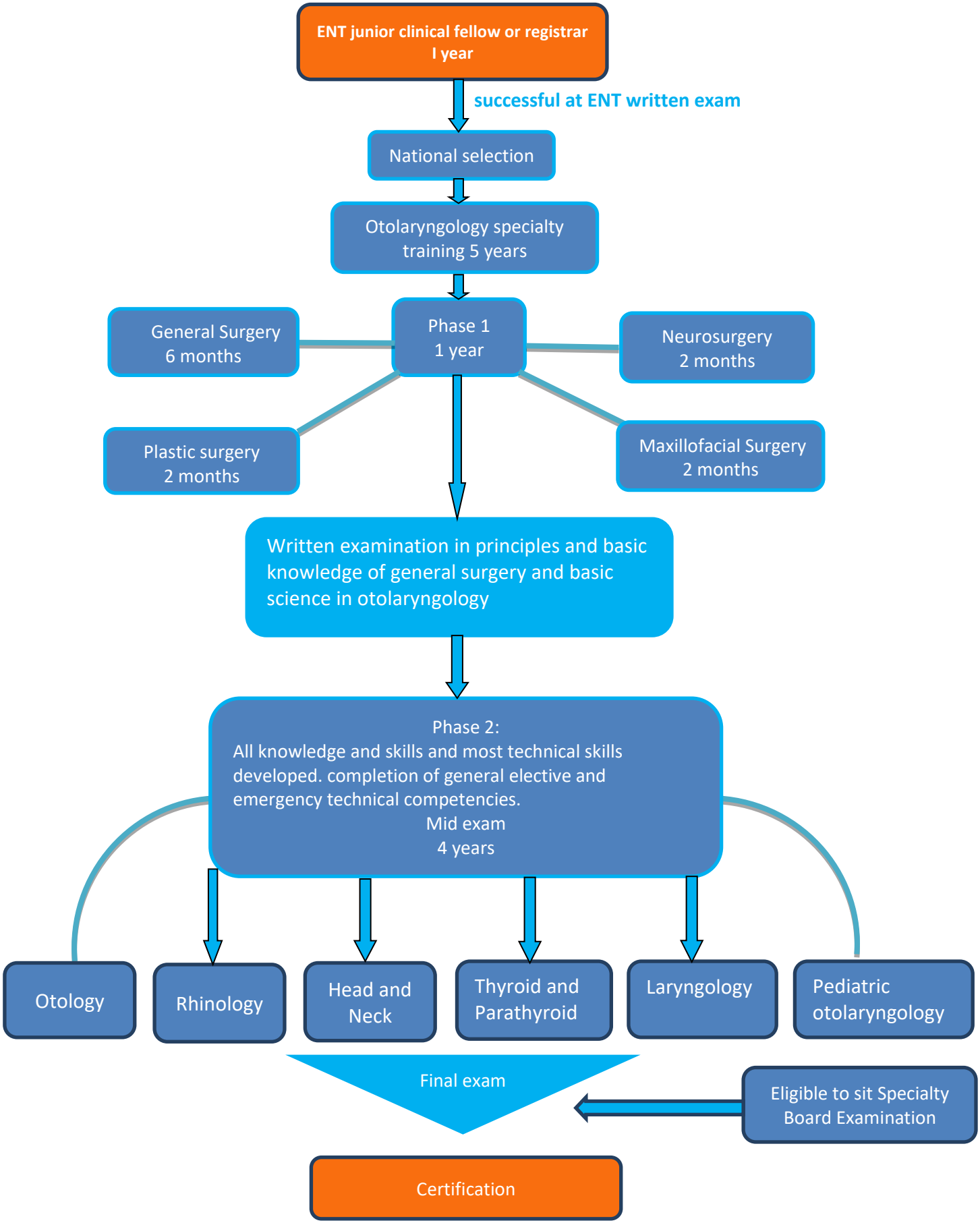

Figure 1: Otolaryngology training pathway.

3. Programme of Learning

This section covers the expected learning outcomes, learning methods, breadth of experience and levels of performance at critical progression points in the training Programme and the levels of performance expected of those completing training.

3.1 What has to be learnt to complete the Otolaryngology curriculum

The practice of Otolaryngology requires the generic and specialty knowledge, clinical and technical skills and behaviors to manage patients presenting with a wide range of ear, nose, throat and neck disorders. It involves development of competence in diagnostic reasoning, managing uncertainty, dealing with co-morbidities, and recognizing when another specialty opinion or care is required.

3.2 Capabilities in Practice (the high-level outcomes of training)

Training is designed to produce a person capable of safely and effectively performing the role of a first day specialist surgeon. The role of a specialist surgeon can be thought of as a sum of all the various tasks which need to be performed through a working week. These tasks are the high-level outcomes of the curriculum and grouping these together describe the role of a specialist surgeon. To perform a high-level clinical task as a specialist surgeon requires trainees to be able to integrate areas of learning from all parts of the syllabus, including knowledge, clinical skills, professional skills and technical skills. In addition, a surgeon will need to have acquired the generic skills, behaviors and values shared by all doctors in order to perform this task safely and well. A capability is a set of skills that can be developed through training from novice to expert and, therefore, these high-level clinical outcomes are known as Capabilities in Practice.

There are five Capabilities in Practice which are shared between all surgical specialties:

1) Manages an out-patient clinic
2) Manages the unselected emergency take
3) Manages ward rounds and the on-going care of in-patients
4) Manages an operating list
5) Manages multi-disciplinary working

3.3 Breadth of experience required during training in Otolaryngology

The curriculum requires trainees to accrue a rich experience that promotes deep learning of knowledge, clinical skills, technical skills, professional behavior, leadership and all other generic professional skills that are considered necessary to ensure patient safety throughout the training process and specifically at the end of training. The scope of practice of a day-one consultant in Otolaryngology is described in the syllabus. In addition, there are certain skills and conditions within the syllabus that are of such central and fundamental importance to the safe practice of Otolaryngology that they are highlighted as critical conditions and index procedures.

3.3.1 Critical conditions

From the syllabus, a list of critical conditions has been identified which are of significant importance for patient safety and demonstration of a safe breadth of practice. Across surgery, these are defined as any condition where a misdiagnosis could be associated with devastating consequences for life or limb. These critical conditions are assessed individually by means of the Case Based which include an assessment of clinical judgement and decision-making. They provide formative feedback to the trainee and feed into the summative assessment of the Assigned Educational Supervisor.

4. Teaching and Learning

4.1 How the Otolaryngology curriculum is delivered

The curriculum is used to help design training programmes locally that ensure all trainees can develop the necessary skills and knowledge in a variety of settings and situations. The curriculum is designed to ensure it can be applied in a flexible manner, meeting service needs as well as supporting each trainee's own tailored learning and development plan. This stipulates that all training must comply with the following standards:

Theme 1: learning environment and culture

S1.1 The learning environment is safe for patients and supportive for learners and educators. The culture is caring, compassionate and provides a good standard of care and experience for patients, carers and families.

S1.2 The learning environment and organisational culture value and support education and training, so that learners are able to demonstrate what is expected in Good Medical Practice and to achieve the learning outcomes required by their curriculum.

Theme 2: educational governance and leadership

S2.1 The educational governance system continuously improves the quality and outcomes of education and training by measuring performance against the standards, demonstrating accountability and responding when standards are not being met.

S2.2 The educational and clinical governance systems are integrated, allowing organisations to address concerns about patient safety, the standard of care, and the standard of education and training.

S2.3 The educational governance system makes sure that education and training is fair and is based on the principles of equality and diversity.

Theme 3: supporting learners

S3.1 Learners receive educational and pastoral support to be able to demonstrate what is expected in Good Medical Practice, and to achieve the learning outcomes required by their curriculum.

Theme 4: supporting educators

S4.1 Educators are selected, inducted, trained, and appraised to reflect their education and training responsibilities.

S4.2 Educators receive the support, resources and time to meet their education and training responsibilities.

4.2 Learning opportunities

A variety of educational approaches are used by education providers in order to help trainees develop the knowledge, clinical and technical skills, professional judgement, values and behaviors required by the curriculum. These educational approaches divide into three areas:

- Self-directed learning
- Learning from practice
- Learning from formal situations

4.2.1 Self-directed learning

The curriculum is trainee-led and self-directed learning is encouraged. Trainees are expected to take a proactive approach to learning and development and towards working as a member of a multi-professional team. Trainees are encouraged to establish study groups, journal clubs and conduct peer reviews. They should take the opportunity of learning with peers at a local level through postgraduate teaching and discussion sessions, and nationally with examination preparation courses. Trainees are expected to undertake personal study in addition to attending formal and informal teaching. This includes using study materials and publications and reflective practice. Trainees are expected to use the developmental feedback they get from their trainers in learning agreement meetings and from assessments to focus further research and practice.

Reflective practice is an important part of self-directed learning and of continuing professional development. It is an educational exercise that enables trainees to explore, with rigour, the complexities and underpinning elements of their actions in order to refine and improve them. Reflection in the oral form is very much an activity that surgeons engage in and find useful and developmental. Writing reflectively adds more to the oral process by deepening the understanding of practice. Written reflection offers different benefits to oral reflection which include: a record for later review, a reference point to demonstrate development and a starting point for shared discussion. Whatever the modality of reflection, it is important that it takes place and that there is a record of it having taken place, whether or not the specific subject or content of the reflection is recorded.

4.2.2 Learning from clinical practice

Surgical learning is largely experiential in nature with any interaction in the workplace having the potential to become a learning episode. The workplace provides learning opportunities on a daily basis for surgical trainees, based on what they see and what they do. Trainees are placed in clinical placements, which provide teaching and learning opportunities. The placements must be in units that are able to provide sufficient clinical resources and have sufficient trainer capacity.

While in the workplace, trainees are involved in supervised clinical practice, primarily in a hospital environment in wards, clinics or theatre. There are strong links to practitioners working in primary care and training environments may include private settings and, where available for training, a variety of community settings where the necessary facilities and governance arrangements are in place. The trainee role in these contexts determines the nature of the learning experience. Learning begins with observation of a trainer (not necessarily a doctor) and progresses to assisting a trainer; the trainer assisting/supervising the trainee and then the trainee managing a case independently but with access to their supervisor. The level of supervision changes in line with the trainee's progression through the phases of the curriculum. As training progresses, trainees should have the opportunity for

increased autonomy, consistent with safe and effective care for the patient. Typically, there should be a gradual reduction in the level of supervision required and an increase in the complexity of cases managed until the level of competence for independent practice is acquired.

4.2.3 Learning from formal situations

Learning from clinical practice is supplemented by an educational programme of courses and teaching sessions arranged at local, regional and national levels.

4.3 Supervision

Supervision is fundamental in the delivery of safe and effective training. It takes advantage of the experience, knowledge and skills of expert clinicians and ensures interaction between an experienced clinician and a trainee. The ultimate responsibility for the quality of patient care and the quality of training lies with the supervisor. Supervision is designed to ensure the safety of the patient by encouraging safe and effective practice and professional conduct. A number of people from a range of professional groups are involved in teaching and training with subject areas of the curriculum being taught by staff with relevant specialist expertise and knowledge.

Those involved in the supervision of trainees must have the relevant qualifications, experience, and training to undertake the role. Specialist skills and knowledge are usually taught by consultants and senior trainees whereas the more generic aspects of practice can also be taught by the wider multidisciplinary team MDT).

4.4 Supporting feedback and reflection

Effective feedback is known to enhance learning, and combining self-reflection with feedback promotes deeper learning. Trainees are encouraged to seek feedback on all they do, either informally, through verbal feedback at the end of a learning event.

4.5 Academic training

All trainees are required to satisfy the learning outcomes: *Capabilities in research and scholarship*. Trainees are encouraged to participate in clinical research and collaborative trials to achieve these outcomes, as well as in journal clubs, literature review and systematic review and to make a major contribution to the publication of novel findings in peer reviewed journals. An understanding of the principles of research, its interpretation and safe implementation of evidenced based new methods, processes and techniques is essential for the modern, progressive practice of surgery and in the interests of patients and the service.

4.6 Assessment

The specialty elements of the early years will all be assessed primarily in the workplace and then scrutinised in the Annual Review of Competency Progression. Specific evidence includes:

4.6.1 Doctor Assessment Form (competencies feedback form)

A. ENT Senior clinical fellow (registrar) (1 year)

1. Basic surgical skills
2. Peri-operative care (pre-operative, intra-operative and postoperative)
3. General otolaryngology
4. Otology
5. Rhinology
6. Head and Neck
7. Pediatric otolaryngology
8. Emergencies in otolaryngology
9. Academic and teaching
10. Tonsillectomy
11. Tracheostomy

B. Core trainee in otolaryngology specialty (5 years)

1. Otology clinic
2. Audiologic clinic (both pediatric and adult)
3. Rhinologic clinic include sleep apnea
4. Laryngologic clinic
5. Head and neck clinic
6. Oncologic clinic
7. Ward
8. Adenoidectomy
9. Tonsillectomy
10. Myringotomy + / grommet
11. Septoplasty
12. Functional Endoscopic Sinus Surgery
13. Tympanoplasty type I
14. Cortical mastoidectomy
15. Microlaryngoscopy
16. Tracheostomy
17. Nasal bone fracture repair
18. Neck surgery
19. Bronchoscopy
20. Oesophagoscope
21. Academic training and research

4.6.2 Courses

1- FESS course
2- Temporal bone dissection course
3- Head and neck course

5. Syllabus standards in specialty training

The syllabus provides a detailed description of the specialty-specific knowledge, clinical and technical skills required for each phase of training and for certification in Otolaryngology. Trainees are expected to have exposure to all topics in phase 2 of training.

1. **Otorhinolaryngology General Objectives -General Basic Knowledge**

- Principles of emergency medicine and resuscitation
- basic laboratory procedures and investigations, correct takingand handling of samples and interpretation of results, tumour markers, immunology and allergology investigations
- basic nutritional medicine: oral and parenteral nutrition
- principles of endocrinology as applied to the ORL regions
- Principles of infection control, bacteriology, mycology andantimicrobial medication
- principles of blood transfusion
- General surgical principles of management,operative techniques, hemostasis
- Principles of wound healing and plastic surgery
- Principles of oncology, reconstructive surgery and wherenecessary, transplantation
- Soft tissue and bone traumatology
- Medical quality control, audit, and management withinmultidisciplinary teams
- Ethical principles and informed consent
- Social welfare legislation with respect to disability(such as hearing and balance) and conditions of an aging population
- Radiation protection
- Management of psychosomatic disorders

2. **Otology/Neurotology-Knowledge of, Medical and Surgical management of the following conditions:**

1. History and clinical examination, imaging of hearing pathway, relevant laboratory investigations
2. Vestibular assessment and physical rehabilitation
3. Ear infections and their treatment
4. Assessment of conductive and sensorineural hearing loss in adults andchildren (including screening) with hearing rehabilitation
5. Tinnitus
6. Facial nerve palsy assessment and treatment

Auricle

- Congenital malformations
- Infections
- Inflammatory
- Benign & malignant tumours
- Otological trauma

Ear Canal

- Congenital malformations
- Infections
- Inflammatory
- Benign and malignant tumours
- Exostosis
- Necrotizing otitis externa
- Keratosis obturans and external canal cholesteatoma
- Trauma

Surgical Procedures:

- Management of oto-haematoma
- Excision of lesions of the auricle
- Wax removal
- Foreign body removal
- Removal of external auditory canal lesions
- Meatoplasty (soft tissue & bony)
- Removal of osteomas/exostoses

Tympanic Membrane and Middle Ear conditions

- Congenital malformations
- Acute & chronic otitis media
- Benign & malignant tumours
- Trauma
- Barotrauma
- Eustachian tube dysfunction-Conductive hearing loss in adults & children (congenital & acquired)

Surgical Procedures:

- Myringotomy
- Ventilation tube insertion
- Myringoplasty (Type1 Tympanoplasty)
- Tympanotomy
- Mastoidectomy-
  Cortical
  Modified radical / radical (Back to front approach)
  Atticotomy / Attico-antrostomy (Front to back approach)
  Combined approach tympanoplasty
  Mastoid obliteration
- Bone anchored hearing aid implantation
- Ossiculoplasty
- Implantation of prostheses
- Middle ear prosthesis (ossicular prosthesis/implantable hearing aids)
- Cochlear implants
- Stapes Surgery

Inner Ear and Lateral Skull Base conditions

- Congenital malformations
- Sensorineural hearing loss in adults & children (congenital & acquired) and its management
- Peripheral and central vestibular disorders
- Non-vestibular balance disorders
- Management of tinnitus (including pulsatile tinnitus) & hyperacusis
- Benign & malignant tumours
- Trauma

- Infective disorders

Surgical Procedures:

- Facial nerve surgery, decompression and grafting; anastomotic nerve surgery
- Endolymphatic sac decompression
- Vestibular schwannoma surgery
- Translabyrinthine approach
- Retrosigmoid approach
- Middle cranial fossa approach
- Vestibular neurectomy
- Glomus tumour surgery
- Petrosectomy
- Correction of malformations
- Peri-auricular fistulas
- Repair of injuries: auricle, external auditory canal, middle ear, middle and posterior cranial fossa
- Surgery of tumours: auricle, external auditory canal, middle and inner ear including management of nerves, vessels; temporal, middle cranial fossa and posterior cranial fossa approaches; management of dura
- Management of postoperative complications

3. Nose and Paranasal sinuses-Medical and Surgical management of the following conditions:

Nose

- congenital malformations of nose, mid-face (cleft lip, palate), including genetic anomalies
- infections of nose
- Neoplastic conditions: benign and malignant
- nasal and facial trauma
- Epistaxis
- Inflammatory conditions
- Allergic conditions (rhino-allergology)

Diagnostic tests and surgical procedures

- Assessment of function, investigations (airway, allergic tests, rhinoscopy, endoscopy and visual assessment including photography and facial measurements)
- Pharmacological therapy of nasal conditions
- Specific immunotherapy (hyposensitisation), sublingual immunotherapy
- Management of anaphylaxis
- Application of local and regional anaesthesia, rigid and flexible nasal endoscopy
- Management of epistaxis-nasal packing, nasal cautery and other endoscopic management, Management of medical conditions in epistaxis patients
- Foreign body removal
- Nasal Polypectomy
- Turbinate procedures (including coblation, radiofrequency etc)

- Septal surgery
- Revision septoplasty
- Septorhinoplasty (open and closed, reduction, augmentation, grafting techniques, cleft lip septorhinoplasty)
- Rhinophyma management and operative techniques
- Correction of congenital malformations (choanal atresia, fistulas, dermoid)

Paranasal Sinuses

- Congenital malformations
- Rhinosinusitis: acute and chronic
- Atopic, non-atopic, bacterial, fungal, allergic fungal
- Inflammatory and granulomatous systemic conditions including sarcoid,tuberculosis
- Benign and malignant tumours

Surgical Procedures of paranasal sinuses

- Sinus endoscopy
- Antral lavage
- Endoscopic antrostomy and sinus endoscopy
- Radical antrostomy
- Frontal sinus trephination
- External frontal sinus surgery
- External ethmoidectomy
- Endoscopic Sinus Surgery and its possible acute complications: a) anterior ethmoidectomy; b) posterior ethmoidectomy; c) frontal recess procedures; d) sphenoid sinus procedures
- Surgery of floor of maxillary sinus
- Ligation of maxillary, ethmoidal or sphenopalatine artery including endoscopic orbital decompression procedures
- Endoscopic dacry-cysto-rhinostomy (DCR)
- Management of CSF leak
- Tumour Surgery;
- a) maxillectomy (partial, total)
- b) lateral rhinotomy; c)midfacial degloving
- Combined approach to anterior skull base
- e) orbitotomy; f) exenteration of orbit; g) surgery of anterior skull base (incl osteoplastic flap, duraplasty and endoscopic)
- Trauma: a) soft tissue injuries; b) management of fractures of nasal bones/septum and septal haematoma under local or general anaesthesia; c) paranasal sinus fractures; d) fractures of orbit including blowout fractures; e) zygomatic fractures; f) optic nerve decompression; g) reconstruction of anteriorskull base

4. Laryngology, Head and Neck, Phoniatrics: knowledge of, assessment, medical and surgical management of the following:

Basic Knowledge

1. Carcinogenesis, molecular biology and immunobiology in head and neck oncology
2. Epidemiology and biostatistics of cancer management

3. TNM staging
4. Basics of cancer management
   4a. Indications and limitations of surgery
   4b. Biophysics of radiotherapy - indications and side effects
   4c. Chemotherapeutic agents - indications and side effects
   4d. Biologic and immuno-therapy - indications and side effects
5. Clinical trials in head and neck oncology
6. Prevention in head and neck oncology
7. Clinical databases in head and neck oncology

Benign diseases of head and neck
Oral Cavity
Larynx
Pharynx
Sinonasal
Vascular malformations
Trauma

Malignant disease of head and neck
Oral cavity
Pharynx
Larynx
Nose and paranasal sinuses
Neck and unknown primary
Salivary glands
Thyroid gland
Skin of head and neck

Multi-disciplinary management of head and neck cancer patients
Treatment planning – single versus multimodal
Treatment principles and safety of lasers in head and neck management reconstruction options for head and neck defects
Flap physiology and wound healing

a) Single or multiple non-surgical therapies:
b) Radiotherapy
c) Chemotherapy
d) Immunological therapy

Combination of the above with surgery
Curative versus Palliative

Oral cavity surgical procedures
Local surgery (including laser and robotic)
Open neck surgery – pull through procedure
Marginal mandibulectomy
Segmental mandibulectomy

Nasopharynx surgical procedures
Local surgery maxillary swing
Neck nodes (see paragraph on 'neck')
Oropharynx surgical procedures
Tonsillectomy
Transoral surgery (including robotic surgery)
Pharyngotomy
Mandibulotomy (mandibular split, mandibular swing)

Hypopharynx surgical procedures
Endoscopic surgery (TORS, TOUSS, laser surgery)
Management of pharyngeal pouch
Pharyngectomy with/ without laryngectomy
Partial pharyngectomy with near total laryngectomy
Partial pharyngectomy with total laryngectomy
Total pharyngectomy with total laryngectomy
Total pharyngo-laryngo-esophagectomy with reconstruction

Larynx surgical procedures
Endoscopic surgery
Partial or total laryngectomy
Primary or secondary placement of vocal prosthesis
Maintenance and change of speech prosthesis

Nose and paranasal sinuses surgical procedures (overlap with Rhinology above)
Endonasal surgical procedures (including use of navigation systems)
Maxillectomy (partial, total)
Lateral rhinotomy
Midfacial degloving
Orbitotomy and exenteration of orbit
Surgery of anterior skull base (incl osteoplastic flap, duraplasty and endoscopic)
Endoscopic surgery

Neck surgical procedures
Management of congenital neck masses (eg thyroglossal and branchial cysts)
Benign neck tumours (including paraganglioma, haemangioma, schwannoma)
Management of infective and inflammatory lymph node pathology
Management of deep neck space abscesses
Trauma of the neck and neck exploration
Single node resection
Sentinel node procedures
Neck dissection procedures (local, selective, radical, conservative)

Salivary glands surgical procedures
Salivary gland inflammatory and autoimmune conditions, stones, gland biopsy and duct surgery
Sialadenoscopy
Submandibular gland surgery
Parotid surgery (partial or total) (Neck dissection Levels I to V according to the ESGS classification)
Reconstruction (local flaps, SCM and SMAS, Fat)

Thyroid surgical procedures
Goiter and management of thyroid nodule, thyroiditis, parathyroid disorders
Hemithyroidectomy
Total thyroidectomy
Parathyroidectomy
Neck nodes (see paragraph neck)

Skin of head and neck-knowledge and surgical procedures
UV-light, excessive sun exposure
Skin types and classifications
Pigmented lesions
Management of precancerous lesions
Sentinel node technique in melanoma
Limited surgical excision (including local reconstruction)
Extended surgical excision
Reconstruction of the skin

Airway disorders and swallowing
History and clinical examination
Evaluation of hoarseness and dysphagia
Neck pain
Achalasia and gastro-oesophageal reflux
Management of foreign bodies and mediastinal infections
Endoscopy (including bronchoscopy, oesophagoscopy), imaging, airway and lung function tests
Tests of swallowing (FEES, swallow CT, chest CT)
Inhalational trauma
Ingestion of caustic substances
Vocal cord palsy, evaluation and diagnosis

Snoring and sleep related disorders
History, examination, physiological investigation and endoscopic assessment of snoring
Non-surgical (including cPAP) and surgical management of snoring (multi-level surgery)

Vascular malformations of head and neck and airway
Non-surgical, laser treatment, surgical treatment, treatment of airway obstruction

Phoniatrics

Assessment of vocal function
FEES, videofluoroscopy
Pharmacologic treatment and rehabilitation of dysphonia and acquired language disorder
Developmental language disorders, fluency disorders
Assessment and treatment of dysphagia following surgery or association with
-neurodegenerative disease

5. **Facial plastic and Aesthetic surgery, Knowledge, medical and surgical management of:**

Congenital malformations
Infections
Inflammatory
Benign & malignant tumours
Trauma

Assessment

Assessment of the face and ethnic variation
Facial analysis
Effects of aging process
Assessment of skin
Psychological assessment / screeningphotography
Investigation of the cranial nerves and facial paralysis grading
Anterior rhinoscopy
Endoscopy and microscopy
Computer imaging

Non-surgical management

Pharmacological therapy
Topical drug application
Chemical peels
Laser therapy
Intense light therapy
Noninvasive tissue therapy
Intense ultrasound and related methods
Percutaneous cryotherapy
Percutaneous, minimally invasive tissue ablation
Management of wounds
Application of botulinum toxins and neuromodulators

a) for reconstructive purposes
b) for the treatment of facial paralysis, neural deficits and facial pain
c) for cosmetic purposes including wrinkle treatment
d) for wound healing and improved scarring application of fillers (temporary and permanent)

Wrinkle treatment, other methods
Management of scar tissue, wound dressings
Lipolysis
Prosthetic options for ear, nose, etc

Surgical treatment
Topical, local and regional anaesthesia
Suture techniques
Turbinate surgery
Excision techniques for cutaneous malignancies

Trauma
Repair soft tissue injury/lacerations
Facial nerve repair
Lacrimal duct repair
Nasal fracture
Frontal sinus fracture
Naso-ethmoid fracture
Skull and cranial fracture
Midface fracture
Malar (Zygoma), orbital, mandibular and other fractures

Congenital
Hemangioma and lymphangioma resection
Choanal atresia repair
Cleft Lip, unilateral and bilateral
Alveolar cleft repair
Cleft palate repair
Craniofacial procedure
Microtia reconstruction
Otoplasty and other auricular

Reconstructive
Mandible reconstruction
Facial bone grafting and reconstruction
Orthognathic procedures
Grafts-split thickness, Full thickness, Composite, Dermal/Dermal-fat,
Cartilage (Auricular grafts, Septal og Rib grafts)
Flaps-Local, Regional, Distal, Free
Detachment of pedicle flap
Facial nerve reconstruction
Nerve graft
Gold weight
Lower lid tightening
Microneurovascular flap
Muscle sling
Static sling
Other scar revision surgery
Z-plasty, W-plasty and geometric broken line closure
Complex other closures
Full face dermabrasion
Tissue expanders and other

Cosmetic and Reconstructive
Rhinoplasty
Septorhinoplasty
Septoplasty
Blepharoplasty
Upper cosmetic
Upper functional
Lower with fat repositioning
Lower skin pinch
Rhytidectomy:
Extended SMAS W/Smart lipo laser
Deep plane
Mini-lift
Plication lift W/ smart lipo laser
Midface lift
Mentoplasty (Chin)-augmentation, reduction
Facial implants (e.g. malar)
Coronal/frontal lift
Brow-lift
Endoscopic forehead lift
Transtemporal tricophytic
Cervicofacial liposuction
Skin resurfacing
Dermabrasion (major-not scars)
Chemical peel (medium & deep only)
Face, eyelid, and/or perioral laser resurfacing.
Laser treatment of vascular lesions
Fat transfer
Treatment of complications of the above group 5

1. **Pediatric Otorhinolaryngology**

Otology
Foreign body removal
Myringotomy
Ventilation tube insertion
Tympanoplasty
Antrotomy
Mastoidectomy – simple
Cochlear implants, BAHA

Laryngology
Removal of foreign bodies from the larynx, trachea, bronchi and oesophagusEndotracheal intubation
Tracheotomy- tracheostomy
Endolaryngeal surgery of tumours

Endolaryngeal laser surgery of tumours in the upper aerodigestive tractManagement of laryngo-tracheal stenosis

Rhinology
Control of epistaxis, nasal packing/cautery
Foreign body removal
Reposition of nasal fractures
Incising abscess
Septal hematoma
Soft tissue injuries
Otoplasty
Septal surgery
Pediatric endoscopic surgery
Dacryocystorhinostomy in children
Cleft patient
Rhinoplasty
Corrections of malformations (e.g. choanal atresia, fistulae, dermoids, etc)
Juvenile angiofibroma endoscopic and open surgery

Head and Neck
Adenoidectomy
Tonsillectomy
Abscess tonsillectomy (hot tonsillectomy)
Arrest of postadenotonsillectomy haemorrhage
Foreign body removal
Transoral removal of salivary calculi
Drainage of abscess
Peri- and retrotonsillar abscesses
Para- and retropharyngeal abscesses
Correction of malformations
Lingual and labial frenulum
Ranula and inclusion Cysts
Macroglossia
Surgery of simple neck injuries
Surgery of tumours
Thyroglossal duct/cyst
Branchial cyst
Neck fistulae
Single lymph node excision
benign tumours including salivary glands
Incision and drainage of neck abscess
Surgery of benign skin tumours
Surgery of vascular tumours
Surgery of malignant tumours
Surgery of the thyroid gland
Hemithyroidectomy
Total thyroidectomy

5.1 Theoretical lectures

The following is a series of didactic lectures to cover the curriculum. The individual training centers may wish to adopt the list or modify it.

17 Hours

1. Basic Surgical principles

- Principles of emergency medicine and resuscitation 3h
- Basic laboratory procedures and investigations 1h
- Basic nutritional medicine 1h
- Principles of infection control 1h
- Principle of blood transfusion 1h
- General surgical principles of management,operative techniques 2h
- Principles of wound healing 1h
- Peri-operative care 1h
- Soft tissue and bone traumatology 1h
- principles of endocrinology 1h
- Principles of emergency medicine and resuscitation 1h
- Principles of oncology 1h
- Radiation protection 1h
- Ethical principles and informed consent 1h

35 Hours

2. Otology/Neurotology

- Imaging of hearing pathway (CT, MRI) 1h
- Audiology (PTA, tympanometry and ABR) 1h
- Vestibular assessment and physical rehabilitation 1h
- Assessment of hearing loss in adults and children 1h
- Tinnitus 1h
- Vertigo 1h
- Facial nerve palsy ..... 30 min
- Congenital auricle malformation 1h
- Auricular hematoma ..... 30 min
- Otitis externa 1h
- EAC cholesteatoma ..... 30 min
- Benign tumor of Pinna 1h

- Malignancy of the pinna 1h
- Exostosis 1h
- Keratosis obturans 1h
- Necrotizing otitis externa 1h
- Meatoplasty ..... 30 min
- Acute and Chronic otitis media 1h
- Management of otitis media with effusion ..... 30 min
- Chronic suppurative otitis media w/without cholesteatoma 1h
- Conductive hearing loss in adults & children 1h
- Barotrauma ..... 30 min
- Management of tympanic membrane perforation ..... 30 min
- Mastoid surgery (types and indication) 1h
- Bone anchored hearing aid implantation ..... 30 min
- Ossiculoplasty ..... 30 min
- Stapes surgery ..... 30 min
- Cochlear implant 1h
- Inner ear congenital malformation 1h
- Benign paroxysmal positional vertigo 1h
- Noise induced hearing loss ..... 30 min
- Management of sensorineural hearing loss in adults & children 1h
- Vestibular neuritis ..... 30 min
- Otosclerosis 1h
- Meniere's disease 1h
- Temporal bone fracture 1h
- Acute onset sensorineural hearing loss ..... 30 min
- Ototoxicity 1h
- CPA 1h
- Glomus tumor 1h
- Labyrinthitis 1h
- Vestibular schwannoma 1h

25 hours

3. Nose and Paranasal Sinuses

- Imaging of nose and paranasal sinuses (X-ray, CT and MRI)..... 1h
- Epistaxis..... 1h
- Reduction of fractured nasal bones..... 30 min
- Trauma to mid third of face..... 1 h
- Rhinitis..... 1h
- Septoplasty..... 1h
- Turbinate procedures (including coblation, radiofrequency)..... 1h
- Septal perforation..... 1h
- Septorhinoplasty..... 1h
- Granulomatous disease of the nose..... 1h
- Correction of congenital malformations (choanal atresia, fistulas, dermoid)..... 1h
- Nasopharyngeal carcinoma..... 1h
- Juvenile Nasopharyngeal angiofibroma..... 1h
- Nasal Papilloma..... 30 min
- Acute rhinosinusitis..... 1h
- Chronic rhinosinusitis..... 1h
- Nasal polyp..... 1h
- Fungal sinusitis..... 1h
- Complications of sinusitis..... 30 min
- Functional endoscopic sinus surgery..... 1h
- Endoscopic DCR..... 30 min
- External fronto-ethmoidectomy..... 1h
- CSF rhinorrhea..... 30 min
- Sinonasal malignancy..... 1h
- Total maxillectomy..... 1h
- Rhinophyma management and operative techniques..... 30 min
- Ligation of sphenopalatine artery including endoscopic orbital decompression procedures..... 1h
- Management of CSF leak..... 1h

48 Hours

4. Laryngology, Head and neck

- Imaging of head and neck (CT, MRI) 1h
- Angiography and embolization 1h
- Benign lesion of oral cavity 1h
- Oral cancer 1h
- Oropharyngeal cancer 1h
- Tonsillitis 1h
- Tonsillectomy ..... 30 min
- Snoring 1h
- Uvulopalatopharyngoplasty ..... 30 min
- Ranula ..... 30 min
- Inflammatory salivary gland conditions 1h
- Benign salivary gland tumors 1h
- Malignant salivary gland tumors 1h
- Submandibular gland excision ..... 30 min
- Parotidectomy 1h
- Infection of the larynx 1h
- Microscopic laser laryngoscopy surgery 1h
- Laryngeal cancer 1h
- Partial and total laryngectomy 1h
- Voice restoration after laryngectomy 1h
- Benign laryngeal lesion 1h
- Vocal cord palsy 1h
- Stridor 1h
- Tracheostomy 1h
- General principles in head and neck reconstruction 1h
- Assessing flap failure 1h
- Gastroesophageal reflux disease 1h
- Dysphagia 1h
- Post-cricoid web 1h
- Achalasia 1h
- Pharyngeal pouch 1h

- Oesophageal tumor 1h
- Benign thyroid disease 1h
- Graves' disease 1h
- Endoscopic orbital decompression 1h
- Thyroid neoplasia 1h
- Thyroid surgery 1h
- The parathyroid glands 1h
- Congenital neck masses 1h
- Infective neck masses 1h
- Investigation of a neck lump 1h
- Lymph node biopsy ..... 30 min
- Neck dissection 1h
- Deep neck space infection 1h
- Parapharyngeal space mass 1h
- Ludwig's angina 1h
- Parapharyngeal space tumor 1h
- Tests of swallowing (FEES, swallow CT, chest CT) ..... 30 min
- Ingestion of caustic substances ..... 30 min
- Sleep apnea, non-surgical (including cPAP) and surgical management of snoring 1h
- Assessment of vocal function, FEES, videofluoroscopy 1h
- Pharmacologic treatment and rehabilitation of dysphonia 1h
- Vascular malformations of head and neck and airway 1h

31 Hours

5. Pediatric Otorhinolaryngology

- Children and consent ..... 30 min
- Imaging in children 1h
- Feeding disorders 1h
- Drooling ..... 30 min
- Management of hemorrhage in children 1h
- Pediatric airway assessment ..... 30 min
- Endoscopy ..... 30 min
- Pediatric tracheostomy 1h

- Congenital abnormalities of the larynx 1h
- Laryngomalacia 1h
- Vocal cord palsy 1h
- Laryngeal cleft 1h
- Laryngeal web 1h
- Subglottic cyst 1h
- Subglottic Hemangioma 1h
- Vocal cord granuloma 1h
- Tracheomalacia 1h
- Subglottic stenosis 1h
- Infective disease of the larynx 1h
- Congenital ear deformities 1h
- Pediatric audiology 1h
- Congenital hearing loss 1h
- Pediatric neck masses 1h
- Branchial cyst and fistula 1h
- Thyroglossal duct/cyst 1h
- Vascular malformation 1h
- Pediatric cervical lymphadenopathy 1h
- Childhood nasal obstruction 1h
- Rhinitis in children 1h
- How to remove foreign bodies ..... 30 min
- How to drain peritonsillar Abscess ..... 30 min
- Management of post tonsillectomy bleeding 1h
- Septoplasty in children 1h
- Otoplasty in children 1h

5 Hours

6. Facial plastic and Aesthetic surgery

- Principles of facial plastic surgery 1h
- Local facial flaps 1h
- Blepharoplasty 1h
- Excision techniques for cutaneous malignancies 1h
- Laser therapy 1h

5.2 Textbooks

The Textbooks recommended for ST3 core trainee doctor in otolaryngology specialty

Topic	Possible textbooks or other educational sources
Basic otolaryngology	**Scott-Brown's Otorhinolaryngology and Head and Neck** Surgery volume 1 by John Watkinson (Editor), Ray Clarke (Editor)
Anatomy	**Last's Anatomy**: Regional and Applied (MRCS Study Guides) by R.J. Last and Chummy Sinnatamby **Grant's Atlas of Anatomy** by Anne M. R. Agur (Author), Arthur F. Dalley (Author)
Physiology	**Bailey and Love's Short Practice of Surgery** by Norman S. Williams (Editor), Christopher J.K. Bulstrode (Editor), P. RonanO'Connell (Editor)
Pathology	**Bailey and Love's Short Practice of Surgery** by Norman S. Williams (Editor), Christopher J.K. Bulstrode (Editor), P. RonanO'Connell (Editor)
Pharmacology	**Bailey and Love's Short Practice of Surgery** by Norman S. Williams (Editor), Christopher J.K. Bulstrode (Editor), P. Ronan O'Connell (Editor)
Microbiology	**Bailey and Love's Short Practice of Surgery** by Norman S. Williams (Editor), Christopher J.K. Bulstrode (Editor), P. Ronan O'Connell (Editor) **Schwartz's Principles of Surgery** F. Charles Brunicardi, Dana K. Andersen, Timothy R. Billiar, David L. Dunn, Lillian S. Kao, John G. Hunter, Jeffrey B. Matthews, Raphael E. Pollock
Radiology	**Bailey and Love's Short Practice of Surgery** by Norman S. Williams (Editor), Christopher J.K. Bulstrode (Editor), P. Ronan O'Connell (Editor**)** **Schwartz's Principles of Surgery** F. Charles Brunicardi, Dana K. Andersen, Timothy R. Billiar, David L. Dunn, Lillian S. Kao, John G. Hunter, Jeffrey B. Matthews, Raphael E. Pollock

Common surgical conditions	**Bailey and Love's Short Practice of Surgery** by Norman S. Williams (Editor), Christopher J.K. Bulstrode (Editor), P. Ronan O'Connell (Editor) **Schwartz's Principles of Surgery** F. Charles Brunicardi, Dana K. Andersen, Timothy R. Billiar, David L. Dunn, Lillian S. Kao, John G. Hunter, Jeffrey B. Matthews, Raphael E. Pollock
Surgical skills	Basic surgical skills course and curriculum
Peri-operative care including critical care	**Bailey and Love's Short Practice of Surgery** by Norman S. Williams (Editor), Christopher J.K. Bulstrode (Editor), P. Ronan O'Connell (Editor) **Schwartz's Principles of Surgery** F. Charles Brunicardi, Dana K. Andersen, Timothy R. Billiar, David L. Dunn, Lillian S. Kao, John G. Hunter, Jeffrey B. Matthews, Raphael E. Pollock
Surgical care of children	**Bailey and Love's Short Practice of Surgery** by Norman S. Williams (Editor), Christopher J.K. Bulstrode (Editor), P. Ronan O'Connell (Editor) **Schwartz's Principles of Surgery** F. Charles Brunicardi, Dana K. Andersen, Timothy R. Billiar, David L. Dunn, Lillian S. Kao, John G. Hunter, Jeffrey B.
Care of the dying	**Bailey and Love's Short Practice of Surgery** by Norman S. Williams (Editor), Christopher J.K. Bulstrode (Editor), P. Ronan O'Connell (Editor)
Organ transplantation	**Bailey and Love's Short Practice of Surgery** by Norman S. Williams (Editor), Christopher J.K. Bulstrode (Editor), P. Ronan O'Connell (Editor)

The Textbooks recommended to ST4-ST7 core trainee doctor in otolaryngology specialty

Otolaryngology	**Scott-Brown's Otorhinolaryngology and Head and Neck Surgery**, 3 volume set by John Watkinson (Editor), Ray Clarke (Editor) **Cummings Otolaryngology, Head and Neck Surgery** 3-Volume Set By Paul W. Flint & Bruce H. Haughey & Valerie J. Lund & K. Thomas Robbins & J. Regan Thomas & Marci M. Lesperance & Howard W. Francis

	Otolaryngology and Head and Neck Surgery (Oxford Specialist Handbooks in Surgery by Rogan Corbridge (Author), Andrea Thirlwall (Author), Suresh Patel (Author), Giles Warner (Author) **Atlas of Instruments in Otolaryngology, Head and Neck Surgery** by Vikram K. (Author), Ph.D. Bhat (Author), D Manjunath (Author) **Operative Otolaryngology: Head and Neck Surgery** 2-Volume Set by Eugene N. Myers MD FACS FRCS Edin (Hon) (Author) **Advanced ENT training, A guide to passing the FRCS (ORL-HNS) examination.** Edited By Joseph Manjaly, Peter J Kullar **ENT OSCEs A Guide to Passing the DO-HNS and MRCS (ENT) OSCE** By Peter Kullar, Joseph Manjaly, Alison Carter, Richard Fox Manual of Head and Neck Imaging by Mark Jameson, Max Wintermark, Sugoto Mukherjee, Prashant Raghavan

By CCT trainees should be competent in the management of the following procedures and conditions. The exact level of competence is set out in more detail in the topic sections. It is expected that by CCT all trainees will have developed an area of special interest and can demonstrate a higher level of proficiency in their chosen area of expertise.

EMERGENCIES

- Tracheostomy and airway management in the acute situation
- Exploration of the neck for sepsis and trauma
- Pharyngo-oesophagoscopy for removal of foreign bodies
- Drainage of peritonsillar abscesses
- Complications of head and neck surgery
- Tonsillitis
- Tonsillar and adenoid haemorrhage
- Removal of foreign bodies from the nose and ear
- Epistaxis management, surgical and non surgical
- Complications of sinusitis
- Drainage of orbital abscess
- Nasal trauma
- Facial palsy including postoperative complications
- Otological trauma
- Facial palsy
- Mastoiditis and complications
- Otitis externa

ELECTIVE

Otology

- Infective and non infective conditions of the external ear
- Infective and non infective disorders of the middle ear
- Infective and non infective disorders of the inner ear
- Hearing loss
- Tinnitus
- Vertigo and balance disorders
- Neoplastic and non neoplastic disease of the skull base
- Surgical and non surgical rehabilitation of hearing

Paediatric ORL

- Paediatric airway disorders
- Congenital disorders affecting the ear, nose and throat.
- Conditions of the tonsils and adenoids
- Sleep disordered breathing

- Hearing disorders in childhood
- Drooling
- Paediatric neoplasia affecting the ears, nose and throat
- Universal neonatal hearing screening

Rhinology

- Acute and chronic Rhinosinusitis
- Nasal polyps
- Disorders of the sense of smell
- Facial pain
- Nasal and facial deformity including trauma
- Sinonasal malignancy
- Epiphora
- Allergy
- Skin cancer of the head and neck

Head and Neck

- OSAS and snoring
- Voice disorders
- Disorders of swallowing
- Thyroid disease
- Adenotonsillar pathology
- Cervical lymphadenopathy
- Neck lumps
- Head and neck oncology
- Disorders of the oral cavity including malignancy
- Diseases of the salivary gland

6. Specialty Board Examination

The board examination is governed by Iraqi board. The examination is a powerful driver for knowledge and clinical skill acquisition. The examination is taken after successful completion of phase 2 and the standard is set at having the knowledge, clinical and professional skills at the level of a day-one consultant in the generality of the specialty, and must be passed in order to complete the curriculum. The examination components have been chosen to test the application of knowledge, clinical skills, interpretation of findings, clinical judgement, decision making, professionalism, and communication skills described within the curriculum.

There are two sections to the exam:

• Section 1 is a paper-based assessment comprising one paper taken on the same day. These are Single Best Answer (SBA) paper designed to test the application of knowledge and clinical reasoning.

• Section 2 comprises the clinical component of the examination. It consists of a series of carefully designed and structured interviews on clinical topics – some scenario-based and others patient-based. The construct of section 2 allows assessment of the application of knowledge, clinical interpretation, decision-making, clinical judgement and professionalism. Clinical and oral components are calibrated prior to the start of each diet. It is independently marked by examiners working in pairs but with reference to the marking descriptors and the standard agreed at the calibration meeting.

Attempts:

Trainees have a maximum of four attempts at each section of the examination with no re-entry. A pass in section 1 is required to proceed to section 2.

6.1 Completion of training in Otolaryngology

The following requirements are applied to all trainees completing the curriculum and applying for certification and entry to specialist register.

All seeking certification in Otolaryngology must:

a) have a licence to practise

b) have achieved the competencies

c) have successfully passed ENT board examination

In order to be awarded, trainees must be able to satisfy the following specialty specific guidelines:

Requirements for completion of training in Otolaryngology: a) generic requirements shared between all surgical specialties and b) requirements specific to Otolaryngology. Once these requirements have been met, the trainee can seek recommendation for certification and entry onto the specialist register.

a) Generic requirements shared between surgical specialities

Research - Trainees must provide evidence of having met the relevant requirements for research and scholarship. Broadly, this includes capabilities in 4 areas:

1. The demonstration of evidence-based practice.
2. Understanding how to critically appraise literature and conduct literature searches and reviews.
3. Understanding and applying basic research principles.
4. Understanding the basic principles of research governance and how to apply relevant ethical guidelines to research activities.

Medical Education and training - evidence of an understanding of, and participation in, medical education and training as defined in the curriculum	Trainees must provide evidence of being trained in the training of others.
Management and leadership - evidence of an understanding of management structures and challenges of the health service in the training jurisdiction	Trainees must provide evidence of training in health service management and leadership and having taken part in a management related activity e.g. rota administration, trainee representative, membership of working party etc. or of having shadowed a management role within the hospital.

b) specific to Otolaryngology

Additional courses / qualifications - evidence of having attended specific courses/gained specific qualifications as defined in the curriculum	FESS course Hand on Temporal bone course Hand on Head and neck course
Specialist conferences - evidence of having attended conferences and meetings as defined in the curriculum appropriate to the specialty	It is recommended that trainees attend national or international meetings during training (e.g. annual meetings of specialty associations or major international equivalents).
Clinical experience - evidence of the breadth of clinical experience defined in the specialty syllabus, and experience in one specialty interests	The time spent in Specialty Training should have been in posts, in a minimum of three units. Trainees must have participated in on-call rotas and managed emergency cases during their training. Trainees should have experience in and have rotated through placements in areas of interest across the range of Otology, Rhinology, Head and Neck, Thyroid and Parathyroid, Laryngology, and Paediatric Otolaryngology.
Operative experience - consolidated logbook evidence of the breadth of operative experience defined in the specialty syllabus	Trainees should have undertaken an indicative minimum 220 operations during training as principal in a training unit.
Index Procedures - Index procedures are of significant importance for patient safety and to demonstrate a safe breadth of practice.	Trainees must be competent in the management of, and procedures allied to, emergency care. See index procedures.

Critical Conditions - To ensure that trainees have the necessary skills to manage the defined critical conditions.	By certification there should be documented evidence of performance at the level of a day-one consultant. 1 Adult airway obstruction (malignancy, inhalation i injury etc.) 2 Paediatric airway obstruction 3 Upper aero-digestive tract foreign body and chemical injury (including batteries) 4 Acute infections of the upper aero-digestive tract including tonsillitis & supraglottitis 5 Deep neck space abscess and necrotising fasciitis 6 Management of tonsillar haemorrhage and other major upper aerodigestive tract haemorrhage 7 Blunt and penetrating trauma to the neck 8 Epistaxis including sphenopalatine artery ligation 9 Complications of acute and chronic sinusitis including orbital cellulitis 10 Complications of ear sepsis including acute mastoiditis and necrotising otitis externa 11 Acute balance disorder including vestibulopathy, and diagnostic understanding of brain stem stroke and multiple sclerosis 12 Sudden onset sensorineural hearing loss

The supervision levels are:
Level I: Able to observe only
Level II: Able and trusted to act with direct supervision:
a) Supervisor present throughout
b) Supervisor present for part

Level III: Able and trusted to act with indirect supervision
Level IV: Able and trusted to act at the level expected of a day-one consultant
Level V: Able and trusted to act at a level beyond that expected of a day-one consultant

Standards for clinical and technical skills
The practical application of knowledge is evidenced through clinical and technical skills.
Unless otherwise stated in this document, the clinical skills listed below are expected to be at level 4 at the end of phase 2.
1. Has observed
Exit descriptor; at this level the trainee:
● Has adequate knowledge of the steps through direct observation.

● Demonstrates that he/she can handle instruments relevant to the procedure appropriately and safely.
● Can perform some parts of the procedure with reasonable fluency.

2. Can do with assistance
Exit descriptor; at this level the trainee:
● Knows all the steps - and the reasons that lie behind the methodology.
● Can carry out a straightforward procedure fluently from start to finish.
● Knows and demonstrates when to call for assistance/advice from the supervisor (knows personal limitations).

3. Can do whole but may need assistance
Exit descriptor; at this level the trainee:
● Can adapt to well- known variations in the procedure encountered, without direct input from the trainer.
● Recognises and makes a correct assessment of common problems that are encountered.
● Is able to deal with most of the common problems.
● Knows and demonstrates when he/she needs help.
● Requires advice rather than help that requires the trainer to scrub.

4. Competent to do without assistance, including complications

6.2 Competencies

- **ENT Senior clinical fellow (registrar)**

1	Basic surgical skills	Assessment technique	Areas in which simulation should be used to develop relevant skills
Objective	• Preparation of the surgeon for surgery • Safe administration of appropriate local anaesthetic agents • Acquisition of basic surgical skills in instrument and tissue handling. • Understanding of the formation and healing of surgical wounds • Incise superficial tissues accurately with suitable instruments. • Close superficial tissues accurately. • Tie secure knots. • Safely use surgical diathermy • Achieve haemostasis of superficial vessels. • Use suitable methods of retraction. • Knowledge of when to use a drain and which to choose. • Handle tissues gently with appropriate	**Doctor Assessment Form**	

	instruments. • Assist helpfully, even when the operation is not familiar. • Understand the principles of anastomosis • Understand the principles of endoscopy		
Knowledge	Principles of safe surgery • Preparation of the surgeon for surgery • Principles of hand washing, scrubbing and gowning • Immunisation protocols for surgeons and patients Administration of local anaesthesia • Choice of anaesthetic agent • Safe practise Surgical wounds • Classification of surgical wounds • Principles of wound management • Pathophysiology of wound healing • Scars and contractures • Incision of skin and subcutaneous tissue: o Langer's lines o Choice of instrument o Safe practice • Closure of skin and subcutaneous tissue: o Options for closure o Suture and needle choice • Safe practice • Knot tying o Range and choice of material for suture and ligation o Safe application of knots for surgical sutures and ligatures • Haemostasis: o Surgical techniques o Principles of diathermy		**Strongly recommended: Basic surgical skills Tissue handling/suturing** **Strongly recommended (Paediatric Surgery):** • **Basic suturing and wound management** **Desirable (Cardiothoracic Surgery / Plastic Surgery):** • **Anastomosis** • **Endoscopy**
	• Tissue handling and retraction: o Choice of instruments • Biopsy techniques including fine needle aspiration cytology • Use of drains: o Indications o Types o Management/removal • Principles of anastomosis • Principles of surgical endoscopy		

Clinical Skills	Preparation of the surgeon for surgery • Effective and safe hand washing, gloving and gowning • Administration of local anaesthesia • Accurate and safe administration of local anaesthetic agent Preparation of a patient for surgery • Creation of a sterile field • Antisepsis • Draping		
Technical Skills and Procedures	Preparation of the surgeon for surgery • Effective and safe hand washing, gloving and gowning Administration of local anaesthesia • Accurate and safe administration of local anaesthetic agent Incision of skin and subcutaneous tissue: • Ability to use scalpel, diathermy and scissors Closure of skin and subcutaneous tissue: • Accurate and tension free apposition of wound edges Knot tying: • Single handed • Double handed • Instrument • Superficial • Deep Haemostasis: • Control of bleeding vessel (superficial) • Diathermy • Suture ligation • Tie ligation • Clip application • Transfixion suture Tissue retraction: • Tissue forceps • Placement of wound retractors Use of drains: • Insertion • Fixation • Removal Tissue handling: • Appropriate application of instruments		

	and respect for tissues • Biopsy techniques Skill as assistant: Anticipation of needs of surgeon whenassisting		

2	**Peri-operative care**		
Objective	To assess and manage preoperative risk To manage patient care in the peri-operative period To conduct safe surgery in the operatingtheatre 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 complicationsTo assess, plan and manage post- operative fluid balance To assess and plan perioperativenutritional management	**Doctor Assessment Form**	

Knowledge	Pre-operative assessment andmanagement: • Cardiorespiratory physiology • Diabetes mellitus and other relevant endocrine disorders • Fluid balance and homeostasis • Renal failure • Pathophysiology of sepsis –prevention and prophylaxis • Thromboprophylaxis • Laboratory testing and imaging • Risk factors for surgery andscoring systems • Pre-medication and otherpreoperative prescribing • Principles of day surgery Intraoperative care: • Safety in theatre including patient positioning and avoidance of nerve injuries • Sharps safety • Diathermy, laser use • Infection risks • Radiation use and risks • Tourniquet use includingindications, effects and complications • Principles of local, regional andgeneral anaesthesia • Principles of invasive and non-invasive monitoring • Prevention of venousthrombosis • Surgery in hepatitis and HIVcarriers • Fluid balance and homeostasis Post-operative care: • Post-operative monitoring • Cardiorespiratory physiology • Fluid balance and homeostasis • Diabetes mellitus and other relevant endocrine disorders • Renal failure • Pathophysiology of blood loss • Pathophysiology of sepsisincluding SIRS and shock • Multi-organ dysfunctionsyndrome • Post-operative complications ingeneral • Methods of postoperativeanalgesia		Strongly recommended:Basic surgical skills Life Support Critical Care Strongly recommended (Paediatric Surgery): • Safe surgery

	To assess and plan nutritional management • Post-operative nutrition • Effects of malnutrition, bothexcess and depletion • Metabolic response to injury • Methods of screening and assessment of nutritional status • Methods of enteral andparenteral nutrition Haemostasis and Blood Products: • Mechanism of haemostasis including the clotting cascade • Pathology of impaired haemostasis e.g. haemophilia,liver disease, massive haemorrhage • Components of blood • Alternatives to use of blood products • Principles of administration of blood products • Patient safety with respect toblood products Coagulation, deep vein thrombosis andembolism: • Clotting mechanism (VirchowTriad) • Effect of surgery and trauma oncoagulation • Tests for thrombophilia and other disorders of coagulation • Methods of investigation for suspected thromboembolic disease • Principles of treatment of venous thrombosis and pulmonary embolism includinganticoagulation • Role of V/Q scanning, CTpulmonary angiography, D-dimer and thrombolysis • Place of pulmonaryembolectomy • Prophylaxis of thromboembolism: • Risk classification andmanagement of DVT • Knowledge of methods of prevention of DVT, mechanicaland pharmacological Antibiotics: • Common pathogens in surgicalpatients • Antibiotic sensitivities • Antibiotic side-effects • Principles of prophylaxis andtreatment Metabolic and endocrine disorders inrelation perioperative management		

	• Pathophysiology of thyroid hormone excess and deficiencyand associated risks from surgery • Causes and effects of hypercalcaemia and hypocalcaemia • Complications of corticosteroidtherapy • Causes and consequences ofSteroid insufficiency • Complications of diabetesmellitus • Causes and effects of hyponatraemia • Causes and effects of hyperkalaemia and hypokalaemia Delirium • Epidemiology and prognosis ofdelirium • Causes and clinical features ofdelirium • The impact of delirium onpatient, family and carers		

Clinical Skills	Pre-operative assessment andmanagement: • History and examination of apatient from a medical and surgical standpoint • Interpretation of pre-operative investigations • Management of co morbidity • Resuscitation • Appropriate preoperativeprescribing including premedication Intra-operative care: • Safe conduct of intraoperativecare • Correct patient positioning • Avoidance of nerve injuries • Management of sharps injuries • Prevention of diathermy injury • Prevention of venousthrombosis Post-operative care: • Writing of operation records • Assessment and monitoring of patient's condition • Post-operative analgesia • Fluid and electrolytemanagement • Detection of impending organfailure • Initial management of organfailure • Principles and indications forDialysis • Recognition, prevention andtreatment of post-operative complications		

	Haemostasis and Blood Products: • Recognition of conditions likelyto lead to the diathesis • Recognition of abnormalbleeding during surgery • Appropriate use of bloodproducts • Management of the complications of blood producttransfusion Coagulation, deep vein thrombosis and embolism • Recognition of patients at risk • Awareness and diagnosis of pulmonary embolism and DVT • Role of duplex scanning, venography and d-dimermeasurement • Initiate and monitor treatment ofvenous thrombosis and pulmonary embolism • Initiation of prophylaxis Antibiotics: • Appropriate prescription ofantibiotics Assess and plan preoperativenutritional management • Arrange access to suitable artificial nutritional support, preferably via a nutrition team including Dietary supplements,Enteral nutrition and Parenteralnutrition Metabolic and endocrine disorders • History and examination in patients with endocrine andelectrolyte disorders • Investigation and managementof thyrotoxicosis and hypothyroidism • Investigation and managementof hypercalcaemia and hypocalcaemia • Peri-operative management ofpatients on steroid therapy • Peri-operative management ofdiabetic patients • Investigation and managementof hyponatraemia • Investigation and managementof hyperkalaemia and hypokalaemia Delirium Assessment of cognitive impairmentseeking to differentiate dementia from delirium, with the		

	knowledge that delirium is common in people with Dementia Management of patients with delirium including addressing triggersand using non-pharmacological and pharmacological methods where appropriate Explanation of delirium to patientsand advocates Technical Skills and Procedures Central venous line insertion Urethral catheterisation		

3	**General otolaryngology**	**Assessment technique**
Knowledge	Anatomy and embryology of ear, nose and throat, head and neck Awareness and interpretation of radiological investigations Awareness and interpretation of microbiological investigations	**Doctor Assessment Form**
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history and examination Anterior Rhinoscopy Flexible Nasendoscopy Otoscopy Tuning fork Microscopy PATIENT MANAGEMENT Conservative, medical and surgical	
Technical Skills and Procedures	Patient preparation for surgery Consent before surgery Observation of patient postoperative Communication with the medical staff in the ward	

4	**Otology**	
Ear conditions	Ear infection(external, middle ear infection) Bacterial, viral and fungal infection. Ear trauma Hearing loss Tinnitus Vertigo Facial nerve palsy	**Doctor Assessment Form**

Knowledge	Anatomy, physiology and pathology of the external ear and relationship of disease to the temporal bone. The pathogenesis of infective disorders of the external ear & pinna Necrotising otitis externa Microbiology of external ear and pinna Knowledge of antimicrobial and antiviral agents and relevant pharmacology of medications used in treatment. Differential diagnosis of infective/inflammatory conditions Management including medical and surgical options as appropriate	
Clinical skills	HISTORY AND EXAMINATION Obtain appropriate history, clinical examination Otoscopy, Tuning fork Microscopy PTA, tympanometry Facial nerve examination Fistula test Dix-Hallpike test Epley's maneuver DATA INTERPRETATION Awareness and interpretation of radiological investigations Awareness and interpretation of microbiological investigations	
Technical Skills and Procedures	Microscopy Suction clearance Drainage of abscess Foreign body removal biopsy of lesion of external ear canal	

5	**Rhinology**	
Nasal conditions	Acute and chronic rhinosinusitis Allergic rhinitis Olfactory dysfunction Nasal obstruction Nasal fracture Septum hematoma Septal abscess Epistaxis	**Doctor Assessment Form**
Knowledge	Anatomy and embryology of the nose and sinuses. Nasal physiology Knowledge of the scientific principles of common investigations e.g skin prick tests,RAST Knowledge of the evidence base for Knowledge of imaging techniques; assessment of abnormalities on CT scanning of theparanasal sinuses	

Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from the child/carer3 Anterior Rhinoscopy Flexible Nasendoscopy Otoscopy DATA INTERPRETATION Skin prick tests for allergies; Blood tests for allergies; immunological tests, ciliary function tests. PATIENT MANAGEMENT Conservative, medical and surgical	
Technical Skills and Procedures	Nasal cautery EUA nose Appropriate nasal packing Fracture nose reduction under local anesthesia	

6	**Larynx, head and neck**	
Conditions	Adenotonsillar pathology Cervical lymphadenopathy Neck lumps Peritonsillar abscess Post tonsillectomy bleeding OSAS and snoring Voice disorders Disorders of swallowing Thyroid disease	**Doctor Assessment Form**
Knowledge	Understand the anatomy of the oral cavity, head and neck. Know the normal flora of the oral cavity and how oral disease can alter oral flora. Understand the physiology of the oral phases of swallowing Know the physiology of salivary function Understand the consequences of oral disease on swallowing Understand the embryology, physiology, biochemistry and anatomy of the thyroid gland	
Clinical Skills	Be able to elicit an appropriate clinical history and interpret physical signs correctly Oral cavity examination Neck examination Demonstrate the ability to detect 'red flag' symptoms & signs of malignant disease. Flexible fibreoptic nasopharyngolaryngoscopy Order the most appropriate imaging modality Be able to interpret plain images of the oral cavity and associated bony structures	

Technical Skills and Procedures	Incision and drainage of peritonsillar abscess. Tonsillectomy	

7	**Pediatric otolaryngology**	
Pediatric conditions	Paediatric airway disorders Congenital disorders affecting the ear,nose and throat. Conditions of the tonsils and adenoids, Tonsillitis Sleep disordered breathing Hearing disorders in childhood Drooling Foreign body in ear, nose and throat Otitis media with effusion Acute otitis media Nasal fracture	**Doctor Assessment Form**
Knowledge	Anatomy of the oral cavity, oropharynx and nasopharynx Microbiology of the oral cavity, oropharynx and nasopharynx Epidemiology, classification, aetiology and natural history of adenotonsillar disease. Anatomy of the larynx in children and the physiology of voiceproduction. The normal developmental milestones with an emphasis on speech andlanguage acquisition.	
Clinical Skills	HISTORY AND EXAMINATION Ability to take a through history fromchild/parent. Otoscopy Examination of the oral cavity and oropharynx Ability to recognise the child with possible OSA. DATA INTERPRETATION Clinical assessment of the nasal airway PATIENT MANAGEMENT Medical and surgical treatment. Management of complications both of the disease (eg peritonsillarabscess) and of treatment	
Technical Skills and Procedures	Tonsillectomy Arrest of adenotonsillar bleeding as an emergency Foreign body removal	

8	**Emergencies in otolaryngology**	
Emergency conditions	Tracheostomy and airway management in the acute situation Pharyngo-oesophagoscopy for removal of foreign bodies peritonsillar abscesses Tonsillitis Tonsillar and adenoid haemorrhage Removal of foreign bodies from the nose and ear Epistaxis management, surgical and non surgical Complications of sinusitis Nasal trauma Otological trauma Facial palsy Otitis externa	**Doctor Assessment Form**
Knowledge	Anatomy, physiology and pathology of the ear, nose and throat. Glasgow Coma Scale Facial nerve grading systems	
Clinical Skills	HISTORY AND EXAMINATION Obtain appropriate history Clinical examination Anterior rhinoscopy Flexible pharyngolaryngoscopy DATA INTERPRETATION Assessment of plain radiography (e.g. chest x-ray and soft tissue neck x- ray) PATIENT MANAGEMENT Recognition of the clinical signs of respiratory distress in children Emergency airway care in conjunction with anaesthetists and paediatricians.	
Technical Skills and Procedures	ABCDE Tracheostomy Tracheotomy Drainage of peritonsillar abscesses Removal of nasal foreign	

9	**Academic and learning**	
	Case presentation Preparation for national ENT exam Competencies Communication with colleagues and medical staff	**Doctor Assessment Form**

Core trainee in otolaryngology specialty

PAEDIATRIC OTOLARYNGOLOGY

1	**Foreign bodies in the ear canal and UADT**	**Beginning of P2**	**End of P2**
Category	Paediatric Otolaryngology		
	Foreign bodies in the ear nose and throat		
Objective	Safe definitive management of children with suspected and actual foreign bodies in the ear nose and pharynx; primary management of inhaled foreign bodies to facilitate safe transfer for tracheobronchoscopy if required. 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		
Knowledge	Anatomy and physiology of the paediatric airway Recognition of anatomical differences between the adult and paediatric airway. Recognition of the clinical features of foreign bodies in the ear, nose, and throat Knowledge of the natural history and the complications associated with foreign bodies. Concept of the shared airway and differing anaesthetic techniques		
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from the child/carer Otoscopy Anterior rhinoscopy Flexible pharyngolaryngoscopy DATA INTERPRETATION Assessment of plain radiography (e.g. chest x-ray and soft tissue neck x-ray). PATIENT MANAGEMENT Recognition of the clinical signs of respiratory distress in children Emergency airway care in conjunction with anaesthetists and paediatricians.	 3	 3
Technical Skills and Procedures	Otomicroscopy and removal of foreign body Removal of nasal foreign body and examination with paediatric and rigid scopes Pharyngo-oesophagoscopy and foreign body removal Rigid bronchoscopy and foreign body removal from larynx and Trachea	4 4 4 2	4 4 4 2

2	**Trauma to the ear, upper aero digestive tract and neck**		
Category	Paediatric Otolaryngology		
	Trauma to the head and neck		
Objective	To be competent in the recognition of paediatric head and neck trauma and its management. To recognise when to refer complicated cases for further assessment and treatment. 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		
Knowledge	Anatomy of the head and neck in children Recognition of anatomical differences between the adult and paediatric airway Mechanisms of trauma to the facial skeleton and soft tissues Know the causes and presentation of nasal septal haematoma Know the causes and presentation of ear trauma (external, middle and inner) Know the causes and presentation of trauma to the neck, pharynx and larynx Knowledge of common aetiologies and awareness of the possible presentations of non-accidental injury to the ENT department. Understand how child abuse is classified, how it may present to otolaryngologists and the mechanism of onward referral and management		
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from child/parent Assessment of the external nose and nasal airway Clinical examination of the ear Assessment of the neck including the airway Otoscopy DATA INTERPRETATION Age appropriate hearing test, tympanometry PATIENT MANAGEMENT Recognition of the signs of respiratory distress in a child Resuscitation of a child in hypovolaemic shock secondary to bleeding Aware of the local protocol for the reporting of suspected non-accidental injury		

Technical Skills and Procedures	Nasal fracture manipulation	4	4
	Laryngoscopy, Pharyngoscopy	4	4
	Drainage of septal haematoma	4	4
	Drainage of haematoma of pinna	4	4
	Exploration of neck	2	3
	Paediatric Tracheostomy	2	2

3	**Epistaxis in a child**		
Category	Paediatric Otolaryngology		
	Epistaxis		
Objective	Optimum recognition and management of children with epistaxis; 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		
Knowledge	Nasal anatomy & physiology Pathophysiology, epidemiology, & natural history of paediatric epistaxis Current approach to treatment of epistaxis to include awareness of the evidence base for current treatment regimens. Understand the aetiologies of paediatric epistaxis (local including nasopharyngeal angiofibroma, and systemic including coagulopathies) Know the relevant investigation and treatments of paediatric epistaxis		
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from the child/carer Anterior Rhinoscopy Flexible Nasendoscopy DATA INTERPRETATION Interpretation of full blood count & other haematological investigations; awareness of significance of coagulation tests PATIENT MANAGEMENT Medical and surgical management of epistaxis		
Technical Skills and Procedures	Nasal cautery	4	4
	EUA nose	4	4
	Appropriate nasal packing in a child (see also adult rhinology section)	4	4
	Paediatric SPA ligation	1	1
	Open and closed procedures for treatment of angiofibroma	1	1

4	**Rhinosinusitis; orbital and intracranial complications of rhinosinusitis**		
Category	Paediatric Otolaryngology		
	Nose and Sinus infections		
Objective	Optimum recognition and management of children with rhinosinusitis; particularly complicated sinus disease e.g. subperiosteal abscess, intracranial sepsis. 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		
Knowledge	Nasal anatomy & pathophysiology Epidemiology, natural history & presenting symptoms of rhinosinusitis in children Current approach to treatment of infective rhinosinusitis to include awareness of the evidence base for current treatment regimens. Recognition and competence in the emergency management of the complications of rhinosinusitis.		
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from the child/carer Anterior Rhinoscopy Flexible Nasendoscopy Otoscopy DATA INTERPRETATION Awareness of imaging techniques Assessment of abnormalities on CT scanning of the paranasal sinuses and MR brain. PATIENT MANAGEMENT Medical and surgical management of rhinosinusitis and its complications.	3	3
Technical Skills and Procedures	EUA Nose Endoscopic Nasal Polypectomy External drainage of subperiosteal abscess External drainage of the frontal sinus Endoscopic drainage of periorbital abscess External drainage of frontal sinus	4 2 1 1 1 1	4 3 3 2 4 1

5	**Airway pathology in childhood**		
Category	Paediatric Otolaryngology		
	Airway Disorders		
Objective	Safe recognition of the main patterns of presentations and likely aetiologies of children with airway obstruction at birth, in infancy and in later childhood. Includes primary management to enable definitive treatment of main conditions. 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		
Knowledge	Anatomy of the paediatric airway, and differences between the adult and child. Physiology of airway obstruction (Poiseuille's law, Reynolds number) Clinical features of airway obstruction Clinical measures to determine severity of obstruction Know the causes, presenting symptoms of airway pathology in children, Know the treatment options and natural history of main conditions causing airway pathology in children at different ages e.g. laryngomalacia, vocal cord palsy, subglottic cysts, haemangioma, RRP, Laryngeal cleft, tracheobronchomalacia, acute epiglottitis and laryngotracheobronchitis (croup). Understand the genetic disorders associated with airway pathology in children Understand the role of laryngopharyngeal reflux in airway pathology in children	 2 2	 2 2
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from the child/carer. Assessment of the airway in a child Flexible pharyngolaryngoscopy. DATA INTERPRETATION Assessment of pulse oximetry findings, assessment of radiography at a basic level e.g. recognition of gross abnormalities on chest radiograph and CT PATIENT MANAGEMENT Medical management in the acute and elective situation e.g. steroids, adrenaline, reflux. Emergency airway care in conjunction with anaesthetist and paediatrician.	 3 3	 3 3
Technical Skills and Procedures	Paediatric flexible pharyngolaryngoscopy in the outpatients Paediatric tracheostomy emergency and elective Paediatric tracheostomy care including tube change Diagnostic rigid airway endoscopy Therapeutic rigid airway endoscopy. Laryngotracheal reconstruction	4 2 2 2 1 1	4 3 3 3 1 1

	Balloon dilatation for subglottic stenosis Management of subglottic cysts	1 1	1 1

6	**The Drooling Child**		
Category	Paediatric Otolaryngology		
Objective	To be competent at assessing a child who presents with the symptom of drooling, and to understand the principles behind management of these patients. 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		
Knowledge	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 of non medical, medical and surgical management of drooling children	 3 3	 3 3
Clinical Skills	Undertake a comprehensive history and examination of a child who presents with drooling Be able to communicate an effective management plan to the patient and his or her carer Work with colleagues from other specialities and disciplines to provide effective care for children presenting with drooling.	 3	 3
Technical Skills and Procedures	Tonsillectomy Adenoidectomy Flexible nasendoscopy Submandibular gland excision Transposition of submandibular ducts Neuromuscular blockade Sublingual gland excision Parotid and submandibular duct ligation Botox to parotid and submandibular glands	4 4 4 2 1 1 1 1 1	4 4 4 2 1 1 1 1 1

7	**Acute tonsillitis, Diseases of the adenoids and their complications**		
Category	Paediatric Otolaryngology		
	Tonsils		
Objective	Definitive secondary-care management of adenotonsillar disease excluding OSA in otherwise healthy children. Management in syndromic and special needs children is often in a designated children's hospital. 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		
Knowledge	Anatomy of the oral cavity, oropharynx and nasopharynx Microbiology of the oral cavity, oropharynx and nasopharynx Epidemiology, classification, aetiology and natural history of adenotonsillar disease. Thorough understanding of the evidence base that underpins current treatment approaches. Awareness of controversies. Understanding of specific management requirements in the very young, special needs and syndromic children		
Clinical Skills	HISTORY AND EXAMINATION Ability to take a through history from child/parent. Otoscopy Examination of the oral cavity and oropharynx Ability to recognise the child with possible OSA. DATA INTERPRETATION Clinical assessment of the nasal airway PATIENT MANAGEMENT Medical and surgical treatment. Management of complications both of the disease (e.g. peritonsillar abscess) and of treatment		
Technical Skills and Procedures	Tonsillectomy Adenoidectomy Arrest of adenotonsillar bleeding as an emergency Suction adenoidectomy Tonsillotomy Experience with CPAP and other non invasive options	4 4 4 4 3 1	4 4 4 4 3 1

8	**ENT-related syndromes and cleft palate**		
Category	Paediatric Otolaryngology		
	Congenital deformities affecting the head and neck		
Objective	Appropriate primary management of children with ENT related syndromes and cleft palate, awareness of the principles and challenges that underpin long-term care. 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		
Knowledge	Embryology of the head and neck, including palate. Anatomy of the head and neck in children Recognition of the common ENT related syndromes and associations (e.g. Down's, Treacher Collins, Pierre Robin, Goldenhar, BOR, CHARGE, craniosynostosis). Knowledge of the ENT manifestations of the conditions listed above	 3 3	 3 3

	Knowledge of the general clinical problems encountered in these conditions with particular reference to safety of anaesthesia. Basic understanding of the underlying genetics of these conditions.	2 2	2 2
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from the patient or carer. Targeted examination of the child based on knowledge of the ENT manifestations of the condition. DATA INTERPRETATION Interpretation of age-appropriate assessment of hearing and overnight pulse oximetry Recognition of abnormalities on imaging PATIENT MANAGEMENT Able to participate in the multidisciplinary approach to children with complex needs. Management of airway obstruction in children with craniofacial abnormalities in conjunction with anaesthetists . Management of OME in children with cleft palate or Downs syndrome	 3 3 3	 3 3 3
Technical Skills and Procedures	Myringotomy & ventilation tube insertion Flexible pharyngolaryngoscopy Rigid airway endoscopy Paediatric tracheostomy	4 4 4 1	4 4 4 2

9	**Congenital and acquired neck masses**		
Category	Paediatric Otolaryngology		
	Neck Masses		
Objective	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. 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		
Knowledge	Anatomy of the head and neck and upper mediastinum. Applied embryology of thyroid gland with relation to thyroglossal cysts Applied embryology of the branchial arches. Anatomy of the neck spaces and understanding of the presentation, clinical features and primary management of abscesses and collections in these spaces Classification of vascular malformations and awareness of treatment options		

	Knowledge of the clinical presentation and management of the commoner congenital abnormalities (e.g. cystic hygroma, teratoma, branchial abnormalities, thyroglossal cysts, lingual thyroid) Awareness of the infective causes of neck lumps in children. (e.g. TB, HIV, other viral) Management of persistent cervical lymphadenopathy and the appropriate use of investigations and surgical intervention. Knowledge of the possible airway complications of neck masses and their management.	3 3	3 3
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from a patient or carer Systematic examination of the child with particular reference to the neck Be able to identify the signs of airway obstruction in a child DATA INTERPRETATION Be able to identify the most appropriate imaging options available e.g. sonography, CT, MR scanning. Interpretation of virology and microbiology investigations. Interpretation of head and neck images. PATIENT MANAGEMENT Be able to identify the most appropriate imaging options available e.g. sonography, CT, MR scanning. Surgical and non-surgical treatment options for the management of neck masses. Be able to work in a multidisciplinary team.	 3 3	 3 3
Technical Skills and Procedures	Flexible pharyngolaryngoscopy Incision & drainage neck abscess Biopsy neck node Excision thyroglossal cyst Diagnostic rigid airway endoscopy Paediatric tracheostomy Experience with EXIT procedures and CHAOS	4 4 4 2 2 2 1	4 4 4 2 2 2 1

10	**Language delay and dysphonia in childhood**		
Category	Paediatric Otolaryngology		
	Speech and language development		
Objective	Awareness of the aetiology of language delay. Awareness of congenital and acquired laryngeal disorders affecting speech. 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		
Knowledge	Anatomy of the larynx in children and the physiology of voice production.		

	The normal developmental milestones with an emphasis on speech and language acquisition. Common causes of delayed speech Understanding of how hearing loss impacts on language acquisition Management of laryngeal pathologies. Understanding of age appropriate hearing tests. Understanding of the controversies in the management of tongue tie.	3	3
Clinical Skills	HISTORY AND EXAMINATION Ability to take a through history from child/carer Otoscopy Flexible pharyngolaryngoscopy DATA INTERPRETATION Age appropriate hearing test Tympanometry PATIENT MANAGEMENT Multidisciplinary approach in the management of children with speech and other developmental problems	3	3
Technical Skills and Procedures	Flexible nasendoscopy and pharyngolaryngoscopy Division of tongue tie Ventilation tube insertion	4 4 4	4 4 4

11	**Head and neck malignancy in childhood**		
Category	Paediatric Otolaryngology		
	Oncology		
Objective	Awareness of the epidemiology, presentation and principles of management of malignant disease in the head and neck. 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		
Knowledge	Knowledge of the common malignancies of the head and neck in childhood Knowledge of presentation, investigations and management options in childhood cancers. Understanding of issues relating to the management of the child and family with cancer including palliative care e.g. management of epistaxis and hearing loss. Understanding of the need for a multidisciplinary approach to childhood cancer and the need for early referral to a regional oncology centre when malignancy is suspected.	3 3	3 3
Clinical Skills	HISTORY AND EXAMINATION Ability to take a through history from child/carer Examination of the head and neck Examination of the cranial nerves		

	Otoscopy Flexible pharyngolaryngoscopy PATIENT MANAGEMENT Multidisciplinary approach to the management of childhood cancer Know the range of diagnostic tests available particularly imaging	 3	 3
Technical Skills and Procedures	Flexible pharyngolaryngoscopy Neck node biopsy after liaison with regional oncology services Biopsy of tumours after liaison with regional oncology services Paediatric thyroid surgery Paediatric neck dissection Paediatric salivary gland surgery	4 3 3 1 1 1	4 3 3 1 1 1

12	**Congenital abnormalities of the ear**		
Category	Paediatric Otolaryngology		
	Disorders of the external ear in children		
Objective	Recognition and classification of the principle congenital anomalies of the ear. 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		
Knowledge	Understanding of the anatomy & embryology of the ear and related structures Physiology of hearing Knowledge of the clinical problems associated with dysplasia of the ear Knowledge of common grading systems for microtia and atresia. Knowledge of bone anchored auricular prosthesis and autologous pinna reconstruction.	 2 2	 2 2
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from the child/carer Inspection of the external ear and recognition of main anomalies; Otoscopy Clinical assessment of hearing DATA INTERPRETATION Age-appropriate assessment of hearing; Tympanometry; PATIENT MANAGEMENT Demonstrate the ability to present the options for the rehabilitation of hearing loss in microtia; Appropriate referral for ear reconstruction/prostheses;	 3 3	 3 3

	Counselling of child and carers with microtia and other major anomalies of the external ear.		
Technical Skills and Procedures	Otomicroscopy Excision of preauricular sinus Excision of simple lesions in and around the external ear Surgery for prominent ears Bone anchored hearing aid Surgical management of 1st branchial arch anomalies Implant placement for prosthetic ear in microtia Other implants for hearing loss including ME implants	4 2 4 2 1 1 1 1	4 2 4 2 1 1 1 1

13	**Congenital deafness**		
Category	Paediatric Otolaryngology		
	Deafness excluding otitis media and its complications		
Objective	Awareness of the epidemiology and presentation of deafness, knowledge of range of causes, awareness of diagnostic and investigative strategies and knowledge of the principles that underpin rehabilitation including amplification and cochlear implantation. 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		
Knowledge	Embryology of the ear including congenital deformities of the ear and their relationship to deafness Physiology of hearing Knowledge of the molecular basis of genetic, syndromic and non-syndromic deafness Knowledge of acquired causes including congenital infections (e.g. CMV, rubella) Fundamental understanding of age appropriate audiological testing including universal neonatal screening (OAE,ABR). Appropriate investigations for the congenitally deaf child (bilateral or unilateral) e.g. TORCH screen, dipstix for haematuria, MRI, genetic review Multidisciplinary approach to the rehabilitation of the deaf child (bilateral and unilateral). Knowledge of rehabilitative options including hearing aids Knowledge of candidacy criteria for cochlear implantation and nature of surgery involved. Awareness of the range of investigative options available including imaging (sonography, CT, MR scanning)	3	3
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from child/parent. Otoscopy Clinical assessment of hearing DATA INTERPRETATION Age appropriate hearing test		

	Tympanometry PATIENT MANAGEMENT Appropriate referral for hearing aids	3	3
Technical Skills and Procedures	Microscopic examination of the ear Myringotomy & ventilation tube Cochlear implant	4 4 1	4 4 1

14	**The Dizzy Child**		
Category	Paediatric Otolaryngology		
	Dizziness		
Objective	To be competent in the assessment, investigation and management of a child presenting with dizziness		
Knowledge	Anatomy of the ear and vestibular system Physiology of balance Knowledge of the causes of balance disorders in children Knowledge of the genetic causes of hearing loss associated with vestibular symptoms e.g. Ushers, NF2, Jervell-Lange-Nielson Knowledge of appropriate investigations and subsequent management of vestibular disorders	 3 3	 3 3
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from the child/carer Otoscopy Clinical assessment of vestibular function e.g. Dix Hallpike, head thrust, Unterbergers Neurological examination including cranial nerves DATA INTERPRETATION Age appropriate hearing test Tympanogram Interpretation of vestibular testing-posturography, calorics, VEMP's Identification of significant abnormalities from diagnostic imaging e.g. MRI, CT PATIENT MANAGEMENT Explanation of diagnosis to child and family Commencement of conservative, medical or surgical management of underlying vestibular pathology Appropriate referral to allied health professionals or other specialities	 3 3 4 3	 3 3 4 3
Technical Skills and Procedures	Myringotomy and ventilation tube insertion Cholesteatoma surgery	4 2	4 2

15	**Otitis media (acute, chronic and with effusion) and complications and conditions of the external auditory canal**		
Category	Paediatric Otolaryngology		
	Otitis media and its complications		
Objective	Definitive secondary-care management of middle and external ear disease and its 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		
Knowledge	Anatomy of the external and middle ear cleft and surrounding structures Physiology of hearing Epidemiology, classification, aetiology and natural history of each variant of otitis media. Know the indications for imaging Know the evidence base which underpins current treatment approaches. Demonstrate an understanding of the surgical management of cholesteatoma and the complications of otitis media Knowledge of the indications for, and surgical principles of, bone anchored hearing aids and middle ear implants.		
Clinical Skills	HISTORY AND EXAMINATION Ability to take a through history from child/parent Otoscopy Neurological examination including cranial nerves Clinical assessment of hearing. DATA INTERPRETATION Age appropriate hearing tests (including ABR, OAE, VRA, play audiometry) Tympanometry Identification of significant abnormalities from diagnostic imaging e.g. CT scan, MRI Laboratory investigations e.g. blood tests, bacteriology results PATIENT MANAGEMENT Medical, conservative and surgical management Appropriate referrals and team working for children with complications of acute otitis media		
Technical Skills and Procedures	Otomicroscopy and aural toilet Ventilation tube insertion Myringoplasty Ossiculoplasty Cortical Mastoidectomy Cholesteatoma surgery Bone anchored hearing aid	4 4 3 1 4 2 1	4 4 4 1 4 2 1

16	**Facial palsy in childhood**		
Category	Paediatric Otolaryngology		
	Facial Palsy		
Objective	Safe primary management of children with facial palsy, recognition of clinical pathologies that present with facial palsy. 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		
Knowledge	Anatomy of the facial nerve, and related structures knowledge of the aetiologies (congenital and acquired) of facial palsy. Knowledge of the initial investigations and management of a child with facial palsy Knowledge of the natural history of childhood facial palsy. Know when to refer to tertiary centre. Awareness of the range of diagnostic tests and the principles that govern their use e.g. electroneuronography, imaging of the facial nerve	2	2
Clinical Skills	HISTORY AND EXAMINATION Ability to take a history from child/parent Otoscopy Examination of the head and neck Assessment of the cranial nerves in children and grading of facial palsy Clinical assessment of hearing DATA INTERPRETATION Interpretation of specific investigations e.g. electroneuronography PATIENT MANAGEMENT Pharmacological management (e.g. steroids, anti-viral agents) Eye protection	2	2
Technical Skills and Procedures	Myringotomy and ventilation tube insertion Cortical mastoidectomy & Drainage of mastoid abscess Cholesteatoma surgery	4 4 2	4 4 2

17	**Rhinitis**		
Category	Paediatric Otolaryngology		
	Inflammatory nasal disease (including allergic rhinitis)		
Objective	Optimum recognition and management of children with rhinitis. 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		
Knowledge	Anatomy and embryology of the nose and sinuses. Nasal physiology Knowledge of the pathophysiology, epidemiology, symptomatology and natural history of rhinitis Know the basic science of allergy Knowledge of the scientific principles of common investigations e.g skin prick tests, RAST Knowledge of the evidence base for current treatment of allergic rhinitis Knowledge of imaging techniques; assessment of abnormalities on CT scanning of the paranasal sinuses Understanding of scientific basis and methodology behind desensitisation in allergy	3 3	3 3
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from the child/carer Anterior Rhinoscopy Flexible Nasendoscopy Otoscopy DATA INTERPRETATION Skin prick tests for allergies; Blood tests for allergies; immunological tests, ciliary function tests. PATIENT MANAGEMENT Conservative, medical and surgical management of rhinitis	 2	 3
Technical Skills and Procedures	Turbinate surgery EUA Nose & PNS Nasal biopsy Advanced FESS in paediatric patient	4 4 4 1	4 4 4 1

18	**Nasal Obstruction**		
Category	Paediatric Otolaryngology		
	Nasal Polyps in Children		
Objective	To be competent at the diagnosis of inflammatory nasal disease, the differential diagnosis and management of inflammatory nasal disease. 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		
Knowledge	Anatomy and embryology of the nose and sinuses. Nasal physiology Knowledge of the aetiology, clinical features and management of nasal polyps in children including their association with cystic fibrosis Knowledge of the aetiologies of nasal obstruction at birth, in infancy and in later childhood e.g. choanal atresia, rhinitis, encephocele, glioma, angiofibroma. Knowledge of the investigations (including imaging) and treatment of the above conditions. Knowledge of related systemic conditions involving the nose e.g. Wegeners granulomatosis		
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from the child or carer Anterior Rhinoscopy Flexible Nasendoscopy Otoscopy DATA INTERPRETATION Assessment of abnormalities on CT scanning of the paranasal sinuses 2. Immunological tests, ciliary function tests PATIENT MANAGEMENT Medical and surgical management of nasal polyposis Investigation of nasal masses	3	3
Technical Skills and Procedures	Endoscopic Nasal Polypectomy Endoscopic sinonasal surgery Nasal biopsy Examination nose and PNS Choanal atresia surgery Surgery to congenital pyriform aperture stenosis Open and closed procedures for angiofibroma Nasal stenting	2 2 4 4 1 1 1 1	2 2 4 4 1 1 1 1

19	**Obstructive sleep apnoea**		
Category	Paediatric Otolaryngology		
	Airway obstruction in childhood		
Objective	Optimum recognition and management of children with possible obstructive sleep apnoea. 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		
Knowledge	Anatomy of the upper airway Physiology of sleep Knowledge of multi-level obstruction Knowledge of the concept of sleep disordered breathing Knowledge of the complications of upper airway obstruction Knowledge of appropriate investigations and treatment. Knowledge of the relevance of co-morbidities Assessment of low versus high risk patients and appropriate referral	3	3
Clinical Skills	HISTORY AND EXAMINATION Ability to take a thorough history from the child/carer Examination of the oral cavity, oropharynx and chest wall Anterior Rhinoscopy Flexible Nasendoscopy DATA INTERPRETATION Interpretation of sleep studies ECG/CXR/echo manifestations PATIENT MANAGEMENT Conservative, medical and surgical management of OSA	1	1
Technical Skills and Procedures	EUA PNS and adenoidectomy Tonsillectomy Paediatric tracheostomy	4 4 2	4 4 2

HEAD AND NECK

20	**Adenoid and tonsillar pathology in adults**		
Category	Head and Neck		
Objective	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.		
Knowledge	Demonstrate a detailed knowledge of the anatomy, physiology, pathology & microbiology of the oro and nasopharynx incl relevant anatomical relationships Know the presenting signs and symptoms of benign adenotonsillar & pharyngeal disease Know the complications of adenotonsillar infection. Understand the investigation, differential diagnosis and complications of adenotonsillar hypertrophy Know the 'red flag' indicators of malignant disease of the pharynx		
Clinical Skills	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 Diagnosis and medical management of post-operative haemorrhage following adenotonsillar surgery		
Technical Skills and Procedures	Incision and drainage of peritonsillar abscess. Manage the compromised airway due to hypertrophy Tonsillectomy and adenoidectomy in adults Surgical management of post-operative bleeding following adenotonsillar surgery	4 4 4 4	4 4 4 4

21	**Airway obstruction in adults**		
Category	Head and Neck		
Objective	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.		
Knowledge	Demonstrate a detailed knowledge of the anatomy & physiology of the larynx, trachea, pharynx and oral cavity Understand the microbiology and pathology of disorders of the upper aerodigestive tract.		

	Understand the classification of diseases that may present with airway obstruction. Understand the principles of patient management of patients presenting with airway obstruction. Know the different methods of securing an airway safely (surgical & non surgical) in an emergency setting Understand the indications & techniques for surgical debulking of upper airway malignancies Understand the principles of the use of cricothyroidotomy and tracheostomy during a Can't Intubate, Can't Oxygenate Event.		
Clinical Skills	Be able to elicit an appropriate clinical history and correctly interpret physical signs. Be aware of the role of appropriate investigation in the management of airway obstruction Demonstrate the ability to work effectively with anaesthetists and those involved in critical care who manage the 'shared airway'. Demonstrate expertise in the safe assessment of patients with critical airways.		
Technical Skills and Procedures	Be competent at performing the following diagnostic procedures; fibreoptic nasopharyngoscopy, direct laryngoscopy, microlaryngoscopy, bronchoscopy, pharyngo oesophagoscopy Be competent at performing endotracheal intubation Be proficient at performing a surgical tracheostomy in the elective & emergency setting both under general and local anaesthesia Percutaneous tracheostomy Be competent at foreign body removal from the airway in adults Debulking procedures (laser/microdebrider) Tracheostomy change Emergency Front of Neck Airway procedures including cricothyroidotomy and tracheostomy	4 3 4 1 4 2 4 4	4 3 4 1 4 2 4 4

22	**Aetiology and management of craniocervical trauma in adults**		
Category	Head and Neck		
Objective	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.		
Knowledge	Understand the anatomy of the head and neck 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 Understand the Le Fort classification of facial fractures and their effects.	3 3	4 4

	Understand the classification of fractures of the mandible and their effects	3	3
	Understand the classification of fractures of the temporal bone and their effects.	3	4
	Understand the consequences and potential complications of injury to structures in the neck, in the 3 horizontal entry zones of the neck.	3	4
	Understand the principles underpinning the appropriate investigation of a patient with a penetrating injury of the neck	3	4
	Understand the principles of the Glasgow Coma Scale and the management of the patient with an altered level of consciousness.	4	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.	3	4
	Understand the need for a multidisciplinary approach to management of craniocervical trauma	3	4
	Understand the pathophysiology of chemical and thermal burn injury to the upper aerodigestive tract & principles of management	3	4
Clinical Skills	Be able to elicit an appropriate clinical history from a patient with craniocervical trauma (or from a third party witness).	3	4
	Be able to demonstrate the relevant clinical signs from a patient with craniocervical trauma.	3	4
	Be able to appropriately order and interpret the results of investigations in a patient with craniocervical trauma.	3	4
	Be able to coordinate the assembly of an appropriate multidisciplinary team to manage a patient with craniocervical trauma.	3	4
Technical Skills and Procedures	Tracheostomy	4	4
	Endotracheal intubation	2	3
	Be able to explore the traumatized neck and secure bleeding vessels.	3	4
	Be able to manage penetrating injury to the viscera of the upper aerodigestive tract	3	4
	Be able to undertake microsurgical reanastomosis of divided nerves where appropriate	1	1

23	**Disorders of swallowing**		
Category	Head and Neck		
Objective	To understand the aetiology, presenting signs, symptoms and management of common disorders of swallowing, including dysphagia, globus pharyngeus ,neurological swallowing disorders, reflux disease, 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		
Knowledge	Know the anatomy of the pharynx, and physiology of swallowing. Know the causes of odynophagia. Know the various hypotheses relating to the aetiology of dysphagia. Understand the investigation and imaging of a patient with dysphagia. Understand the principles of medical and surgical management of dysphagia Understand the pathophysiology of aspiration, its complications and the principles of management Understand the aetiology and management of globus pharyngeus Understand the aetiology and management of laryngopharyngeal reflux Understand the aetiology and management of Eosinophilic oesophagitis		
Clinical Skills	Elicit an appropriate clinical history and clinical signs. Be able to examine the pharynx and oesophagus with endoscopes in outpatients Be able to work in cooperation with Speech & language therapists in the management of dysphagia Be aware of 'red flag' symptoms in the differential diagnosis of dysphagia Interpretation of videofluoroscopic swallowing studies		
Technical Skills and Procedures	Flexible fibreoptic nasopharyngolaryngoscopy Fibreoptic endoscopic evaluation of swallowing studies Endoscopic examination of pharynx, larynx and oesophagus under general anaesthesia Removal of foreign bodies from the pharynx, larynx and oesophagus under general anaesthesia Endoscopic pharyngeal pouch surgery Open pharyngeal pouch surgery	4 3 4 4 3 1	4 3 4 4 3 1

24	**Aetiology and management of cervical sepsis**		
Category	Head and Neck		
Objective	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.		
Knowledge	Know the anatomy of the fascial compartments of the neck. Understand the pathogenesis(including congenital abnormalities) and clinical presentation of deep neck space infections. Know the microbiology of deep neck space infections. Understand the principles of medical and surgical management of deep neck space infection, including image guided drainage procedures. Understand the complications of deep neck space infections and their management.	3	4
Clinical Skills	Be able to elicit an appropriate history from a patient with deep cervical sepsis. Be able to demonstrate the relevant clinical signs from a patient with deep cervical sepsis. Be able to order and interpret the results of appropriate investigations, including imaging and microbiological cultures, in a patient with deep cervical sepsis. Be able to undertake treatment of a patient with deep cervical sepsis or complications thereof.	3 3	4 4
Technical Skills and Procedures	Be proficient in rigid endoscopic examination of the upper aerodigestive tract Be proficient in management of the compromised upper airway in deep cervical sepsis, including tracheostomy. Manage the patient in conjunction with anaesthetists/intensivists Be competent in the incision and drainage of a deep cervical abscess, as well as demonstrating awareness of the complications of such procedures.	3 3 3 4	4 4 4 4

25	**Aetiology and management of congenital abnormalities of the head and neck affecting adults (including branchial & thyroglossal cysts, pharyngeal diverticulae, cleft lip & palate)**		
Category	Head and Neck		
Objective	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.		
Knowledge	Understand the embryology of the head and neck. Know the anatomy of the neck. Understand the morphology and classification of pharyngeal diverticulae. Understand the pathophysiological effects of pharyngeal diverticulae and the principles underlying their management 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.(i.e. branchial cleft abnormalities) 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. Know of syndromes associated with congenital abnormalities of the head and neck Understand the morphology and classification of dentoalveolar malformations and the principles underlying their management. Understand the morphology and classification of congenital abnormalities of the larynx, trachea and oesophagus and the principles underlying their management. Understand the morphology, classification of and pathophysiological effects of cleft lip and palate, and the principles of management thereof. Understand the investigation of congenital abnormalities of the head and neck including imaging and examination under anaesthesia.	3	3
Clinical Skills	Be able to elicit an appropriate history from a patient with a congenital abnormality of the head and neck. Be able to demonstrate the relevant clinical signs from a patient with a congenital abnormality of the head and neck. Be able to undertake appropriately ordered investigation of a congenital abnormality of the head and neck. Be able to interpret imaging of congenital abnormalities of the head and neck. Understand the role of a multidisciplinary team in the management of congenital abnormalities of the head and neck.	3	3

Technical Skills and Procedures	Be able to perform appropriately directed examination under anaesthesia, including endoscopic assessment of a congenital abnormality of the head and neck.	3	4
	Be able to excise a pharyngeal diverticulum using endoscopic techniques.	2	3
	Be able to perform surgery to remove abnormalities of the thyroglossal duct.	3	4
	Be able to perform a tracheostomy under general and local anaesthesia.	3	4
	Be able to excise a branchial cyst.	3	4
	Be able to excise a branchial fistula	1	1

26	**Cervical lymphadenopathy in adults**		
Category	Head and Neck		
Objective	To understand the aetiology, presenting symptoms & 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.		
Knowledge	Demonstrate knowledge of the aetiology & pathology of cervical lymphadenopathy including manifestations of systemic disease. Be able to order the appropriate investigations of neck masses Understand the anatomy of the neck, and distribution of cervical lymph nodes. Classify the lymphatic levels of the neck according to the MSK classification. Demonstrate knowledge of the differing histological and microbiological causes of cervical lymphadenopathy. Presentation, aetiology, investigations and pattern of metastatic spread of upper aerodigestive tract, salivary gland, cutaneous and thyroid malignancies. Demonstrate knowledge of the presentation, aetiology, investigations and principles of management of lymphoreticular disease as it applies to the head and neck. Principles of management of patients with cervical lymphadenopathy including specifically the management of the unknown primary malignant neck lump. Demonstrate knowledge of the indications for medical & surgical management and the complications of management.		
Clinical Skills	Be able to take a relevant detailed history and interpret clinical signs correctly.		

Technical Skills and Procedures	Fine needle aspiration cytology Outpatient and in-patient endoscopy of the UADT. Excision of cervical lymph nodes and deal with the complications Radical neck dissection Selective neck dissection Modified radical neck dissection	2 4 3 2 2 1	4 4 4 2 4 1

27	**Head and neck malignancies in the upper aerodigestive tract excluding the oral cavity**		
Category	Head and Neck		
Objective	To understand the aetiology of head and neck malignancies in the upper 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		
Knowledge	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. Know the pathology of HNC Understand the presenting signs and symptoms of head and neck cancer. Understand the various hypotheses relating to the aetiology of squamous cell cancer including the cellular basis of oncogenesis. Understand the pattern of spread of malignant disease. Understand how HNC is managed in the multidisciplinary setting. Know the indications for imaging in HNC and the use of relevant imaging modalities. Understand the functional consequences of head and neck cancer, and its treatment. Understand the principles involved in and evidence for the various medical and surgical methods of treatment available for head and neck cancer. Understand the role of surgical and medical treatment in palliative management of patients Understand the indications for reconstructive and rehabilitative surgery (including surgical voice restoration) in HNC Know of the various reconstructive options available in HNC Be aware of national and local guidelines for the management of HNC Know the complications of surgical and non-surgical treatment of HNC and the multidisciplinary management of these complications Understand the basic science underpinning chemotherapy & radiotherapy		

	Understand the principles of treatment of chemotherapy and radiotherapy and different techniques and regimes		
Clinical Skills	Elicit a relevant clinical history and clinical signs including being able to perform an appropriate examination. Be able to work within the MDT, and recognise the contributions made by all team members. Demonstrate good communication skills with other professionals. Be able to break bad news sensitively and appropriately to patients and their families Demonstrate competence in the management of acute complications of head and neck surgery	 3 3 3 3	 4 4 4 4
Technical Skills and Procedures	Be able to perform the following diagnostic procedures; microlaryngoscopy, pharyngo-oesophagoscopy, tonsillectomy, examination of postnasal space, bronchoscopy, Fine Needle Aspiration Cytology (FNAC) Total laryngectomy Radical neck dissection Selective neck dissection Modified radical neck dissection Open and endoscopic excision of pharyngeal tumours Transoral laser surgery Reconstructive surgery with myocutaneous (pedicled) flaps Reconstructive surgery with free tissue transfer Be able to manage safely acute complications of head and neck surgery Be able to replace a tracheooesophageal valve in clinic.	4 2 2 4 1 2 2 2 2 4 4	4 2 2 4 1 2 2 2 2 4 4

28	**Investigation and management of the neck lump**		
Category	Head and Neck		
Objective	To understand the aetiology, presenting symptoms & 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.		
Knowledge	Understand the anatomy of the neck, and distribution of cervical lymph nodes. Classify the lymphatic levels of the neck according to the MSK(Memorial Sloane Kettering) classification. Know the differential diagnosis of a neck lump. Demonstrate knowledge of the aetiology & pathology of cervical lymphadenopathy including manifestations of systemic disease. Understand the presentation, aetiology, investigations and pattern of metastatic spread of upper aerodigestive tract, salivary gland, cutaneous and thyroid malignancies.		

	Understand the appropriate investigation of neck masses and specifically the management of the unknown primary malignant lump. Demonstrate knowledge of the presentation, aetiology, investigations and principles of management of lymphoma and leukaemia as it applies to the head and neck. Understand the principles of medical and surgical management of patients with a neck lump Demonstrate knowledge of the potential complications of management.		
Clinical Skills	Be able to take a relevant detailed history, perform appropriate examination and interpret clinical signs correctly. Demonstrate a rational approach to investigation of a neck lump		
Technical Skills and Procedures	Perform FNAC Outpatient and inpatient endoscopy of the Upper aerodigestive tract Perform excision biopsy of cervical lymph nodes and deal with the complications. Radical neck dissection Selective neck dissection Modified radical neck dissection Branchial cyst excision and management of complications	4 4 4 2 4 1 3	4 4 4 2 4 1 4

29	**Neoplastic salivary gland disease**		
Category	Head and Neck		
Objective	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.		
Knowledge	Know the anatomy & physiology of the major & minor salivary glands & their relations. Know the anatomy of the neck. Know the anatomy of the oral cavity. Know the pathology of salivary gland tumours. Understand the classification of salivary gland tumours. Know the presenting symptoms & signs of salivary gland tumours. Understand the modalities (cytological & imaging) available for investigating salivary gland tumours Know the differential diagnosis of salivary gland tumours and inflammatory swellings. Understand the principles of management of salivary gland tumours. Understand the potential consequences of salivary gland surgery and the complications of surgery		

	Understand the principles of management (surgical & non surgical) of malignant salivary gland disease Understand the role of reconstructive and palliative surgery in the management of malignant salivary gland disease		
Clinical Skills	Be able to elicit an appropriate clinical history and interpret physical signs correctly Demonstrate the ability to detect 'red flag' symptoms & signs of malignant disease. Order the most appropriate imaging modality Manage patients with malignant disease in a multidisciplinary team		
Technical Skills and Procedures	FNAC Set up and use facial nerve monitor Be able to perform a submandibular gland excision Biopsy of a minor salivary gland tumour Be able to perform a superficial parotidectomy Total parotidectomy Radical neck dissection Selective neck dissection Modified radical neck dissection Facial nerve grafting Facio-hypoglossal anastomosis	4 4 4 4 4 1 2 4 1 1 1	4 4 4 4 4 1 2 4 1 1 1

30	**Non-neoplastic salivary gland disease**		
Category	Head and Neck		
Objective	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.		
Knowledge	Know the anatomy and physiology of the major and minor salivary glands. Understand the pathological processes, both local & systemic, that can affect the salivary glands. Understand the classification of benign salivary gland disease including infection, inflammatory diseases, drugs and benign tumours Know the various imaging modalities for investigation of benign salivary gland disease. Understand the principles of patient management. Know the medical and surgical management of salivary gland disease, and the complications of surgery		

Clinical Skills	Be able to elicit an appropriate clinical history and interpret clinical signs correctly. Be able to order the appropriate special investigations and correctly interpret images including plain radiographs, computerized tomography and Magnetic resonance imaging. Be able to counsel patients on the particular risks of salivary gland surgery.		
Technical Skills and Procedures	Be able to excise a submandibular calculus Be able to perform submandibular gland excision Excision of ranula Minor salivary gland biopsy Parotidectomy for inflammatory disease	4 4 1 4 1	4 4 1 4 1

31	**Thyroid and parathyroid disease**		
Category	Head and Neck		
Objective	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.		
Knowledge	Understand the embryology, physiology, biochemistry and anatomy of the thyroid gland Understand the embryology, physiology, biochemistry and anatomy of the parathyroid glands. Understand the pathophysiology of endocrine dysfunction of the thyroid and parathyroid glands. Understand the classification of thyroid neoplasia. Including TNM Understand the principles of investigation of a patient with endocrine dysfunction of the thyroid gland. Understand the principles of investigation of a patient with endocrine dysfunction of the parathyroid glands. Understand the principles of investigation of a patient with a parathyroid or thyroid mass Understand principles of medical and surgical management of endocrine dysfunction of the thyroid and parathyroid glands, including the peri operative management of thyrotoxicosis. Understand principles of medical and surgical management of neoplasia of the thyroid and parathyroid glands, including post operative complications. Understand the need to work as part of an MDT in management of malignant thyroid disease. Be aware of national and local guidelines for the management of thyroid malignancy.		

	Understand the necessary genetic and endocrine testing required for thyroid malignancies that may be associated with multiple endocrine neoplasia (MEN) syndromes.		
Clinical Skills	Be able to elicit an appropriate clinical history from a patient with thyroid or parathyroid gland disease. Be able to demonstrate relevant clinical signs in a patient with thyroid or parathyroid gland disease Thyroid Investigation protocols for thyroid cancer CT MR and PET scanning in thyroid disease Interpretation of thyroid function tests FNAC Core biopsy of thyroid US of thyroid Interpretation of isotope scans MDT discussion of thyroid cases Management of post thyroidectomy hypocalcaemia Management of post thyroidectomy hoarseness Parathyroid Investigation protocols for parathyroid disease CT MR and PET scanning in parathyroid disease Interpretation of Ca PTH and Vitamin D levels FNAC Core biopsy US of the neck Interpretation of Isotope scans MDT discussion of parathyroid cases Management of post thyroidectomy hypocalcaemia Management of hoarseness post parathyroidectomy including management of vocal cord palsy	 3 3 1 2 2 3 3 2 2 2	 3 3 1 2 2 3 3 2 2 2
Technical Skills and Procedures	Thyroid lobectomy Total Thyroidectomy Surgical treatment of retrosternal thyroid enlargement Revision thyroid surgery Extended operations in the neck for advanced thyroid cancer including operations on the trachea, oesophagus and larynx Exploration of the neck for post thyroidectomy bleeding Level 1-5 ND Level VI ND Re-exploration of the thyroid bed for residual or recurrent cancer Be able to obtain appropriate samples for fine needle cytology or core biopsy from a patient with a thyroid or parathyroid mass Parathyroid Parathyroidectomy	2 2 2 2 1 2 1 1 1 4 1	2 2 2 2 1 4 1 1 1 4 1

	Parathyroid surgery: reoperation Re exploration of the neck for post operative haemorrhage Transcervical thymectomy	1 1 1	1 1 1

32	**Oral pathology**		
Category	Head and Neck		
Objective	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.		
Knowledge	Understand the anatomy of the oral cavity Know the normal flora of the oral cavity and how oral disease can alter oral flora Understand the physiology of the oral phases of swallowing Know the physiology of salivary function Understand the consequences of oral disease on swallowing Understand the consequences of salivary gland dysfunction on oral health Know the causes of drooling and the principles of management thereof. Understand the aetiology, pathophysiology, presenting symptoms and signs of dental caries Know the pathophysiology, presenting symptoms & signs and management of mucosal oral disease including infection, inflammation, soft tissue and bony conditions Understand the aetiology of oral cancer Know the presenting symptoms and signs of oral cancer Understand the principles of management of oral cancer Understand the long and short term effects of chemotherapy and radiotherapy on oral health Understand the appropriate modalities for imaging oral disease		
Clinical Skills	Be able to elicit an appropriate clinical history and interpret physical signs correctly Demonstrate the ability to detect 'red flag' symptoms & signs of malignant disease. Order the most appropriate imaging modality Be able to interpret plain images of the oral cavity and associated bony structures Manage patients with malignant disease in a multidisciplinary team Be able to diagnose dental related sepsis presenting in the neck or paranasal sinuses	3	4

Technical Skills and Procedures	Perform a biopsy of an oral lesion	4	4
	Remove and treat benign oral lesions	4	4
	Partial glossectomy	1	1
	Submandibular duct transposition for drooling	1	1
	Dental extractions	1	1
	Closure of oroantral fistulae	1	1
	Mandibulotomy and excision of floor of mouth lesion	1	1

33	**Sleep related breathing disorders**		
Category	Head and Neck		
Objective	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.		
Knowledge	Know the aetiology, presenting signs and symptoms of sleep related breathing disorders, including snoring, obstructive sleep apnoea / hypopnoea and central sleep apnoea in adults. Know of the pathophysiological sequelae of sleep related breathing disorders including snoring, obstructive sleep apnoea / hypopnoea and central sleep apnoea Understand the principles of assessment and investigation of sleep related breathing disorders, including sleep nasendoscopy and sleep studies / polysomnography. Understand the principles of management of sleep related breathing disorders including CPAP, mandibular advancement prostheses, nasal and pharyngeal surgery, tracheostomy and drug therapy. Understand the principles of midface and mandibular advancement surgery.		
Clinical Skills	Be able to elicit an appropriate clinical history and identify relevant clinical signs in a patient with a sleep related breathing disorder. 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.		
Technical Skills and Procedures	Be able to perform palatal surgery for snoring/OSAS	4	4
	Be able to perform surgery to correct nasal airway obstruction.	4	4
	Be able to perform sleep nasendoscopy or out patient flexible fibreoptic nasendoscopy	4	4
	Tracheostomy	4	4

34	**Laryngology and Voice Disorders**		
Category	Head and Neck		
	Laryngology. Airway surgery		
Objective	To understand the aetiology, presenting signs, symptoms and management of common voice and chronic airway disorders. 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		
Knowledge	Understand the physics of sound		
	Understand the embryology of the larynx and congenital malformations of the larynx		
	Understand the maturational / developmental changes of the larynx		
	Understand the anatomy, neuroanatomy and movements of the larynx		
	Understand the physiology of phonation and articulation		
	Understand the classification of dysphonias and the various hypotheses relating to the aetiology of dysphonias.	3	3
	Understand the classification of disorders of articulation	2	2
	Understand principles of videostroboscopic examination of the larynx, laryngography and analysis of pitch and periodicity of speech (including photodocumentation)	2	2
	Understand the principles of the medical and surgical management of patients with dysphonia (including instrumentation).	2	2
	Know the principles of Speech and Language Therapy	2	2
	Know the classification & aetiology of inflammatory and neoplastic laryngeal disorders	3	3
	Laser Physics	2	2
	Laser safety	4	4
	Understand the principles of anaesthesia in Laser surgery	2	2
	Understand the principles of laryngotracheal reconstruction in adults	2	2
	Understand the aetiology, pathophysiology and treatment of Vocal cord palsy	4	3
	Understand the aetiology, pathophysiology and treatment of Age related vocal cord atrophy	4	3
	Understand the material science in vocal cord injection materials	2	2
	Laryngeal reinnervation	2	2
	Laryngeal transplantation	2	2
Clinical Skills	Elicit an appropriate clinical history from and demonstrate clinical signs in a dysphonic patient		
	Communication skills with Speech & Language therapists and ability to work in a multidisciplinary team.	2	2
	Transnasal oesophagoscopy	2	2
	EMG in clinical decision making	2	2

	Imaging studies of the larynx, trachea and oesophagus Vocal function testing	2 2	2 2
Technical Skills and Procedures	Laryngeal examination with mirrors and flexible fibreoptic endoscope in an outpatient setting Suspension Microlaryngoscopy Videostroboscopic laryngoscopy in an outpatient setting Microscopic / endoscopic laryngeal surgery and intralaryngeal injection techniques Isshiki type 1-4 thyroplasty Arytenoid adduction and reduction. Type 2 thyroplasty for spasmodic dysphonia Vocal cord injection Laryngeal electromyography Laryngofissure Laser Thyroarytenoid myoneurectomy Laser supraglottoplasty Laser microflap and mini microflap surgery Office laser phonosurgery Transnasal KTP laser under local anaesthetic Laryngeal reinnervation procedures	4 4 3 2 1 1 1 2 1 1 1 1 1 1 1 1	4 4 3 2 1 1 1 2 1 1 1 1 1 1 1 1

35	**Tracheostomy Care Module (Adult)**		
Category	Head & Neck		
	Airway management		
Objective	To be able to manage patients with short and long term tracheostomies in an emergency, elective & community setting and provide an expert resource to other health professionals in the management of tracheostomies		
Knowledge	Anatomy of larynx, trachea and neck Physiology of respiration Indications for tracheostomy In depth knowledge of different types of tracheostomy tubes and relative indications for use Role of health professionals in the multidisciplinary management of patients with tracheostomy Local and national guidelines for tracheostomy management Indications for surgical & percutaneous tracheostomy Principles of weaning		
Clinical Skills	Tracheostomy care; suction, inner tube care, humidification Appropriate selection of correct tube to suit patient Supervision of weaning and extubation Troubleshooting in a variety of situations Management of persistent trachea cutaneous fistula Management of patients with failed extubation		

	Multi-disciplinary management of patients with long term tracheostomy tubes		
Technical Skills and Procedures	Flexible nasendoscopy Management of blocked & displaced tube Tracheostomy change Repair of persistent tracheo cutaneous fistula	4 4 4 3	4 4 4 3

OTOLOGY

36	**Non-infective, acquired lesions of the pinna and external ear canal**		
Category	Otology		
	Non infective conditions of the external ear		
Objective	To understand the aetiology, pathology, presentation and management of non-infective conditions of the external ear. 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		
Knowledge	Anatomy, physiology and pathology of the external ear and relationship of disease to the temporal bone. Systemic conditions affecting external ear Dermatological conditions of the external ear Pharmacology of medications used in treatment Aetiology, pathology, presentation and management of benign Tumours of the pinna and external ear canal Aetiology, pathology, presentation and management of malignant Tumours of the pinna and external ear canal Aetiology of acquired atresia of the external auditory meatus Pathogenesis of effects of ionizing radiation of the ear and temporal bone Aetiology, pathology, presentation and management of osteoma / exostosis Management of foreign bodies Understand the implications and management of trauma to the pinna Management including medical and surgical options as appropriate	 3 3	 3 3
Clinical Skills	HISTORY AND EXAMINATION Obtain appropriate history Clinical examination Otoscopy microscopy DATA INTERPRETATION Interpretation of audiological investigations Awareness and interpretation of radiological investigations	 3	 3

Technical Skills and Procedures	Aural toilet including microsuction and application of dressings	4	4
	Biopsy of lesion of external ear	4	4
	Oncological resection of tumours of the pinna	3	3
	Reconstructive surgery of the pinna	1	1
	Meatoplasty	2	2
	Removal of osteoma/exostosis	1	1
	Otomicroscopy and removal of FBs	4	4
	Drainage of haematoma of pinna	4	4
	Suturing of pinna	4	4

37	**Infective conditions of the pinna and external ear canal**		
Category	Otology		
	Infective conditions of the external ear and pinna including otitis externa, furunculosis, otomycosis, viral infections, chondritis & cellulitis		
Objective	To understand the aetiology, pathology, presentation and management of infective conditions of the external ear. 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		
Knowledge	Anatomy, physiology and pathology of the external ear and relationship of disease to the temporal bone. The pathogenesis of infective disorders of the external ear and pinna Necrotising otitis externa Microbiology of external ear and conditions affecting the pinna Knowledge of antimicrobial and antiviral agents and relevant pharmacology of medications used in treatment. Differential diagnosis of infective/inflammatory conditions Management including medical and surgical options as appropriate		
Clinical Skills	HISTORY AND EXAMINATION Obtain appropriate history Clinical examination Otoscopy Microscopy DATA INTERPRETATION Awareness and interpretation of radiological investigations Awareness and interpretation of microbiological investigations	3	3
Technical Skills and Procedures	Microscopy	4	4
	Suction clearance	4	4
	Biopsy of lesion of external ear canal	4	4
	Drainage of abscess	4	4

38	**Trauma**		
Category	Otology		
Objective	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. This list should not be considered to be fully inclusive or exhaustive		
Knowledge	Anatomy, physiology and pathology of the ear and auditory pathways. The effects of trauma on the pinna, ear canal, tympanic membrane, middle ear, otic capsule and temporal bone. The effects and assessment of poly-trauma and neurological injury. The effects of barotrauma The surgical and non-surgical management of trauma of the external, middle and inner ear. Glasgow Coma Scale Grading of facial nerve function Neurophysiological assessment of facial nerve	3 2	3 2
Clinical Skills	HISTORY AND EXAMINATION Obtain appropriate history Clinical examination including neurological assessment Otoscopy Microscopy Audiological and vestibular assessment DATA INTERPRETATION Objective and subjective audiological and vestibular tests Radiological imaging of the temporal bone, head and neck Laboratory investigations for suspected CSF leaks PATIENT MANAGEMENT Be able to advise the patient of the treatment options, discuss risks and potential benefits, potential complications To work where appropriate in a multidisciplinary team & liaise with other professional and organisations The importance of teamwork in managing critically ill patients	3 3 3 3 3	3 3 3 3 3
Technical Skills and Procedures	Microscopy Suction clearance of ear Meatoplasty Drainage of haematoma of pinna Suturing of pinna Exploratory tympanotomy Myringoplasty Ossiculoplasty Facial nerve decompression/anastomosis Repair of perilymph leak	4 4 2 3 3 2 4 1 1 1	4 4 2 4 4 3 4 1 1 1

39	**Acute otitis media and sequelae**		
Category	**Otology**		
	Middle ear		
Objective	To understand the aetiology, presenting signs, symptoms and management of acute infection of the middle ear. This module gives some indication of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive		
Knowledge	Anatomy, physiology and pathology of the ear and temporal bone The microbiology related to acute ear infections. Complications of acute otitis media including mastoiditis, lateral sinus thrombosis, meningitis and intracranial abscess Indications for laboratory and radiological investigations Differential diagnosis of acute otitis media and complications. Medical and surgical management options Relevant pharmacology of medications used in medical treatment		
Clinical Skills	HISTORY AND EXAMINATION Obtain appropriate history Clinical examination including neurological assessment Otoscopy Microscopy Audiological assessment DATA INTERPRETATION Interpretation of radiological investigations PATIENT MANAGEMENT To work where appropriate in a multidisciplinary team & liaise with other professional and organisations The importance of teamwork in managing critically ill patients		
Technical Skills and Procedures	Microsuction Myringotomy and grommet insertion Cortical mastoidectomy and access mastoidectomy	4 4 4	4 4 4

40	**Chronic suppurative otitis media and sequelae**		
Category	Otology		
	Middle ear		
Objective	To understand the aetiology, presenting signs, symptoms and management of chronic infection/inflammation of the middle ear. This module gives some indication of the breadth and depth of required knowledge and surgical skills. This list should not be considered to be fully inclusive or exhaustive		
Knowledge	Anatomy, physiology and pathology of the ear and temporal bone Definition and classification of chronic middle ear disease, including cholesteatoma, retraction pockets, perforations, otitis media with effusion and myringitis. Aetiology and pathophysiology of chronic middle ear disease The microbiology related to chronic middle ear disease Complications of chronic middle ear disease (including intracranial		

	sepsis) Principles and practice of audiology including pure tone audiometry, tympanometry Principles of specialist audiological investigations including speech audiometry, otoacoustic emissions and evoked response audiometry. Indications for radiological investigations Pharmacology of medications used in medical treatment Medical and surgical management options		
Clinical Skills	HISTORY AND EXAMINATION Obtain appropriate history Clinical examination including neurological assessment Otoscopy Microscopy Audiological assessment DATA INTERPRETATION Interpretation of audiological investigations Interpretation of radiological investigations	3	3
Technical Skills and Procedures	Microsuction Myringotomy and grommet insertion T tube insertion Grommet removal Aural polypectomy Myringoplasty Cortical mastoidectomy and access mastoidectomy Modified radical mastoidectomy Combined approach tympanoplasty Ossiculoplasty	4 4 4 4 4 4 4 3 1 1	4 4 4 4 4 4 4 3 1 1

41	**Adult hearing loss**		
Category	Otology		
	Deafness in adults		
Objective	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. This list should not be considered to be fully inclusive or exhaustive		
Knowledge	Embryology of the ear Anatomy, physiology and pathology of the ear and auditory pathways. Principles of acoustics and measurement of sound. Principles and practice of audiology including pure tone audiometry, speech audiometry and electrophysiological tests and other objective tests of hearing including oto-acoustic emissions Indications for radiological investigation of hearing loss The genetics of otological diseases Differential diagnosis, aetiology and management of conductive	3	4 4 4 4 4 3

	hearing loss including external/middle ear disorders and otosclerosis. Differential diagnosis, aetiology and management of sensorineural hearing loss including noise induced hearing loss, presbyacusis, Meniere's disease autoimmune diseases and retro-cochlear pathology. Aetiology, investigation and management of acute sensorineural hearing loss Central auditory processing disorders, auditory neuropathy, obscure auditory dysfunction Auditory rehabilitation including the use of hearing aids and other assistive devices. Social and psychological issues of deafness Principles of non-auditory communication Principles of surgical reconstruction. Management of severe/ profound hearing loss. Principles of and indications for cochlear implants, middle ear implants and bone anchored hearing aids. Principles of preventative audiology and hearing conservation	3 3 3 3	3 3 3 3
Clinical Skills	HISTORY AND EXAMINATION Obtain appropriate history Clinical examination Otoscopy Microscopy Audiological assessment DATA INTERPRETATION Interpretation of audiological investigations Interpretation of radiological investigations Interpretation of laboratory investigations PATIENT MANAGEMENT Demonstrate communication skills and empathy Be able to advise the patient of the treatment options, discuss risks and potential benefits, potential complications To work where appropriate in a multidisciplinary team & liaise with other professional and organisations Principles of a holistic approach to the management of hearing loss Genetic counselling	3 2	3 2
Technical Skills and Procedures	Perform pure tone audiometry, tympanometry Microscopy Microsuction Myringotomy + grommet insertion Exploratory tympanotomy Myringoplasty Ossiculoplasty Stapedotomy/stapedectomy Cochlear implantation	3 4 4 4 3 4 1 1 1	4 4 4 4 3 4 1 1 1

	Middle ear implantation Insertion of Bone anchored hearing aid abutment Closure of perilymph leak The surgical approaches to the CP angle Acoustic neuroma surgery	1 2 1 1 1	1 2 1 1 1

42	**Tinnitus**		
Category	Otology		
	Tinnitus		
Objective	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. This list should not be considered to be fully inclusive or exhaustive		
Knowledge	Anatomy, physiology and pathology of the ear and auditory pathways. Psycho-acoustical tests, pitch and loudness match, minimum masking level, residual inhibition The various hypotheses relating to the aetiology of tinnitus both objective and subjective Knowledge of objective causes of tinnitus e.g. palatal myoclonus, tumours, arteriovenous malformations The psychological effects of tinnitus Principles of tinnitus retraining and rehabilitation and the principles of support and counselling Principles of hearing aid(s) and masking	2 3 3	2 3 3
Clinical Skills	HISTORY AND EXAMINATION Obtain appropriate history Clinical examination Otoscopy DATA INTERPRETATION Interpretation of radiology PATIENT MANAGEMENT Demonstrate communication skills and empathy. Be able to advise the patient of the treatment options, discuss risks and potential benefits. To liaise with other organisations and professionals including audiologists, hearing therapists and clinical psychologists	 3	 3
Technical Skills and Procedures	Perform pure tone audiometry, tympanometry	3	4

43	**Facial palsy**		
Category	Otology		
	Facial Paralysis		
Objective	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. This list should not be considered to be fully inclusive or exhaustive		
Knowledge	The anatomy and physiology of facial nerve and related structures The aetiology, classification and neuro-physiology of facial paralysis Indications for investigations including radiology, electrophysiology and laboratory tests. Facial nerve grading Management of acute and chronic facial nerve palsy Management and prevention of ocular complications Principles of peri-operative facial nerve monitoring Principles of rehabilitation for facial paralysis	2	2
Clinical Skills	HISTORY AND EXAMINATION Obtain appropriate history Clinical examination including assessment of facial nerve function Otoscopy DATA INTERPRETATION Neuro-physiological tests of inner ear function and facial nerve Interpretation of radiological tests Interpretation of laboratory investigations PATIENT MANAGEMENT Demonstrate communication skills and empathy Appreciate the psychological effects of facial disfigurement Be able to advise the patient of the treatment options, and liaise with other health care professionals.	2 3 2	2 3 2
Technical Skills and Procedures	Setup and use of intra-operative facial nerve monitor Cortical mastoidectomy Modified radical mastoidectomy Full decompression of facial nerve Facial nerve anastomosis Resection of facial neuroma	4 4 3 1 1 1	4 4 3 1 1 1

44	**Disorders of balance**		
Category	Otology		
Objective	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.		
Knowledge	Anatomy and physiology related to maintenance of balance including the vestibular system, visual, locomotor, central nervous and cardiovascular systems The pathology and various hypotheses relating to the aetiology and management of sudden vestibular failure, Meniere's disease, benign paroxysmal vertigo, vestibular schwannoma, pharmacological and metabolic side effects The handicaps related to age related sensory and proprioceptive degeneration Psychological aspects of dizziness Appropriate investigations for balance disorders including audiological, radiological, laboratory and vestibular tests. The law as it relates to disorders of balance The principles of vestibular rehabilitation The principles of particle repositioning manoeuvres Medical, non-surgical and surgical treatment options		
Clinical Skills	HISTORY AND EXAMINATION Obtain appropriate history Clinical examination including neurological assessment Otoscopy DATA INTERPRETATION Interpretation of audiological tests Interpretation of vestibular tests Interpretation of radiological and laboratory tests PATIENT MANAGEMENT Demonstrate communication skills and empathy Be able to advise the patient of the treatment options, discuss risks and potential benefits, potential complications To work where appropriate in a multidisciplinary team & liaise with other professional and organisations		
Technical Skills and Procedures	Perform particle re-positioning manoeuvres Myringotomy and grommet insertion Intratympanic instillation of drugs Cortical mastoidectomy Decompression of endolymphatic sac Closure of perilymph fistula Labyrinthectomy Vestibular neurectomy Singular neurectomy Superior SCC dehiscence repair	4 4 1 4 1 1 1 1 1 1	4 4 1 4 1 1 1 1 1 1

45	**Lateral skull base tumours**		
Category	Otology		
	Head and neck neoplasia		
Objective	To understand the aetiology, presenting signs, symptoms and management of lateral skull base neoplasia. 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.		
Knowledge	Anatomy of the skull base and neck Anatomy of the inner, middle and external ear Anatomy of the cranial nerves Pathology and pathogenesis of skull base tumours The relevant clinical neurological, vascular, radiological, biological, immunological and serological investigations The genetics of skull base tumours including vestibular schwannomas and genetic counselling. The clinical presentation of skull base tumours The surgical and non-surgical management options. The surgical approaches to the CP angle and skull base	3 3	3 3
Clinical Skills	HISTORY AND EXAMINATION Obtain appropriate history Clinical examination including neurological assessment Otoscopy DATA INTERPRETATION Interpretation of audiological tests Interpretation of vestibular tests Interpretation of radiological and laboratory tests PATIENT MANAGEMENT Demonstrate communication skills and empathy Be able to advise the patient of the treatment options, discuss risks and potential benefits, potential complications Principles of patient management including multidisciplinary team working	 3 3	 3 3
Technical Skills and Procedures	Surgical approaches to the lateral skull base Tympanotomy Resection of glomus tympanicum Management of complications of lateral skull base surgery including CSF leak, lateral sigmoid thrombosis and facial palsy.	1 3 1 1	1 3 1 1

RHINOLOGY

46	**Epistaxis**		
Category	Rhinology		
Objective	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 problems. This list should not be considered to be fully inclusive or exhaustive		
Knowledge	Know the anatomy of the nose Understanding of local and systemic aetiologies of epistaxes Detailed knowledge of the anatomy and physiology of nasal vasculature Detailed understanding of the presenting symptoms and signs of epistaxes Detailed knowledge of management including first aid measures, nasal cautery, packing and operative techniques in the management of epistaxes Know the complications of epistaxes and the management of them. Understanding of the role of radiology and embolization in managing epistaxis		
Clinical Skills	Demonstrate expertise in taking an appropriate clinical history. Ability to elicit physical signs both local and systemic if appropriate Awareness of relevant haematological and imaging investigations. Awareness of management principles in patient with epistaxis Ability to resuscitate critically ill patient		
Technical Skills and Procedures	Diagnostic nasendoscopy Packing of nose Removal of nasal packing Cautery of nasal septum Ethmoid Artery ligation Sphenopalatine artery ligation Maxillary artery ligation External Carotid artery ligation Approach to ICA epistaxis	4 4 4 4 4 3 1 1 1	4 4 4 4 4 4 1 1 1

47	**Nasal trauma and deformity**		
Category	Rhinology		
Objective	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.		
Knowledge	Know the anatomy of the nose, paranasal sinuses and facial skeleton. Understanding of the mechanisms of trauma responsible for nasal and facial injuries. Understanding of objective assessment of airway e.g. rhinomanometry Knowledge of the appropriate imaging techniques Knowledge of the specific complications of nasal trauma Knowledge of the management of nasal trauma Knowledge of the management of nasal deformity Glasgow Coma Scale		
Clinical Skills	Ability to take a relevant history and perform an appropriate clinical examination Knowledge of the relevant special investigations and correct interpretation eg rhinomanometry Ability to adequately resuscitate the critically ill patient		
Technical Skills and Procedures	Fracture nose reduction Insertion septal button Packing of nose Management of traumatically induced epistaxis (see epistaxis section) Septoplasty Septorhinoplasty Surgical repair septal perforation-open and endonasal	4 4 4 4 4 3 1	4 4 4 4 4 4 1

48	**Acute and chronic rhinosinusitis**		
Category	Rhinology		
Objective	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.		

Knowledge	Detailed knowledge of anatomy and physiology of the nose and paranasal sinuses Know the microbiology of acute and chronic rhinosinusitis understanding of special investigations to inform the diagnosis Understanding of the management of acute and chronic rhinosinusitis. Knowledge of the indications for, techniques of, and complications of surgical management Knowledge of the complications of sinusitis and their management.		
Clinical Skills	Demonstrate an ability to take an appropriate history and perform a nasal examination with a speculum and endoscope. Awareness of the indications for and ability to interpret imaging including CT and MRI Awareness of indications for other special investigations including microbiology, immunology etc		
Technical Skills and Procedures	Preparation of the nose for endoscopic surgery Nasendoscopy Antral washout – direct vision Inferior meatal antrostomy – direct vision + endoscopic Middle meatal antrostomy – endoscopic Nasal polypectomy – endoscopic including microdebrider Middle turbinate partial excision Uncinectomy – endoscopic Anterior ethmoidectomy - endoscopic Caldwell-Luc – direct vision External ethmoidectomy Posterior ethmoidectomy – endoscopic Sphenoidotomy – endoscopic Opening the frontal recess – endoscopic Balloon sinuplasty Surgical management of intra-orbital bleeding Extended frontal sinus procedures Osteoplastic flap Modified endoscopic medial maxillectomy Frontal sinusotomy types 1 2 and 3	4 4 2 2 4 4 4 4 4 2 1 2 1 1 1 2 1 1 1 1	4 4 4 2 4 4 4 4 4 4 2 3 2 1 1 4 1 1 1 1

49	**Nose and sinus inflammation including allergy**		
Category	Rhinology		
Objective	To understand the aetiology and pathophysiology of nasal & 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.		

Knowledge	Detailed knowledge of anatomy and physiology of the nose and paranasal sinuses Understanding of the aetiologies underlying inflammation of the nose and sinuses. Basic science of allergy Know the role of allergy in the pathophysiology of inflammation of the nose and sinuses. Understanding of the special investigations used in the assessment of nasal allergy. Understanding of the imaging modalities to assess the nose and sinuses Knowledge of the role of management of allergy, and drug treatment in nasal and sinus inflammation. Knowledge of the indications for, techniques of and complications of surgical management Knowledge of systemic conditions that can cause sinonasal inflammation Understanding of scientific basis and methodology of desensitisation	3	3
Clinical Skills	Ability to take an appropriate history and perform endoscopic examination of the nose and sinuses. Ability to interpret the result of allergy testing including skin prick testing Know which haematological investigations & radiological imaging are appropriate.		
Technical Skills and Procedures	Preparation of the nose for endoscopic surgery Nasendoscopy Antral washout – direct vision Inferior meatal antrostomy – direct vision + endoscopic Middle meatal antrostomy – endoscopic Nasal polypectomy – endoscopic including microdebrider Turbinate surgery Uncinectomy – endoscopic Anterior ethmoidectomy - endoscopic Caldwell-Luc – direct vision External ethmoidectomy Posterior ethmoidectomy – endoscopic Sphenoidotomy – endoscopic Opening the frontal recess – endoscopic Balloon sinuplasty Surgical management of intra-orbital bleeding	4 4 4 2 4 4 4 4 4 2 1 2 1 1 1 2	4 4 4 2 4 4 4 4 4 2 2 2 1 1 1 2

50	**Congenital abnormalities of the nose and sinuses**		
Category	Rhinology		
Objective	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.		
Knowledge	Knowledge of the anatomy and physiology of the nose and paranasal sinuses. Knowledge of the embryology of the nose and sinuses. Knowledge of those conditions associated with congenital nasal abnormalities. Understanding of how to manage congenital nasal abnormalities in both the elective and emergency settings. Understanding of imaging modalities appropriate to the investigation of congenital abnormality Principles of genetics relating to congenital abnormalities	2	2
Clinical Skills	Ability to take an appropriate history from the parent and child and perform relevant general and specific rhinological examination. Examination including endoscopic		
Technical Skills and Procedures	Nasendoscopy Examination under anaesthesia Surgical management of choanal atresia Endoscopic and open approaches to midline congenital lesions	4 4 1 1	4 4 1 1

51	**Facial pain**		
Category	Rhinology		
Objective	To understand the aetiologies, characteristics and management of conditions presenting with facial pain, including those causes not arising in the upper aerodigestive tract		
Knowledge	Anatomy and physiology of the head and neck, including the face, TMJ, dentition and cervical spine Understand the differential diagnosis of facial pain including organic and functional causes Understand the various treatment modalities, both medical and surgical Understanding of the pharmacology of drugs used in the management of facial pain Awareness of the multidisciplinary approach to management	3	3
Clinical Skills	Ability to take a relevant history of facial pain Ability to perform an appropriate ENT, neurological and locomotor examination Understanding of the appropriate radiological investigations		

	Appropriate management to include onward referral for pharmacological, surgical and counselling therapies		
Technical Skills and Procedures	Outpatient endoscopy of upper aerodigestive tract Examination under anaesthesia Biopsy - external nose Biopsy – internal nose	4 4 4 4	4 4 4 4

52	**Pituitary disease**		
Category	Rhinology		
Objective	To understand the aetiology, classification, clinical features and management of pituitary disease. 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.		
Knowledge	Understanding of the anatomy of the nose, paranasal sinuses and parasellar regions Knowledge of the Pathophysiology of the hypothalamic-pituitary axis and associated disorders Understanding of the principles of perioperative care Knowledge of indications for the endonasal and craniotomy approaches Surgical complications	2	2
Clinical Skills	Ability to take a relevant history and perform an appropriate clinical examination Knowledge of the relevant pituitary investigations and correct interpretation of them.		
Technical Skills and Procedures	Transsphenoidal approach to the pituitary fossa	1	1

53	**Disorders of Olfaction**		
Category	Rhinology		
	Olfaction		
Objective	To understand the aetiology, clinical presentation and management of olfactory disorders. 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.		
Knowledge	Know the anatomy of the olfactory nerve including intracranial connections. Know the physiology of olfaction Know the classification of olfactory dysfunction Know the causes of olfactory dysfunction Understand the scientific basis for the assessment of olfactory dysfunction Know of the commonly used tests of olfaction Know the anatomy and physiology of taste Know the causes of taste dysfunction		

Clinical Skills	Be competent at taking a comprehensive history and examination from a patient presenting with olfactory and/ or taste dysfunction. Be competent at performing a formal assessment of olfaction using appropriate validated assessment techniques Be competent at ordering and interpreting appropriate imaging to investigate olfactory dysfunction		
Technical Skills and Procedures	Nasendoscopy Examination of nose and postnasal space Nasal biopsy	4 4 4	4 4 4

54	**Sinonasal neoplasms including anterior skull base tumours**		
Category	Sinonasal neoplasms		
Objective	To understand the aetiology, clinical presentation and management of benign and malignant 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.		
Knowledge	Knowledge of the anatomy of the nose and paranasal sinuses. Knowledge of the distribution of cervical lymph nodes Understanding of the pattern of spread of malignancy in the head and neck Knowledge of the different histological types of neoplasm in the nose, paranasal sinuses and skull base. Understanding of the principles of medical and surgical management of neoplasms of the nose and sinuses. Knowledge of the complications of both the diseases and their management. Understanding of the multidisciplinary approach to the management of sinonasal/skull base tumours	3	3
Clinical Skills	Ability to take a relevant history, perform an appropriate examination and interpret clinical findings correctly Demonstrate a rational approach to special investigations Participation in a multi-disciplinary team approach to management of sinonasal neoplasms		
Technical Skills and Procedures	Examination of nose under anaesthesia Biopsy of nose - external Biopsy of nose – internal Anterior skull base approaches including endoscopic Endoscopic medial maxillectomy Lateral rhinotomy Endoscopic excision nasal and sinus tumours Maxillectomy Midfacial degloving Bicoronal flap approach	4 4 4 1 2 1 1 1 1 1	4 4 4 1 2 1 1 1 1 1

	Endoscopic repair of anterior skull base csf leak Osteoplastic flap approach Craniofacial resection	1 1 1	1 1 1

55	**CSF LEAKS / SKULL BASE DEFECT**		
Category	**Advanced Rhinology**		
Objective	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.		
Knowledge	Anatomy of nose and paranasal sinuses Knowledge of aetiology of CSF leaks and meningoencephaloceles relevant to ENT Understanding of pathophysiology and complications of CSF leaks /skull base defects Understanding of the management of CSF leaks/skull base defects Understanding of principles of diagnosis and management of CSF leaks and skull base defects		
Clinical Skills	Ability to take an appropriate history and perform an examination including nasal endoscopy. Awareness of and ability to interpret CT/MR imaging and other relevant assessments Lumbar puncture and lumbar drain management Ability to work in a multidisciplinary team	 1 2	 1 2
Technical Skills and Procedures	Endoscopic repair with free grafts for small defects Management of larger defects with pedicled nasal flaps Harvesting of nasoseptal flap	1 1 1	1 1 1

56	**Extended endonasal skull base procedures**		
Category	Advanced Rhinology		
Objective	To understand the aetiology, clinical presentation and management of benign and malignant 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		
Knowledge	Knowledge of the anatomy of the nose, paranasal sinuses, and skull base Knowledge of tumours/disorders of skull base in the regions of the anterior and posterior fossa and pterygopalatine fossa Understanding of the selection of approaches, both endonasal and transcranial. Principles of perioperative management Complications of surgery and principles of management.	 3 3 2 2	 3 3 2 2

	Understanding of the multidisciplinary approach to the management of sinonasal/skull base tumours		
Clinical Skills	Principles of assessment and perioperative management of midline tumours	2	2
	Ability to interpret relevant CT and MR & angiography /embolization images	2	2
	Principles of lumbar puncture and lumbar drainage	2	2
	Participation in a multi-disciplinary team approach to management of skull base lesions	2	2
Technical Skills and Procedures	Examination of nose under anaesthesia	4	4
	Biopsy of nose - external	4	4
	Biopsy of nose – internal SPA	4	4
	ligation	3	4
	endonasal transmaxillary approach to pterygopalatine fossa Vidian	1	1
	neurectomy	1	1
	Anterior skull base approaches including endoscopic	1	1
	Endoscopic medial maxillectomy	1	1
	Lateral rhinotomy	1	1
	Endoscopic excision skull base tumours (team) Midfacial	1	1
	degloving approach to the sinuses Endoscopic repair of	1	1
	anterior / posterior skull base Repair csf leak	1	1
	Craniofacial resection	1	1
	Craniotomy	1	1
		1	1

57	**Orbital disorders**		
Category	Advanced Rhinology		
	Intraorbital		
Objective	To understand the aetiologies, characteristics and management of conditions presenting with facial pain, including those causes not arising in the upper aerodigestive tract. 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.		
Knowledge	Anatomy and physiology of the orbit and its contents Assessment of visual loss and knowledge of tests of visual and orbital function		
	Understanding of thyroid eye disease		
	Understanding of disorders of the optic nerve as relevant to	3	3
	otolaryngologists	3	3
	Knowledge of the surgical approaches both open and endoscopic		
	to the orbit	3	3
Clinical Skills	Ability to take a relevant history form a patient with an orbital disorder		
	Ability to perform an appropriate ENT, neurological and ophthalmic examination		
	Understanding of the appropriate radiological and special		
		3	3

	investigations of visual and orbital function Ability to work in a team with ophthalmological colleagues	 2	 2
Technical Skills and Procedures	Nasal endoscopy Lateral canthotomy Medial orbital endoscopic decompression Medial open orbital decompression Optic nerve decompression	4 2 2 2 1	4 3 3 3 1

58	**Orbital disorders**		
Category	Surgical Management of Epiphora		
Objective	To understand the aetiology and pathophysiology of epiphora. There should be detailed understanding of the presenting features, diagnosis, and management of this disorder. 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.		
Knowledge	Anatomy of the lacrimal system Intranasal anatomy Physiology of lacrimation Causes of epiphora 'Red Flag' symptoms		
Clinical Skills	Take a comprehensive history from a patient presenting with epiphora Relevant ophthalmic examination Syringing of lacrimal system and understanding of results Dye disappearance test Understand indications for relevant investigations Team working with ophthalmologist	 3 1 1 2 2	 3 1 1 2 2
Technical Skills and Procedures	Nasal endoscopy EUA Nose Endonasal DCR	4 4 2	4 4 2

59	**Septorhinoplasty**		
Category	Rhinology		
	Facial Plastics		
Objective	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.		
Knowledge	Understanding of the anatomy of the nose, paranasal sinuses and facial skeleton. Understanding of the embryology of the nose Understanding of the mechanisms of trauma responsible for nasal and facial injuries. Understanding of methods of assessment of the facial skeleton		

	Knowledge of surgical techniques including use of grafts Knowledge of the specific complications of nasal surgery		
Clinical Skills	Ability to take a relevant history and perform an appropriate clinical examination Ability to assess photographs and devise a surgical plan including onwards referral as appropriate		
Technical Skills and Procedures	Septoplasty Septorhinoplasty including use of grafts Appropriate dressing and packing of nose	4 4 4	4 4 4

60	**Congenital abnormalities of the face**		
Category	Rhinology		
	Facial Plastics		
Objective	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.		
Knowledge	Knowledge of the anatomy and physiology of the facial structures. Knowledge of the embryology of the face including the nose, palate and neck. Knowledge of those conditions associated with congenital facial abnormalities. Understanding of how to manage congenital facial abnormalities in both the elective & emergency settings. Principles of genetics and counselling	2	2
Clinical Skills	Ability to take an appropriate history from the parent and child and perform relevant examinations. Nasendoscopy if appropriate		
Technical Skills and Procedures	Examination under anaesthesia Excision facial skin lesion including reconstructive techniques Septorhinoplasty in cleft patients	4 4 1	4 4 1

61	**Cosmetic Surgery**		
Category	Rhinology		
	Facial Plastics		
Objective	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.		
Knowledge	Understanding of the anatomical areas and aesthetic units that make up the face. Knowledge of relaxed skin tension lines Understanding of the blood supply and innervation of the face.		

	Knowledge of the planes of dissection available. Knowledge of the methods used to analyse facial features.		
	Knowledge of the various procedures used in cosmetic facial surgery. Knowledge of the limitations and complications of cosmetic facial surgery		
Clinical Skills	Ability to take a relevant history and perform an appropriate clinical examination Ability to assess facial deformity and devise a management plan		
Technical Skills and Procedures	Nasendoscopy Resection of nasal lesion Be able to reconstruct defects with local flaps Be able to reconstruct defects using Distant flaps Excision skin lesion Harvesting and use of split and full thickness skin grafts Facelift Tissue expansion techniques Neuromuscular blockade	4 4 2 1 4 4 1 1 1	4 4 2 1 4 4 1 1 1

62	**Skin Cancer**		
Category	Skin cancer		
	Facial plastics		
Objective	To understand the aetiology, clinical presentation and management of benign and malignant tumours of the skin. 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.		
Knowledge	Know the anatomy and cellular composition of the skin. Know the zones of the face and relaxed skin contour lines. Know the physiology of skin. Understand the principles of carcinogenesis Know of the different types of skin cancer and their classification. Know the presenting features and appearance of different types of skin cancer. Know the causes and predisposing factors of skin cancer. Know of the staging of different types of skin cancer. Know of the treatment of different types of skin cancer. Understand the rationale for the strategies to prevent skin cancer.		

Clinical Skills	Be able to take a comprehensive history and examination from a patient presenting with symptoms of skin cancer	4	4
	Manage all patients within a multidisciplinary setting when indicated.	3	3
	Be able to recommend correct treatment options to patients	3	3
	Order appropriate imaging.	4	4
Technical Skills and Procedures	Skin biopsy	4	4
	Excision of skin cancer and primary closure	4	4
	Excision of skin cancer and reconstruction with local axial or random pattern flaps or grafts	2	2
	Harvesting and use of split and full thickness skin grafts	4	4
	Be able to reconstruct defects using Distant flaps	1	1

63	**Reconstruction**		
Category	Rhinology		
	Facial Plastics		
Objective	To understand the methods available for facial reconstruction including, 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.		
Knowledge	Understanding of the applied anatomy of the head and neck Understanding of the blood supply and innervation of the head and neck and of local, regional and free grafts. Knowledge of the different types of flap available and the indications for their use Knowledge of the implants and prosthetic devices available.		
Clinical Skills	Ability to take a relevant history and perform an appropriate clinical examination Ability to assess cosmetic and functional deficits and devise a management plan including onward referral as appropriate		
Technical Skills and Procedures	Resection of nasal lesion	4	4
	Reconstruction of nasal cosmetic units	2	2
	Lip-wedge resection	2	2
	Excision skin lesion	4	3
	Suture skin	4	4
	Reconstruction with axial and random pattern local flaps Split and full thickness skin grafts	2 4	2 4
	Tissue expansion techniques	1	1
	Dermal fillers	1	1

64	**Academic training and learning**		
	Using study materials and publications and reflective practice. Trainees are expected to use the developmental feedback they get from their trainers in learning agreement meetings and from assessments to focus further research and practice. Trainees are encouraged to participate in clinical research and collaborative trials to achieve these outcomes, as well as in journal clubs, literature review and systematic review and to make a major contribution to the publication of novel findings in peer reviewed journals.		4 4

6.3 Critical conditions

Otolayngology manages a large number of individual conditions as described in the syllabus. Assessment of a trainee's ability to manage these is through the supervision level decisions made when assessing the shared CiPs. Otolaryngology also has a list of critical conditions which are of significant importance for patient safety and to demonstrate a safe breadth of practice. Below a list of critical conditions:

1) Adult airway obstruction (malignancy, inhalation injury etc.)
2) Paediatric airway obstruction
3) Upper aero-digestive tract foreign body and chemical injury (including batteries)
4) Acute infections of the upper aero-digestive tract including tonsillitis & supraglottitis
5) Deep neck space abscess and necrotising fasciitis
6) Management of tonsillar haemorrhage and other major upper aerodigestive tract haemorrhage
7) Blunt and penetrating trauma to the neck
8) Epistaxis including sphenopalatine artery ligation
9) Complications of acute and chronic sinusitis including orbital cellulitis
10) Complications of ear sepsis including acute mastoiditis and necrotising otitis externa
11) Acute balance disorder including vestibulopathy, and diagnostic understanding of brain stem stroke and multiple sclerosis
12) Sudden onset sensorineural hearing loss

6.4 Index Procedures for trainee in otolaryngology specialty

Otolaryngology requires technical skills to be achieved across a wide range of operative procedures as described in the syllabus. Assessment of a trainee's ability to carry out this full range of procedures is covered by the supervision. These assess not only the necessary technical skills but the totality of capabilities required to carry them out.

The index procedures are of significant importance for patient safety and to demonstrate a safe breadth of practice. There should be evidence that an indicative one or more operation in each group has been assessed and at level 4a/b, (simulated operations are not accepted for this level 4 evidence requirement):

- Level 4a: *Procedure performed fluently without guidance or intervention*
- Level 4b: As 4a *and was able to anticipate, avoid and/or deal with common problems/complications*.

Trainees should have undertaken a minimum 220 operations during training as principal to include :

1) Adenoidectomy	50 as main surgeon
2) Tonsillectomy	50 as main surgeon
3) Myringotomy + /- Grommet	50 as main surgeon
4) Septoplasty	15 as main surgeon
5) Functional Endoscopic Sinus Surgery	15 as main surgeon
6) Tympanoplasty type I	5 as main surgeon
7) Cortical Mastoidectomy	5 as main surgeon
8) Microlaryngoscopy	5 as main surgeon
9) Tracheostomy	5 as main surgeon
10) Nasal Bone fracture Repair	5 as main surgeon
11) Neck Surgery	5 as main surgeon
12) Bronchoscopy	5 as main surgeon
13) Oesophagoscope	5 as main surgeon

The following operations is required by the applicant trainee during the training period as an assistant according to the possibilities of the training program:

1-Mastoid surgery
2-Stapes surgery
3-Tympanoplasty and Ossiculoplasty
4-Cochlear implant surgery
5-Inner ear surgery
6-Lateral rhinotomy
7-Maxillectomy
8-Trephine operation
9-DCR
10-Snoring procedures
11-Rhinoplasty
12-Laryngectomy
13-Neck dissection
14-Salivary glands surgery
15-Thyroid surgery
16-Other surgeries

Out patient clinics

1. Otologic outpatient clinic
2. Audiologic clinic include pediatric audiology
3. Rhinology clinic
4. Laryngology clinic include diagnostic endoscopy
5. Head and neck surgery outpatient clinic
6. Cancer ambulatory
7. Sleep apnea clinic
8. Otolaryngology ward

Iraqi board for medical specialties

The Iraqi board is responsible for setting the standards for curricula and approving curricula as well as approval of training programmes and training post locations.

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