

The Intercollegiate Surgical Curriculum

Educating the surgeons of the future

Plastic Surgery Syllabus

2010

ISCP

INTERCOLLEGIATE
SURGICAL
CURRICULUM
PROGRAMME

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Overview and objectives of the Plastic Surgery Curriculum

- The specialty of plastic and reconstructive surgery is that branch of surgery concerned with the restoration of normal form and function. It is a varied specialty involving adults and children and encompassing a wide range of conditions affecting different parts of the body.
- Nowadays most consultants in the UK have a particular area of special interest within plastic surgery although nearly all also take part in an on-call rota dealing with emergency admissions.
- One of the most interesting and fulfilling aspects of the specialty is the frequency with which plastic surgeons work with surgeons from other specialties such as general surgery, orthopaedics, otorhinolaryngology, and oral maxillofacial surgery. In these cases the reconstructive techniques that plastic surgeons have at their disposal are particularly useful.
- The specialty is also closely associated with aesthetic surgery where body parts are surgically altered to bring about an improvement in appearance.

Areas of special interest associated with the specialty of plastic surgery include the following:

- Head and Neck Surgical Oncology
- Cleft Lip and Palate Surgery (including craniofacial abnormalities)
- Breast Surgery
- Hand and Upper Limb Surgery
- Academic Plastic Surgery

Other areas where senior trainees and subsequently consultants develop particular expertise include:

- Burns
- Skin and soft tissue tumours
- Lower limb trauma
- Aesthetic or cosmetic surgery

Implicit in the wide ranging nature of the specialty is the requirement that a consultant in plastic surgery demonstrates a high level of skill, experience and judgement in carrying out all the roles that his/her job entails. The curriculum and training programmes are designed to produce surgeons competent to take up such consultant appointments in the UK. To be considered fully trained, surgeons must achieve all the requirements of the curriculum through to successful completion.

Vivien Lees - SAC Chair

Steve Livesey - Content Editor

The Purposes of Training in the Specialty of Plastic Surgery

To produce plastic surgeons competent to work as consultant plastic surgeons in the UK.

This includes:

- Competence to manage patients presenting with a wide range of acute and emergency conditions including trauma and burns, diagnosing, assessing and treating or referring on as appropriate.
 - Competence in the management of patients presenting with a range of elective conditions as specified in the core syllabus for the specialty of plastic surgery.
 - Competence to manage an additional range of elective and emergency conditions by virtue of appropriate training and assessment opportunities obtained during training.
 - Professional competences as specified in the syllabus and derived from the Good Medical Practice framework of the General Medical Council of the UK.
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The Training Pathway in the Specialty of Plastic Surgery

- To acquire the CCT in the specialty of plastic surgery trainees must complete all the requirements of the syllabus. This includes the key topics for each stage and clear demonstration that the specified levels of competence overall have been achieved at the time of final review.
 - The curriculum is designed to provide trainees in the specialty of plastic surgery with a structured training programme that will enable them to progress from the introductory stages of training through to the level required of a surgeon working independently as a consultant in the NHS.
 - The training programme, designed to last an indicative 8 years, includes training in areas of special interest. It comprises three stages: initial (CT1 and 2); intermediate (ST3 - 6); and final (ST7 and 8).
 - Normally, CT1 and CT2 will comprise a two-year period of generic surgical training where the trainee rotates through several surgical specialties including plastic surgery with each rotation lasting 4-6 months.
 - At the end of this period, selected trainees will proceed to ST3 and from this point their training will be solely in the specialty of plastic surgery.
 - Having completed the syllabus, attained the required levels of competence and passed the Intercollegiate Examination, the candidate will be eligible to be awarded a CCT.
 - Increasingly, senior trainees are undertaking training in an area of special interest that crosses specialty boundaries: so-called interface training. These modules, which take between 12 and 24 months to complete and are appointed through advertisement and selection, are taken towards the end of training (in ST7 and 8). Training in such an additional area of special interest will usually result in the deferment of the CCT until this is completed.
 - They are available in the following areas:
 - Head and neck (with exposure to training from otorhinolaryngologists and oral and maxillofacial surgeons)
 - Hand surgery (in combination with orthopaedic surgeons)
 - Cleft lip and palate (in combination with otorhinolaryngologists and oral and maxillofacial surgeons)
 - Breast surgery (in combination with breast surgeons)
 - Aesthetic Surgery (with otorhinolaryngologists, oral and maxillofacial surgeons, breast surgeons, ophthalmic surgeons (4 month training modules)
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The Scope and Standards of Plastic Surgical Practice at CCT

A major proportion of the workload involves dealing with urgent or emergency cases including:

- Hand trauma.
- Burns and scalds
- Soft tissue injuries involving face, trunk or limbs.

Elective surgery includes the following major areas:

- Head and neck. This includes excisional and reconstructive surgery for congenital and acquired abnormalities, and for malignancy involving the face and mouth.
 - Cleft lip and palate and other craniofacial abnormalities.
 - Breast: including surgery for reconstruction, reduction and augmentation.
 - Hand and upper limb: including congenital and acquired conditions.
 - Skin and soft tissue tumours.
 - Congenital and acquired deformities of the trunk and urogenital system.
 - Aesthetic or cosmetic surgery.
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The Configuration and Delivery of Plastic Surgical Services

- There are approximately 60 plastic surgery units around the country and these are for the most part situated in teaching hospitals.
 - At present each comprises on average 6-7 consultants together with a number of trainees and other grades in support.
 - Inpatient care, including management of urgent conditions, is carried out in the base hospital for each unit with consultants also providing outpatient clinics and at times day case operating at peripheral hospitals within their catchment area.
 - There are approximately 300 consultants in the UK, which translates into 1: 205,000 population.
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Future Trends in Plastic Surgery

- The specialty is planning to increase consultant numbers and this will be reflected by some increase in recognised training posts.
 - To achieve the recommendation made by the then Senate of Surgery of 1 consultant per 100,000 population for the UK and to allow a consultant delivered service, a doubling of consultant numbers to 600 will be required.
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Key Topics

Key Conditions

Wound Care

- Management of wounds including contaminated, infected wounds and those involving skin loss

Burns

- Assessment, resuscitation and initial management of burns
- Surgical management of burns
- Diagnosis and management of complications of burns including inhalational injury and septic shock

Head & Neck

- Approaches to reconstruction of defects of the ear, eyelid, nose, lip and oral cavity
- Approaches to management of facial palsy
- Management of patients requiring radical or selective neck dissection

Clefts

- Principles of management of baby with cleft lip and palate
- Investigation and management of velopharyngeal incompetence

Breast

- Management of patients requiring breast reconstruction, reduction and augmentation

Hand

- The diagnosis and management of all aspects of hand trauma
- The diagnosis and management of congenital deformities of the hand
- The diagnosis and management of acquired hand conditions

Lower Limb

- The multidisciplinary assessment and management of compound tibial fractures involving skin loss

Skin Tumours

- All aspects of diagnosis and management of malignant skin tumours including surgical reconstruction and management of regional lymph nodes

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- The principles of surgical management of hypospadias

Aesthetic

- The assessment and management of patients requiring aesthetic alterations of body parts including face, eyelids, nose and ears.

General

- Competence in the use of plastic surgery techniques including design and use of z-plasty, pedicled cutaneous and myocutaneous flaps, and free flaps

Initial Stage Overview

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

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

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

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

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

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

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

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

Module 2: Common surgical conditions

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

Module 3 Basic surgical skills

- To prepare oneself for surgery
- To safely administer appropriate local anaesthetic agents
- To handle surgical instruments safely
- To handle tissues safely
- To incise and close superficial tissues accurately
- To tie secure knots
- To safely use surgical diathermy
- To achieve haemostasis of superficial vessels.
- To use a suitable surgical drain appropriately.
- To assist helpfully, even when the operation is not familiar.
- To understand the principles of anastomosis
- To understand the principles of endoscopy including laparoscopy

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

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

Module 5: Peri-operative care of the surgical patient

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

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

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

Module 7: Surgical care of the paediatric patient

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

Module 8: Management of the dying patient

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

Module 9: Organ and tissue transplantation

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

Module 10: Professional behaviour

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

SPECIALTY SPECIFIC MODULES

In addition to the knowledge that is of general utility the trainee will attain the knowledge, skills and behaviour as defined in the following Plastic Surgery specific modules of the syllabus:

Module: Hand trauma

- Ability to assess, diagnose and formulate management plan for the majority of hand trauma cases.
- Demonstrate Level 2 competence in performing
 - flexor tendon repair
 - extensor tendon repair
 - K-wire fixation closed metacarpal and phalangeal fractures
 - digital nerve repair
 - Washout of hand infection
 - Revision amputation of digit

Module: Burns

- Demonstrate ability to assess and initiate the management of burns and scalds in children and adults.
- Demonstrate Level 2 competence in assessment of the airway and understanding of respiratory injury
- Demonstrate Level 2 competence in undertaking fluid resuscitation informed by standard protocols
- Demonstrate ability to undertake burns dressing change

Module: Wound management

- Demonstrate ability to assess and initiate treatment for the complex or contaminated wound
- Demonstrate familiarity with BAPRAS/BOA guidelines on management of lower limb trauma
- Ability to assess and advise on treatment of the open tibia with soft tissue loss, major nerve or vessel injury
- Demonstrate Level 3 competence in harvesting of split skin graft
- Demonstrate Level 3 competence in application of vacuum-assisted suction device

Module: Elective plastic surgery

- Have Level 2 competence in the use of general reconstructive techniques including skin grafting, z-plasty, flap elevation and related techniques.
- Demonstrate ability to diagnose and manage skin lesions, including skin malignancy (Level 2).
- Early competence in the use of the operating microscope.
- Demonstrate a broad appreciation of the range of conditions encountered in the elective practice of the specialty (Level1)

Those conditions that present on an urgent or emergency basis necessarily involve some out of hours working. It is expected that there will be appropriate allocation of duties such that the trainee has the opportunity to gain such experience. It is not regarded as sufficient that trainees be taught on day time trauma lists as this will mean loss of exposure to the more complex and challenging cases that are an important part of the trainee's experience.

Initial Stage Topics

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

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

	<ul style="list-style-type: none"> • Acute Breast pain 	
	<p>Peripheral vascular disease Presenting symptoms or syndrome</p> <ul style="list-style-type: none"> • Chronic and acute limb ischaemia • Aneurysmal disease • Transient ischaemic attacks • Varicose veins • Leg ulceration 	<p>To include the following conditions</p> <ul style="list-style-type: none"> • Atherosclerotic arterial disease • Embolic and thrombotic arterial disease • Venous insufficiency • Diabetic ulceration
	<p>Cardiovascular and pulmonary disease</p>	<p>To include the following conditions</p> <ul style="list-style-type: none"> • Coronary heart disease • Bronchial carcinoma • Obstructive airways disease • Space occupying lesions of the chest • Pulmonary embolus
	<p>Genitourinary disease Presenting symptoms or syndrome</p> <ul style="list-style-type: none"> • Loin pain • Haematuria • Lower urinary tract symptoms • Urinary retention • Renal failure • Scrotal swellings • Testicular pain 	<p>To include the following conditions</p> <ul style="list-style-type: none"> • Genitourinary malignancy • Urinary calculus disease • Urinary tract infection • Benign prostatic hyperplasia • Obstructive uropathy
	<p>Trauma and orthopaedics Presenting symptoms or syndrome</p> <ul style="list-style-type: none"> • Traumatic limb and joint pain and deformity • Chronic limb and joint pain and deformity • Back pain 	<p>To include the following conditions</p> <ul style="list-style-type: none"> • Simple fractures and joint dislocations • Fractures around the hip and ankle • Basic principles of Degenerative joint disease • Basic principles of inflammatory joint disease including bone and joint infection • Compartment syndrome • Spinal nerve root entrapment and spinal cord compression • Metastatic bone cancer • Common peripheral neuropathies and nerve injuries
	<p>Disease of the Skin, Head and Neck Presenting symptoms or syndrome</p> <ul style="list-style-type: none"> • Lumps in the neck • Epistaxis • Upper airway obstructions 	<p>To include the following conditions</p> <ul style="list-style-type: none"> • Benign and malignant skin lesions • Benign and malignant lesions of the mouth and tongue
	<p>Neurology and Neurosurgery Presenting symptoms or syndrome</p> <ul style="list-style-type: none"> • Headache • Facial pain • Coma 	<p>To include the following conditions</p> <ul style="list-style-type: none"> • Space occupying lesions from bleeding and tumour
	<p>Endocrine Presenting symptoms or syndrome</p> <ul style="list-style-type: none"> • Lumps in the neck • Acute endocrine crises 	<p>To include the following conditions</p> <ul style="list-style-type: none"> • Thyroid and parathyroid disease • Adrenal gland disease • Diabetes

Module 3	Basic surgical skills
Objective	<ul style="list-style-type: none"> • Preparation of the surgeon for surgery • Safe administration of appropriate local anaesthetic agents

	<ul style="list-style-type: none"> • 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 instruments. • Assist helpfully, even when the operation is not familiar. • Understand the principles of anastomosis • Understand the principles of endoscopy including laparoscopy
Knowledge	<p>Principles of safe surgery</p> <ul style="list-style-type: none"> • Preparation of the surgeon for surgery • Principles of hand washing, scrubbing and gowning • Immunisation protocols for surgeons and patients <p>Administration of local anaesthesia</p> <ul style="list-style-type: none"> • Choice of anaesthetic agent • Safe practise <p>Surgical wounds</p> <ul style="list-style-type: none"> • Classification of surgical wounds • Principles of wound management • Pathophysiology of wound healing • Scars and contractures • Incision of skin and subcutaneous tissue: <ul style="list-style-type: none"> ○ Langer's lines ○ Choice of instrument ○ Safe practice • Closure of skin and subcutaneous tissue: <ul style="list-style-type: none"> ○ Options for closure ○ Suture and needle choice • Safe practice • Knot tying <ul style="list-style-type: none"> ○ Range and choice of material for suture and ligation ○ Safe application of knots for surgical sutures and ligatures • Haemostasis: <ul style="list-style-type: none"> ○ Surgical techniques ○ Principles of diathermy • Tissue handling and retraction: <ul style="list-style-type: none"> ○ Choice of instruments • Biopsy techniques including fine needle aspiration cytology • Use of drains: <ul style="list-style-type: none"> ○ Indications ○ Types ○ Management/removal • Principles of anastomosis • Principles of surgical endoscopy including laparoscopy
Clinical Skills	<p>4 Preparation of the surgeon for surgery</p> <ul style="list-style-type: none"> • Effective and safe hand washing, gloving and gowning <p>4 Preparation of a patient for surgery</p> <ul style="list-style-type: none"> • Creation of a sterile field • Antisepsis • Draping

	<p>4 Administration of local anaesthesia</p> <ul style="list-style-type: none"> • Accurate and safe administration of local anaesthetic agent
Technical Skills and Procedures	<p>4 Preparation of the surgeon for surgery</p> <ul style="list-style-type: none"> • Effective and safe hand washing, gloving and gowning <p>4 Administration of local anaesthesia</p> <ul style="list-style-type: none"> • Accurate and safe administration of local anaesthetic agent <p>4 Incision of skin and subcutaneous tissue:</p> <ul style="list-style-type: none"> • Ability to use scalpel, diathermy and scissors <p>4 Closure of skin and subcutaneous tissue:</p> <ul style="list-style-type: none"> • Accurate and tension free apposition of wound edges <p>4 Knot tying:</p> <ul style="list-style-type: none"> • Single handed • Double handed • Instrument • Superficial • Deep <p>3 Haemostasis:</p> <ul style="list-style-type: none"> • Control of bleeding vessel (superficial) • Diathermy • Suture ligation • Tie ligation • Clip application • Transfixion suture <p>4 Tissue retraction:</p> <ul style="list-style-type: none"> • Tissue forceps • Placement of wound retractors <p>3 Use of drains:</p> <ul style="list-style-type: none"> • Insertion • Fixation • Removal <p>3 Tissue handling:</p> <ul style="list-style-type: none"> • Appropriate application of instruments and respect for tissues • Biopsy techniques <p>4 Skill as assistant:</p> <ul style="list-style-type: none"> • Anticipation of needs of surgeon when assisting

Module 4	The assessment and management of the surgical patient
Objective	To demonstrate the relevant knowledge, skills and attitudes in assessing the patient and manage the patient, and propose surgical or non-surgical management.
Knowledge	<p>The knowledge relevant to this section will be variable from patient to patient and is covered within the rest of the syllabus – see common surgical conditions in particular (Module 2).</p> <p>As a trainee develops an interest in a particular speciality then the principles of history taking and examination may be increasingly applied in that context.</p>
Clinical Skills	<p>4 Surgical history and examination (elective and emergency)</p> <p>3 Construct a differential diagnosis</p> <p>3 Plan investigations</p> <p>3 Clinical decision making</p> <p>3 Team working and planning</p>

	<p>3 Case work up and evaluation; risk management</p> <p>3 Active participation in clinical audit events</p> <p>3 Appropriate prescribing</p> <p>3 Taking consent for intermediate level intervention; emergency and elective</p> <p>3 Written clinical communication skills</p> <p>3 Interactive clinical communication skills: patients</p> <p>3 Interactive clinical communication skills: colleagues</p>
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Module 5	Peri-operative care
Objective	<p>To assess and manage preoperative risk</p> <p>To manage patient care in the peri-operative period</p> <p>To conduct safe surgery in the operating theatre environment</p> <p>To assess and manage bleeding including the use of blood products</p> <p>To care for the patient in the post-operative period including the assessment of common complications</p> <p>To assess, plan and manage post-operative fluid balance</p> <p>To assess and plan perioperative nutritional management</p>
Knowledge	<p>Pre-operative assessment and management:</p> <ul style="list-style-type: none"> • 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 and scoring systems • Pre-medication and other preoperative prescribing • Principles of day surgery <p>Intraoperative care:</p> <ul style="list-style-type: none"> • Safety in theatre including patient positioning and avoidance of nerve injuries • Sharps safety • Diathermy, laser use • Infection risks • Radiation use and risks • Tourniquet use including indications, effects and complications • Principles of local, regional and general anaesthesia • Principles of invasive and non-invasive monitoring • Prevention of venous thrombosis • Surgery in hepatitis and HIV carriers • Fluid balance and homeostasis <p>Post-operative care:</p> <ul style="list-style-type: none"> • Post-operative monitoring • Cardiorespiratory physiology • Fluid balance and homeostasis • Diabetes mellitus and other relevant endocrine disorders • Renal failure • Pathophysiology of blood loss • Pathophysiology of sepsis including SIRS and shock • Multi-organ dysfunction syndrome • Post-operative complications in general • Methods of postoperative analgesia <p>To assess and plan nutritional management</p> <ul style="list-style-type: none"> • Post-operative nutrition • Effects of malnutrition, both excess and depletion • Metabolic response to injury • Methods of screening and assessment of nutritional status • Methods of enteral and parenteral nutrition

	<p>Haemostasis and Blood Products:</p> <ul style="list-style-type: none"> • 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 to blood products <p>Coagulation, deep vein thrombosis and embolism:</p> <ul style="list-style-type: none"> • Clotting mechanism (Virchow Triad) • Effect of surgery and trauma on coagulation • Tests for thrombophilia and other disorders of coagulation • Methods of investigation for suspected thromboembolic disease • Principles of treatment of venous thrombosis and pulmonary embolism including anticoagulation • Role of V/Q scanning, CT pulmonary angiography, D-dimer and thrombolysis • Place of pulmonary embolectomy • Prophylaxis of thromboembolism: • Risk classification and management of DVT • Knowledge of methods of prevention of DVT, mechanical and pharmacological <p>Antibiotics:</p> <ul style="list-style-type: none"> • Common pathogens in surgical patients • Antibiotic sensitivities • Antibiotic side-effects • Principles of prophylaxis and treatment <p>Metabolic and endocrine disorders in relation to perioperative management</p> <ul style="list-style-type: none"> • Pathophysiology of thyroid hormone excess and deficiency and associated risks from surgery • Causes and effects of hypercalcaemia and hypocalcaemia • Complications of corticosteroid therapy • Causes and consequences of Steroid insufficiency • Complications of diabetes mellitus • Causes and effects of hyponatraemia • Causes and effects of hyperkalaemia and hypokalaemia
Clinical Skills	<p>3 Pre-operative assessment and management:</p> <ul style="list-style-type: none"> • History and examination of a patient from a medical and surgical standpoint • Interpretation of pre-operative investigations • Management of co morbidity • Resuscitation • Appropriate preoperative prescribing including premedication <p>3 Intra-operative care:</p> <ul style="list-style-type: none"> • Safe conduct of intraoperative care • Correct patient positioning • Avoidance of nerve injuries • Management of sharps injuries • Prevention of diathermy injury • Prevention of venous thrombosis <p>3 Post-operative care:</p> <ul style="list-style-type: none"> • Writing of operation records • Assessment and monitoring of patient's condition • Post-operative analgesia • Fluid and electrolyte management • Detection of impending organ failure • Initial management of organ failure • Principles and indications for Dialysis

	<ul style="list-style-type: none"> Recognition, prevention and treatment of post-operative complications <p>3 Haemostasis and Blood Products:</p> <ul style="list-style-type: none"> Recognition of conditions likely to lead to the diathesis Recognition of abnormal bleeding during surgery Appropriate use of blood products Management of the complications of blood product transfusion <p>3 Coagulation, deep vein thrombosis and embolism</p> <ul style="list-style-type: none"> Recognition of patients at risk Awareness and diagnosis of pulmonary embolism and DVT Role of duplex scanning, venography and d-dimer measurement Initiate and monitor treatment of venous thrombosis and pulmonary embolism Initiation of prophylaxis <p>3 Antibiotics:</p> <ul style="list-style-type: none"> Appropriate prescription of antibiotics <p>3 Assess and plan preoperative nutritional management</p> <ul style="list-style-type: none"> Arrange access to suitable artificial nutritional support, preferably via a nutrition team including Dietary supplements, Enteral nutrition and Parenteral nutrition <p>3 Metabolic and endocrine disorders</p> <ul style="list-style-type: none"> History and examination in patients with endocrine and electrolyte disorders Investigation and management of thyrotoxicosis and hypothyroidism Investigation and management of hypercalcaemia and hypocalcaemia Peri-operative management of patients on steroid therapy Peri-operative management of diabetic patients Investigation and management of hyponatraemia Investigation and management of hyperkalaemia and hypokalaemia
Technical Skills and Procedures	<p>2 Central venous line insertion</p> <p>4 Urethral catheterisation</p>

Module 6	Assessment and management of patients with trauma (including the multiply injured patient)
Objective	<p>Assess and initiate management of patients</p> <ul style="list-style-type: none"> Who have sustained chest trauma who have sustained a head injury who have sustained a spinal cord injury who have sustained abdominal and urogenital trauma who have sustained vascular trauma who have sustained a single or multiple fractures or dislocations who have sustained traumatic skin and soft tissue injury who have sustained burns Safely assess the multiply injured patient. Contextualise any combination of the above Be able to prioritise management in such situation as defined by ATLS, APLS etc
Knowledge	<p>General</p> <ul style="list-style-type: none"> Scoring systems for assessment of the injured patient Major incident triage Differences In children <p>Shock</p> <ul style="list-style-type: none"> Pathogenesis of shock Shock and cardiovascular physiology Metabolic response to injury Adult respiratory distress syndrome

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

Module 7	Surgical care of the Paediatric patient
Objective	<p>To assess and manage children with surgical problems, understanding the similarities and differences from adult surgical patients</p> <p>To understand the issues of child protection and to take action as appropriate</p>
Knowledge	<ul style="list-style-type: none"> • Physiological and metabolic response to injury and surgery

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

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

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

In addition, in the early years of training, trainees must address early years competencies of the Professional Behaviour and Leadership Syllabus on pages 91-113.

Requirement to meet the ST3 in Plastic Surgery

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

Therefore in early years training, IN ADDITION to the generic competencies for all surgeons, it is necessary to address the specifics of a developing interest in Plastic Surgery during these years. This means spending 6-12 months in Plastic Surgery in a service which gives trainees access to the appropriate learning opportunities. Also by the time a trainee enters ST3 they need to be familiar with the operating room environment both with respect to elective and emergency cases.

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

The range of conditions a trainee needs to manage are laid out below and in the depth demonstrated in a text book such as Plastic Surgery by Grabb and Smith (6th Edition) or Fundamentals of Plastic Surgery by McGregor (10th Edition)

1. Assessment and diagnosis of hand trauma cases and including operative management in some cases with appropriate supervision as appropriate
2. Assessment and initial management of burns and scalds in children and adults.
3. Wound management including complex and contaminated wounds and involving both conservative and operative management.
4. Assessment and initial management of cases of lower limb trauma involving compound fractures with soft tissue damage, skin loss, major nerve and/or vessel injury.
5. Diagnosis and management of skin lesions, including skin malignancy.
6. Competence in the use of general plastic surgery techniques in reconstruction including skin grafting, z-plasty, flap elevation and related techniques. Early competence in the use of the operating microscope.
7. Management of common elective plastic surgical procedures.

Early Years training in Plastic Surgery	
Objective	To gain experience in early care of patients with the following: <ul style="list-style-type: none"> • Thermal injury, soft tissue trauma, including hand, limb and facial injuries. • Skin and soft tissue tumours including malignancy • Common elective procedures as laid out in the curriculum
Knowledge	Basic science relevant to management of common emergency and elective plastic surgery conditions including anatomy, physiology, pathology and pharmacology. Knowledge of the principles of allotransplantation Knowledge of relevant imaging techniques. Principles of patient management relevant to common emergency and elective plastic surgical conditions.
Clinical Skills	Ability to systematically undertake examination of the hand and upper limb. Ability to carry out initial assessment and management of burns cases requiring resuscitation. Ability to diagnose common skin tumours including malignancy.
Technical Skills	Exploration of traumatic wounds including hand trauma cases. Repair of divided hand extensor tendon. Repair of divided digital nerve. Repair of divided flexor tendons Split and full thickness skin grafting. Excision of skin and soft tissue lesions. Some ability to use operating microscope.

Assessment

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

Specific evidence includes

Assessment type	Subject
DOPS a selection of types and numbers of each type according to learning agreements	Assessment of burn surface area. Exploration, debridement and closure of wound Harvesting split skin graft Harvesting of full thickness skin graft Repair of divided extensor tendon Repair divided digital nerve Excision and closure of simple skin lesions
Case Based Discussion	At least 1 per attachment
mini CEX	Clinical assessment of injured hand Clinical assessment of burns patient
PBAs	Some common plastic surgical procedures
Training Supervisors report	Evidenced by above WPBAs
ARCP for each specified training interval	As per local Deanery specifications
MRCS	Generic syllabus

Intermediate Stage Overview

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

Intermediate Stage Topics

Topic	Use of plastic surgery techniques including design and use of z-plasty, pedicled and myocutaneous flaps, free flaps
Category	Generic Plastic Surgery
Sub-category:	None
Objective	<i>Competence in the management of the surgical patient and application of the specified plastic surgery techniques.</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant anatomy and physiology. 4 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations and patient assessment. 3 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 3 Recent advances. 3 Relevant anatomy, physiology, pharmacology, pathology relating to skin and flap blood supply 3 Random, axial pattern flaps. 3 Concept of vessel territories.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative management of the acute and elective surgical patient. 4 History taking. 4 Examination. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Z-plasty 3 V-Y advancement 4 Excision of lesion 4 Wide excision of lesion 4 SSG 4 FTSG 4 Excision & local flap 3 Random and axial pattern flaps 3 Rotation, transposition flaps 3 Pedicled cutaneous, fasciocutaneous, myocutaneous and osteocutaneous flaps 3 Free flaps

Topic	Assessment, resuscitation and initial management of burns
Category	Burns
Sub-category:	None
Objective	<i>Competence in the early phase of burns management</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant anatomy, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 3 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations and patient assessment. 3 Range, indications and principles of relevant operations. 3 Post-operative complications and their management.

	<ul style="list-style-type: none"> 3 Recent advances. 3 Relevant ancillary investigations, interventions e.g. psychological support, physiotherapy. 3 Mechanisms of burn injury. 3 Causes of burn injury. 4 IV resuscitation regimens. 4 Use of blood products, plasme volume expanders. 3 Non-accidental injuries.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the acute burns patient 4 History taking. 4 Examination including assessment of burn surface area and depth. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Management of fluid & electrolyte balance 4 Assessment & resuscitation 4 Open venotomy 4 Escharotomy 2 Bronchoscopy 3 Endotracheal intubation 3 Tracheostomy 3 Burn wound management with dressings

Topic	Surgical management of burns
Category	Burns
Sub-category:	None
Objective	<i>Competence in the surgical aspects of burns management</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 3 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant operations. 3 Post-operative complications and their management. 3 Recent advances. 3 Relevant ancillary investigations, interventions e.g. psychological support, physiotherapy, occupational therapy. 3 Knowledge of wound healing and tissue transplantation
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative management of the burns patient. 4 History taking. 4 Examination. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
Technical Skills and Procedures	<ul style="list-style-type: none"> 3 Early tangential excision and split skin grafting 3 Late grafting 2 Use of allograft skin 2 Use of skin substitutes

Topic	Diagnosis and management of complications of burns including inhalational injury and septic shock
Category	Burns
Sub-category:	None
Objective	<i>Competence in management of complications arising during treatment of burn injury</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant anatomy, physiology, bacteriology, biochemistry, and pathology 3 Pathophysiology of smoke inhalation and effect on respiration 3 Pathophysiology of renal failure as relating to burn injury 3 Dietetics as relating to burn injury metabolism 3 Shock complicating resuscitation 3 Septic shock 3 Intensive care monitoring and treatment

Clinical Skills	3 Assessment of the burn patient. 4 History. 4 Examination. 4 IV resuscitation. 4 Provision of oxygen therapy via face mask. 2 Endotracheal intubation. 3 Skills of analysis and diagnostic synthesis, judgement.
Technical Skills and Procedures	N/A

Topic	Late management and rehabilitation
Category	Burns
Sub-category:	None
Objective	<i>Competence in burns management</i> <i>Competence in late management, with understanding of the needs for patient rehabilitation</i>
Knowledge	3 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 3 Relevant associated disease and conditions. 3 Range, indications and principles of relevant operations. 3 Post-operative complications and their management. 3 Recent advances. 3 Relevant ancillary investigations, interventions e.g., psychological support, physiotherapy, occupational therapy. 3 Relevant teamworking with other professionals 2 Prosthetics.
Clinical Skills	4 Assessment and non-operative management of the burns patient 4 History taking. 4 Examination. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning 3 Scar management including use of pressure garments
Technical Skills and Procedures	Contracture release:3 Grafts Contracture release:3 Flaps

Topic	Management of all aspects of hand trauma
Category	Hand and Upper Limb
Sub-category:	Trauma
Objective	<i>Competence in the diagnosis and management of hand trauma</i>
Knowledge	3 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 3 Relevant associated disease and conditions. 3 Appropriate pre-operative investigations and patient assessment. 3 Range, indications and principles of relevant operations. 3 Post-operative complications and their management. 3 Recent advances. 3 Relevant ancillary investigations, interventions e.g. physiotherapy, occupational therapy. 3 Crush injuries. 2 Injection injuries.
Clinical Skills	4 Assessment and non-operative of the management of the acute surgical patient 4 History taking. 4 Examination including hand examination. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	4 Wound exploration and debridement. 3 Primary microsurgical repair of peripheral nerve 3 Primary graft to peripheral nerve

	<ul style="list-style-type: none"> 3 Random pattern flap reconstruction of fingertip (cross-finger, Kutler, Kleinert) 2 Neurovascular island flap reconstruction (homodigital island, Littler) 4 Primary repair of extensor of hand 3 Primary repair of flexor of hand 3 Primary open reduction of small bone and fixation 4 Manipulation of fracture of bone 2 Replantation of digit, hand 4 Amputation of phalanx of finger 3 Provision of skin cover using grafts, flaps
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Topic	Surgical management of brachial plexus injuries
Category	Hand and Upper Limb
Sub-category:	Trauma
Objective	<i>An understanding of the principles of diagnosis, investigation and management of patients, children and adults, with closed brachial plexus injuries</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant anatomy, physiology and pathology. 3 Relevant associated conditions including other trauma. 3 Appropriate pre-operative investigations and assessment including neurological assessment, nerve conduction studies. electromyography. 3 Range, indications and principles of relevant operations. 3 Post-operative complications and their management. 3 Relevant ancillary interventions including physiotherapy, occupational therapy. 3 Mechanisms of nerve injury and regeneration.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative management of these patients. 4 History 4 Examination including neurological examination. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
Technical Skills and Procedures	<ul style="list-style-type: none"> 2 Surgical exposure of brachial plexus 2 Exploration of brachial plexus. 2 Intraoperative nerve testing. 2 Neurolysis 2 Nerve grafting. 3 Nerve repair. 2 Nerve transfer 2 Tendon transfer.

Topic	Diagnosis and management of congenital hand conditions
Category	Hand and Upper Limb
Sub-category:	Elective
Objective	<i>Competence in the management of congenital hand conditions.</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 3 Relevant associated disease and conditions. 3 Appropriate pre-operative investigations and patient assessment. 3 Range, indications and principles of relevant operations. 3 Post-operative complications and their management. 3 Recent advances. 3 Relevant ancillary interventions e.g. physiotherapy, occupational therapy. 3 Classification of congenital hand and forearm anomalies.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the elective surgical patient. 4 History taking. 4 Examination. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
Technical Skills and Procedures	<ul style="list-style-type: none"> 3 Correction of polydactyly (ulnar) 3 Correction of syndactyly. 2 Correction of duplicate thumb.

	<ul style="list-style-type: none"> 3 Correction of triggering of digit. 2 Release of constriction band. 1 Pollicisation 1 Toe to thumb transfer Pollicisation Toe to thumb transfer
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Topic	Management of acquired conditions of the hand
Category	Hand and Upper Limb
Sub-category:	Elective
Objective	<i>Competence in the management of elective, acquired hand and forearm conditions.</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant embryology, anatomy, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 3 Relevant associated disease and conditions. 3 Appropriate pre-operative investigations and patient assessment. 3 Range, indications and principles of relevant operations. 3 Post-operative complications and their management. 3 Recent advances. 3 Relevant ancillary investigations, interventions e.g. appropriate drug therapy, physiotherapy, occupational therapy. 2 Nerve compressions. 2 Vasospastic disorders. 2 Rheumatoid disease. 3 Dupuytren's contracture. 3 Ganglion. 2 Loss of motor function affecting the hand, principles of tendon transfer
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the acute and elective surgical patient 4 History taking. 4 Examination. 4 Digital nerve block 2 Regional nerve block 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 3 Carpal tunnel release 2 Cubital tunnel release 3 Insertion of steroid (trigger finger, de Quervain's, carpal tunnel) 3 Palmar fasciectomy 3 Dermofasciectomy 4 Excision of ganglion 2 Tenosynovectomy (rheumatoid) 2 Multiple transfer of tendon to tendon 2 Secondary repair of tendon using temporary prosthesis 3 Tenolysis of flexor 3 Release of constriction of sheath of tendon (trigger finger, de Quervain's) 2 Microvascular transfer of toe to thumb 2 Pollicisation of finger 2 Swanson MCPJ or PIPJ arthroplasty 3 Trapezectomy 2 Darrach procedure 3 Bone-graft harvest 2 Fusion of wrist 3 Primary arthrodesis of joint 3 Repair of capsule of joint for stabilisation of joint (eg Thumb UCL repair) 2 Release of contracture of joint (Check rein ligament release) 2 Wrist arthroscopy

Topic	Management of children and adults with cleft lip and palate
Category	Cleft Lip and Palate/Cranio Facial Anomalies
Sub-category:	None
Objective	<i>Competence in the management of patients with cleft lip and/or cleft palate</i>
Knowledge	<ul style="list-style-type: none"> 2 Relevant embryology, anatomy, physiology. 2 Incidence of clefting. 2 Related conditions and syndromes. 2 Pre-operative assessment and investigation. 2 Range, indications and principles of operations. 2 Post-operative complications. 2 Speech therapy. 2 Hearing tests. 2 Orthodontics, paediatric and restorative dentistry. 2 Genetics relating to clefting. 3 Structure and function of MDTs.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative management. 4 History taking. 4 Examination. 3 Skills of analysis and diagnostic synthesis, judgement and surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 1 Presurgical orthodontics 2 Cleft lip repair and revision 2 Cleft palate repair and re-repair 2 Pharyngoplasty of varying types 2 Alveolar bone grafting 1 Maxillary and mandibular osteotomy 2 Speech assessment 2 Palatal videofluoroscopy 2 Nasendoscopy

Topic	Investigation and management of velopharyngeal incompetence
Category	Cleft Lip and Palate/Cranio Facial Anomalies
Sub-category:	None
Objective	<i>Competence in the management of velopharyngeal incompetence and related speech problems with or without cleft palate</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant anatomy, embryology and physiology. 3 Related syndromes and conditions. 3 Pre-operative assessment and investigation including speech assessment, nasometry, palatal videofluoroscopy, and nasendoscopy. 2 Range, indication and principles of relevant operations. 3 Post-operative complications and their management. 3 Speech therapy. 2 Hearing tests. 3 Structure and function of MDTs.
Clinical Skills	<ul style="list-style-type: none"> 2 Assessment and non-operative management. 4 History taking. 4 Examination. 2 Skills of analysis, diagnostic synthesis, judgement and surgical planning.
Technical Skills and Procedures	<ul style="list-style-type: none"> 2 Palatal re-repair 2 Palatal exploration with intravelar veloplasty 2 Furlow's repair 2 Pharyngoplasty of varying types.

Topic	Craniofacial deformities
Category	Cleft Lip and Palate/Cranio Facial Anomalies
Sub-category:	None
Objective	<i>To gain knowledge of the commoner craniofacial deformities</i>

Knowledge	2 Relevant embryology, anatomy, physiology and pathology. 2 Relevant associated disease and syndromes. 2 Relevant investigations including imaging; paediatric, neurological and ophthalmic assessment. 2 Range, indications and principles of relevant operations. 3 Post-operative complications and their management.
Clinical Skills	3 Assessment and pre-operative management of the elective surgical patient. 4 History taking. 4 Examination.
Technical Skills and Procedures	2 Common craniofacial procedures.

Topic	Principles of diagnosis and management of maxillofacial trauma
Category	Head and Neck
Sub-category:	None
Objective	<i>Competence in the diagnosis and principles of treatment of maxillofacial trauma</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant anatomy, physiology and pathology. 3 Relevant associated disease and conditions. 3 Appropriate pre-operative investigations including imaging, and patient assessment. 2 Range, indications and principles of relevant operations. 3 Post-operative complications and their management. 2 Methods of internal, external fracture fixation. 3 Fracture healing. 3 Associated head and neck injuries. 4 Glasgow coma scale.
Clinical Skills	<ul style="list-style-type: none"> 3 Assessment and pre-operative management of the acute surgical patient. 4 History taking. 4 Examination. 3 Skills analysis, diagnostic synthesis, judgement, surgical planning.
Technical Skills and Procedures	<ul style="list-style-type: none"> 2 Manipulation of nasal bone fractures. 2 Exploration of orbital fractures. 2 Elevation of malar complex fractures. 2 Reduction and fixation of mandibular fractures.

Topic	Excisional surgery for benign and malignant disease
Category	Head and Neck
Sub-category:	None
Objective	<i>Competence in management of patients with benign or malignant tumours of the head and neck.</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant embryology, anatomy, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 3 Relevant associated disease and conditions. 3 Appropriate pre-operative investigations including imaging, and patient assessment. 3 Tumour staging. 3 Range, indications and principles of relevant operations. 3 Post-operative complications and their management. 2 Recent advances. 3 Relevant ancillary investigations, interventions e.g. radiotherapy, chemotherapy, psychological support, physiotherapy, occupational, speech therapy, dietetics. 3 Effects of sun exposure and other aetiological factors. 3 Premalignant cutaneous and intraoral conditions. 3 Structure and function of MDTs.
Clinical Skills	<ul style="list-style-type: none"> 3 Assessment and non-operative of the management of the acute surgical patient 4 History taking. 4 Examination. 3 Fine needle aspiration cytology. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> Excisional surgery:3 Lip Excisional Surgery: 2 Oral cavity, including tongue, floor of mouth, buccal mucosa, retromolar trigone, alveolus and mandible, palate Excisional Surgery: 2 Maxilla Excisional Surgery: 3 Eyelid Excisional Surgery: 3 Nose Excisional Surgery: 3 Ear Excisional Surgery: 3 Scalp Excisional Surgery: 3 Scalp & Bone 2 Parotidectomy-superficial, radical 2 Submandibular gland excision

Topic	Approaches to reconstruction of the head and neck including defects of the ear, eyelid, nose and lip and oral cavity
Category	Head and Neck
Sub-category:	None
Objective	<i>Competence in reconstruction of traumatic or excisional defects of the head and neck region.</i>
Knowledge	<p>3 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.</p> <p>3 Relevant associated disease and conditions.</p> <p>3 Soft tissue facial injuries.</p> <p>3 Appropriate pre-operative investigations including imaging, and patient assessment.</p> <p>3 Range, indications and principles of relevant operations.</p> <p>3 Post-operative complications and their management.</p> <p>2 Prosthetics.</p> <p>2 Recent advances.</p> <p>2 Relevant ancillary investigations, interventions e.g. radiotherapy, psychological support, physiotherapy, occupational therapy, speech therapy etc.</p>
Clinical Skills	<p>3 Assessment and non-operative of the management of the elective surgical patient.</p> <p>4 History taking.</p> <p>4 Examination.</p> <p>3 Skills of analysis and diagnostic synthesis, judgement, surgical planning.</p>
Technical Skills and Procedures	<p>Reconstructive Surgery Lip:</p> <p>3 Lip shave</p> <p>Reconstructive Surgery lip: 3 Wedge excision</p> <p>Reconstructive Surgery Lip: 2 Local flaps</p> <p>Oral cavity: 3 Skin grafts</p> <p>Oral cavity: 2 Local Flaps</p> <p>Oral cavity: 2 Regional Flaps</p> <p>Oral cavity: 2 Free flaps including cutaneous, myocutaneous, osteocutaneous</p> <p>Oral cavity: 2 Autologous mandibular reconstruction</p> <p>Eyelid reconstruction:</p> <p>3 Skin grafts</p> <p>2 V-excision +/- lateral canthotomy</p> <p>2 Cheek advancement</p> <p>2 Chondromucosal grafts</p> <p>2 Lid switch</p> <p>2 Ptosis correction</p> <p>2 Repair of lacrimal apparatus</p> <p>Nose:</p> <p>3 Skin grafts</p> <p>2 Local flaps</p> <p>2 Regional flaps</p> <p>2 Cartilage/bone grafts</p> <p>2 Branemark reconstruction</p> <p>Ear:</p> <p>2 Skin grafts</p> <p>2 Local flaps</p> <p>2 Autologous reconstruction using cartilage framework</p> <p>2 Branemark reconstruction</p> <p>Scalp:</p> <p>2 Local Flaps</p> <p>2 Regional Flaps</p> <p>2 Free Flaps</p> <p>2 Bone Grafts</p> <p>2 Alloplastic materials</p> <p>2 Tissue expansion</p>

Topic	Management of patients requiring radical or selective neck dissection for malignant disease
Category	Head and Neck
Sub-category:	None
Objective	<i>Competence in the management of patients requiring neck dissection for malignant disease</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant embryology, anatomy, physiology, pathology, microbiology. 3 Relevant associated diseases and conditions. 3 Appropriate pre-operative investigations (including imaging techniques) and patient management. 3 Range, indications and principles of relevant operations including the different types of neck dissection performed. 3 Post-operative complications and their management. 3 Classification of cervical lymph node groups. 3 FNA techniques. 2 Indications for sentinel node biopsy. 3 Structure and function of MDTs. 3 Relevant ancillary investigations and interventions, including radiotherapy, chemotherapy, physiotherapy, occupational therapy, and dietetics.
Clinical Skills	<ul style="list-style-type: none"> 3 Assessment and non-operative management of the elective surgical patient. 4 History taking 4 Examination
Technical Skills and Procedures	<ul style="list-style-type: none"> 3 Cervical lymph node biopsy 3 Radical neck dissection 3 Selective neck dissections of various types

Topic	Approaches to management of facial palsy
Category	Head and Neck
Sub-category:	Congenital and acquired deformities
Objective	<i>Competence in management of patients' children and adults, who have congenital or acquired facial palsy.</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant embryology, anatomy, physiology, pathology. 3 Relevant associated disease and conditions. 3 Appropriate pre-operative investigations and patient assessment. 3 Range, indications and principles of relevant operations. 3 Post-operative complications and their management. 3 Recent advances. 3 Relevant ancillary interventions.
Clinical Skills	<ul style="list-style-type: none"> 3 Assessment and non-operative of the management of the elective surgical patient. 4 History taking. 4 Examination. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 2 Static procedures including fascial slings. 2 Eyelid procedures including gold weight insertion. 2 Facial nerve grafting. 2 Microvascular free muscle transfer.

Topic	Investigation and management of vascular and related abnormalities
Category	Head and Neck
Sub-category:	None
Objective	<i>Competence in the diagnosis and management of patients, children and adult, with congenital abnormalities of the head and neck</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant anatomy, physiology, haematology and pathology. 3 Relevant associated diseases and conditions. 3 Classification of vascular and lymphatic malformations 3 Branchiogenic anomalies

	2 Laser therapy 3 Steroid therapy 2 Interventional radiology 3 Post-operative complications 3 Relevant ancillary investigations and interventions, including ophthalmic assessment
Clinical Skills	3 Assessment and non-operative management 4 History taking 4 Examination
Technical Skills and Procedures	2 Sclerotherapy. 3 Debulking of haemangioma, lymphangioma. 3 Excision and reconstruction of facial structures including eyelids and lips. 3 Excision branchial sinus, fistula and cyst. 2 Excision of thyroglossal cyst.

Topic	Breast augmentation
Category	Management of patients requiring breast reconstruction, reduction and augmentation
Sub-category:	None
Objective	<i>Competence in the management of patients requesting breast augmentation for breast aplasia, hypoplasia and asymmetry.</i>
Knowledge	3 Relevant embryology, anatomy, physiology, and pathology of the breast. 3 Relevant associated disease and conditions including benign breast disease. 3 Safety of breast implants including issues relating to the effects of silicone on the body, and regulation of implants. 3 Appropriate pre-operative investigations and patient assessment including psychological assessment. 3 Post-operative complications and their management. 3 Recent advances and developments relating to implant manufacture.
Clinical Skills	4 Assessment of the elective surgical patient. 4 History taking. 4 Examination. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	3 Breast augmentation (submammary and subpectoral implant placement)

Topic	Breast reduction
Category	Management of patients requiring breast reconstruction, reduction and augmentation
Sub-category:	None
Objective	<i>Competence in management of patients requesting breast reduction.</i>
Knowledge	3 Relevant embryology, anatomy and physiology of the breast. 3 Relevant associated disease and conditions including benign breast disease and causes of mammary hypertrophy. 3 Appropriate pre-operative investigations and patient assessment including psychological assessment. 3 Range, indications and principles of relevant operations for breast reduction and breast mastopexy. 3 Post-operative complications and their management. 3 Recent advances in techniques for breast reduction. 3 Blood supply and innervation of the breast, breast skin and nipple/areolar complex.
Clinical Skills	4 Assessment of the elective surgical patient. 4 History taking. 4 Examination. 3 Skills of analysis, judgement, surgical planning.
Technical Skills and Procedures	3 Various operations for breast reduction. 3 Various operations for breast mastopexy. 2 Correction of the tuberous breast

Topic	Breast reconstruction
Category	Management of patients requiring breast reconstruction, reduction and augmentation
Sub-category:	None
Objective	<i>Competence in the management of patients requiring breast reconstruction. An understanding of the principles involved in multidisciplinary assessment of these patients.</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant embryology, anatomy, physiology, and pathology of the breast. 3 Relevant associated disease and conditions including carcinoma of the breast and its treatment. 3 Appropriate pre-operative investigations and patient assessment. 3 Range, indications and principles of relevant operations. 3 Post-operative complications and their management. 3 Recent advances in flap design. 3 Breast implants and issues surrounding safety of silicone. 3 Relevant ancillary investigations, interventions including radiotherapy, chemotherapy, hormone therapy, psychological support.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment of the elective surgical patient. 4 History taking. 4 Examination. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 3 Axillary nodal dissection 3 FNA/Core Biopsy Breast Reconstruction: 3 Implant only Breast Reconstruction: 3 Tissue expansion Pedicled Flaps: 3 Latissimus dorsi Pedicled flaps: 3 TRAM Free flaps: Latissimus dorsi Free flaps: 2 TRAM Free flaps: 2 DIEP Free flaps: 1 SGAP Free flaps: 1 IGAP <ul style="list-style-type: none"> 3 Nipple/areolar reconstruction

Topic	Perineal reconstruction
Category	Trunk and GU
Sub-category:	None
Objective	<i>To be able to undertake perineal reconstruction in cases of trauma and following excisional procedures for malignant and premalignant conditions affecting the vulva and perineum. Knowledge of techniques available for penile reconstruction. Knowledge of techniques available for vaginal reconstruction.</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant embryology, anatomy, physiology, pathology including microbiology, and histopathology. 3 Relevant associated disease and conditions. 2 Issues relating to patients requesting gender reassignment. 4 Appropriate pre-operative investigations and patient assessment. 3 Range, indications and principles of relevant operations. 3 Post-operative complications and their management. 3 Recent advances.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative management of the acute and elective surgical patient 4 History taking. 4 Examination. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 3 Skin grafts 2 Bowel grafts 3 Random flaps

	3 Myocutaneous flaps 2 Free flaps
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Topic	The principles of surgical management of hypospadias.
Category	Trunk and GU
Sub-category:	None
Objective	<i>To obtain competencies in the management of cases of hypospadias. To understand the principles of management in cases of epispadias and exstrophy.</i>
Knowledge	3 Relevant embryology, anatomy, physiology. pathology. 3 Relevant associated syndromes and conditions. 4 Appropriate pre-operative investigations and patient assessment. 3 Range, indications and principles of relevant operations. 3 Post-operative complications and their management. 3 Recent advances.
Clinical Skills	4 Assessment and non-operative of the management of the elective surgical patient. 4 History taking. 4 Examination. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	3 Operative procedures in common use for hypospadias and related conditions including 1 stage, 2 stage techniques.

Topic	Surgical management of congenital and acquired defects of the chest wall, abdominal wall and trunk
Category	Trunk and GU
Sub-category:	None
Objective	<i>Competence in the assessment and management of defects involving the trunk, including traumatic defects</i>
Knowledge	3 Relevant embryology, anatomy, physiology, and pathology 3 Appropriate pre-operative investigations and patient assessment. 3 Range, indication and principles of relevant operations. 3 Tissue expansion techniques
Clinical Skills	4 Assessment of the acute and elective surgical patient -adult and child 4 History taking 4 Examination 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	3 Operations for Poland's syndrome involving chest deformity 2 Operations to cover spinal defects in children with spina bifida 3 Operations to provide skin cover in traumatic injuries involving skin, soft tissue loss 3 Operations to provide skin cover following surgical resection of tumours including abdominal wall defects, chest wall defects. 2 Provision of skin cover in sternotomy wounds

Topic	Trauma
Category	Lower Limb
Sub-category:	None
Objective	<i>Competence in the management of lower limb trauma.</i>
Knowledge	3 Relevant anatomy, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 4 Appropriate pre-operative investigations and patient assessment. 3 Degloving injuries and their mechanism. 3 Compartment syndrome. 3 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Relevant ancillary investigations and interventions, e.g. imaging techniques,

	physiotherapy, occupational therapy.
Clinical Skills	4 Assessment and non-operative of the management of the acute surgical patient 4 History taking. 4 Examination including assessment of limb viability, compartment syndrome. 4 Use of Doppler. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	4 Superficial wounds 3 Debridement/SSG 3 Fasciotomy 3 Amputations above knee/below knee 3 Harvest iliac crest bone graft Vessel repair Nerve repair 3 Local Flaps: Fasciocutaneous 3 Local flaps: Perforator 3 Local flaps: Muscle 3 Local flaps: Myocutaneous 2 Free Flaps: Radial Free flaps: other

Topic	The multidisciplinary assessment and management of tibial fractures involving skin loss
Category	Lower Limb
Sub-category:	None
Objective	<i>Competence in the combined management of patients with compound tibial fractures involving skin loss</i>
Knowledge	3 Relevant anatomy, physiology, pathology. 3 Fracture healing. 3 Skin blood supply. 2 External fixators. 4 Appropriate pre-operative investigations and patient assessment. 3 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Relevant ancillary investigations and interventions including imaging techniques, physiotherapy, occupational therapy.
Clinical Skills	4 Assessment and non-operative management of the acute surgical patient. 4 History taking 4 Examination including combined assessment of limb viability and function.
Technical Skills and Procedures	Nerve repair Vessel repair 3 Local flaps: Fasciocutaneous 3 Local flaps: Perforator 3 Local flaps: Muscle 3 Local flaps: Myocutaneous 2 Free flaps: Skin 2 Free flaps: Muscle 2 Free flaps: Myocutaneous 2 Free flaps: Osteocutaneous

Topic	The management of lymphoedema
Category	Lower Limb
Sub-category:	None
Objective	<i>Competence in the diagnosis and management of lymphoedema</i>
Knowledge	3 Relevant anatomy, embryology, physiology and pathology of the lymphatic system 3 Classification of lymphoedema 3 Non-operative management

	3 Surgical management
Clinical Skills	4 Assessment of the elective surgical patient 4 History taking 4 Examination
Technical Skills and Procedures	3 Various operations including Charles's procedure

Topic	All aspects of diagnosis and management of benign and malignant skin tumours including surgical reconstruction and regional node dissection
Category	Skin and Soft Tissue Tumours
Sub-category:	None
Objective	<i>Competence in diagnosis and management of skin lesions including benign skin and subcutaneous lesions, skin malignancy</i>
Knowledge	3 Relevant anatomy, embryology, physiology, and pathology including histopathology 3 Relevant associated disease 4 Appropriate pre-operative investigations and patient assessment 4 Benign skin lesions and subcutaneous lesions 4 Malignant melanoma and non-melanoma skin cancer 4 Incisional and excisional biopsy 4 Excision margins 3 Adjuvant therapy including radiotherapy, chemotherapy 3 Tumour staging 3 Minimum data sets 2 Moh's technique 2 Sentinel node biopsy 3 Recent advances 3 Palliative care
Clinical Skills	4 Assessment of the elective surgical patient 4 History taking 4 Examination
Technical Skills and Procedures	4 Excision of sebaceous cyst 4 Excision and direct closure of simple skin lesions 4 Excision and direct closure basal cell carcinoma 4 Excision and graft malignant skin lesions 4 Excision malignant melanoma 3 Excision and flap repair Regional lymph dissection axilla Regional lymph dissection groin Regional lymph dissection neck

Topic	Soft tissue sarcomas
Category	Skin and Soft Tissue Tumours
Sub-category:	None
Objective	<i>To achieve knowledge and understanding of the multidisciplinary management of soft tissue sarcomas</i>
Knowledge	3 Relevant embryology, anatomy, physiology and pathology. 4 Appropriate pre-operative investigations, including imaging, and patient assessment. 3 Range indications and principles of relevant operations. 4 Post-operative complications and their management. 3 Relevant ancillary investigations and interventions, including radiotherapy, chemotherapy. 3 Recent advances. 3 Biopsy techniques
Clinical Skills	4 Assessment and non-operative management of the elective surgical patient. 4 History taking. 4 Examination.

	<ul style="list-style-type: none"> 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning. 3 FNA cytology. 3 Core biopsy.
Technical Skills and Procedures	<ul style="list-style-type: none"> 3 Incisional biopsy at various sites and of varying tissues including fat, connective tissue, muscle, nerve. 3 En-bloc excisional techniques at various sites 3 Flap reconstruction as required 3 Nerve repair 3 Vessel repair

Topic	The assessment and management of patients requiring aesthetic alterations of body parts including face, eyelids, nose and ears.
Category	Aesthetic
Sub-category:	None
Objective	<i>Competence in the practice of aesthetic plastic surgery.</i>
Knowledge	<ul style="list-style-type: none"> 3 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 3 Relevant associated disease. 3 Appropriate pre-operative investigations and patient assessment including psychological assessment. 3 Range, indications and principles of relevant operations in the different areas 3 Post-operative complications and their management. 3 Recent advances including development of new surgical techniques.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the elective surgical patient. 4 History taking. 4 Examination. 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 3 Blepharoplasty-upper 3 Blepharoplasty-lower 4 Pinnaplasty 3 Correction of the constricted ear 3 Breast-augmentation 3 Breast-reduction 3 Breast-mastopexy 3 Breast-tuberous correction 3 Abdominoplasty 2 Face Lift-skin 2 Face Lift-SMAS 3 Liposuction-abdomen 3 Liposuction-thighs 3 Liposuction-trunk 2 Brachioplasty 2 Thigh lifts 2 Body lifts 2 Laser-tattoo removal 2 Laser-skin lesion 2 Laser-peeling 2 Laser-chemical peeling 3 Laser-Dermabrasion

	<p>2 Laser-Filler injections</p> <p>3 Rhinoplasty-post trauma</p> <p>2 Rhinoplasty-cosmetic</p>
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Topic	Management of wounds including contaminated, infected wounds and those involving skin loss
Category	Wound Care
Sub-category:	None
Objective	<i>Competence in the management of lacerations, soft tissue injuries and wounds</i>
Knowledge	<p>3 Relevant anatomy, physiology, biochemistry, pharmacology, pathology including microbiology, haematology, immunology and histopathology.</p> <p>3 Relevant associated disease and conditions.</p> <p>3 Appropriate pre-operative investigations and patient assessment.</p> <p>3 Range, indications and principles of relevant surgical techniques and operations.</p> <p>3 Post-operative complications and their management.</p> <p>3 Recent advances in wound healing</p> <p>3 Facial wounds involving eyelids (including lacrimal apparatus), nose, lips, ears and deeper tissues including salivary glands, facial nerve</p> <p>3 Varicose ulceration including aetiology</p> <p>3 Wound dressings</p> <p>3 Antibiotic therapy</p> <p>3 Degloving injury</p> <p>3 Principles of Doppler physics</p>
Clinical Skills	<p>4 Assessment and non-operative of the management of the acute and elective surgical patient</p> <p>4 History taking.</p> <p>4 Examination.</p> <p>3 Use of Doppler</p> <p>3 Skills of analysis and diagnostic synthesis, judgement, surgical planning</p>
Technical Skills and Procedures	<p>4 Exploration of traumatic wounds</p> <p>3 Assessment of tissue viability</p> <p>4 Debridement of tissues</p> <p>4 Surgical handling of soft tissues</p> <p>4 Suturing of soft tissues and skin lacerations</p> <p>3 Nerve repair</p> <p>4 Split skin grafting</p> <p>3 Use of local and other flaps</p>

Topic	Pressure sore management including surgical management
Category	Wound Care
Sub-category:	None
Objective	<i>Competence in the management of patients developing pressure sores</i>
Knowledge	<p>3 Relevant anatomy, physiology, pathology including microbiology.</p> <p>3 Relevant associated disease and co-morbidity including neurological conditions and trauma.</p> <p>3 Appropriate investigations, patient assessment and non-operative management.</p> <p>3 Related dietetics</p> <p>3 Aetiological factors</p> <p>3 Range, indications and principles of relevant operations.</p> <p>3 Post-operative complications and their management.</p> <p>3 Recent advances including pressure relieving beds and mattresses, VAC therapy</p> <p>3 Relevant ancillary interventions e.g. physiotherapy, occupational therapy.</p>
Clinical Skills	<p>4 Assessment and non-operative of the management of the elective surgical patient</p> <p>4 History taking.</p> <p>4 Examination.</p>

	3 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	3 Debridement of pressure sores 3 Various procedures for closure of defects including flap closure

Topic	Scar management
Category	Wound Care
Sub-category:	None
Objective	<i>To gain understanding of the mechanisms involved in scar formation particularly hypertrophic and keloid scarring. To gain competence in dealing with hypertrophic and keloid scars and in scar revision procedures.</i>
Knowledge	3 Relevant physiology, pathology relating to wound healing and scar formation 3 Methods available to treat hypertrophic/keloid scars including pressure therapy and steroid therapy 3 Scar revision procedures
Clinical Skills	N/A
Technical Skills and Procedures	4 Steroid injection 3 Various scar revision operations including z-plasty, w-plasty

Final including Special Interest Stage

In the final stage trainees continue to develop their competence either generalising in plastic surgery or developing a special interest.

Cleft Lip and Palate

Overview

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

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

- To train a small number of surgical trainees from the relevant surgical specialties in advanced techniques in the management of cleft lip and palate patients.
- To train surgeons in the relevant specialties to be effective, full members of an interdisciplinary team.
- To understand the soft and hard tissue deformities of the mid face and the commonest congenital oro-facial congenital disorder whose degree is variable.
- To collaborate with other medical and dental disciplines, and non-medical health professionals,
- To correct respiratory, hearing, feeding, speech and facial growth disorders and facial deformity.
- To be involved with early diagnosis and care of cleft patients and their families which may start before birth.
- To understand and be a part of multidisciplinary teams that span cleft lip and palate treatment from paediatric presentation through to adulthood.

- To cover the full range of primary and secondary cleft surgical procedures and some of the related procedures that the advanced trainee (and later the consultant) depending on their parent speciality (e.g. insertion of grommets, aspects of dental surgical management).

Description of Training in cleft lip and palate surgery

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

Regulation

- At the time of writing, the module is not recognised as a 'subspecialty' for the purposes of entry onto the Specialist Register, but as an area of 'Special Interest' within the parent speciality.
- The module is competence based and successful completion depends upon achieving the essential requirements for completion as laid out in the syllabus.
- Assessment during the module is through the ARCP process. This is carried out through the local (host) deanery or school of surgery on behalf of the (base) deanery with whom the trainee is registered. The host deanery will liaise carefully with the base deanery.
- Selection occurs through the parent deanery (Severn). These posts are advertised through the British Medical Journal and appointed by a committee involving the three parent specialties. The training programme director has to provide a structured report of the trainees' suitability for the post prior to interview. Appointments are usually made in January.
- The Interface Committee for the special interest will monitor the overall progress of trainees taking the module and the workings of the placements, on behalf of the JCST.
- CCT will be deferred until the essential syllabus for both the parent speciality and the interface modules have been successfully completed.
- Trainees judged to have completed the module successfully by their host deanery ARCP panel will be recommended for the CCT to their base deanery through the usual channels. The Chairman of the Interface Committee of the JCST will write to acknowledge this.
- The CCT will be issued in the speciality with which the trainee is registered.

- Those trainees judged not to have completed the requirements of the module successfully within the time frame set or sooner should their progress be unsatisfactory, will be informed of this by the host ARCP panel and referred back to their base deanery.
- Upon completion of the module, the trainee will transfer back to the base deanery in his/her specialty programme. Experience has shown that most trainees leave the module having completed the essential requirements and successfully achieved a consultant appointment.

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

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

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

Essential Syllabus

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

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

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

1. has observed
2. can do with assistance
3. can do whole but may need assistance

4. competent to do without assistance, including complications

Assessment strategy

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

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

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

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

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

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

Final and Special Interest Stage Topics

Topic	Management of all aspects of hand trauma
Category	ST7/8 General
Sub-category:	Trauma
Objective	<i>Competence in the diagnosis and management of hand trauma</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 4 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances. 4 Relevant ancillary investigations, interventions e.g.physiotherapy, occupational therapy. 4 Crush injuries. 4 Injection injuries.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the acute surgical patient 4 History taking. 4 Examination including hand examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Wound exploration and debridement. 4 Primary microsurgical repair of peripheral nerve 4 Primary graft to peripheral nerve 4 Random pattern flap reconstruction of fingertip (cross-finger, Kutler, Kleinert) 4 Neurovascular island flap reconstruction (homodigital island, Littler) 4 Primary repair of extensor of hand 4 Primary repair of flexor of hand 4 Primary open reduction of small bone and fixation 4 Manipulation of fracture of bone 4 Replantation of digit, hand 4 Amputation of phalanx of finger 4 Provision of skin cover using grafts, flaps

Topic	Use of plastic surgery techniques including design and use of z-plasty, pedicled and myocutaneous flaps, free flaps
Category	ST7/8 General
Sub-category:	Trauma
Objective	<i>Competence in the management of the surgical patient and application of the specified plastic surgery techniques.</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant anatomy and physiology. 4 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances. 4 Relevant anatomy, physiology, pharmacology, pathology relating to skin and flap blood supply 4 Random, axial pattern flaps. 4 Concept of vessel territories.
Clinical Skills	4 Assessment and non-operative management of the acute and elective surgical patient.

	<ul style="list-style-type: none"> 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Z-plasty 4 V-Y advancement 4 Excision of lesion 4 Wide excision of lesion 4 SSG 4 FTSG 4 Excision & local flap 4 Random and axial pattern flaps 4 Rotation, transposition flaps 4 Pedicled cutaneous, fasciocutaneous, myocutaneous and osteocutaneous flaps 4 Free flaps

Topic	Assessment, resuscitation and initial management of burns
Category	ST7/8 General
Sub-category:	Trauma
Objective	<i>Competence in the early phase of burns management</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant anatomy, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 4 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances. 4 Relevant ancillary investigations, interventions e.g. psychological support, physiotherapy. 4 Mechanisms of burn injury. 4 Causes of burn injury. 4 IV resuscitation regimens. 4 Use of blood products, plasme volume expanders. 4 Non-accidental injuries.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the acute burns patient 4 History taking. 4 Examination including assessment of burn surface area and depth. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Management of fluid & electrolyte balance 4 Assessment & resuscitation 4 Open venotomy 4 Escharotomy 2 Bronchoscopy 3 Endotracheal intubation 4 Tracheostomy 4 Burn wound management with dressings

Topic	Surgical management of burns
Category	ST7/8 General
Sub-category:	Trauma
Objective	<i>Competence in the surgical aspects of burns management</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 4 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances.

	4 Relevant ancillary investigations, interventions e.g. psychological support, physiotherapy, occupational therapy 4 Knowledge of wound healing and tissue transplantation
Clinical Skills	4 Assessment and non-operative management of the burns patient. 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
Technical Skills and Procedures	4 Early tangential excision and split skin grafting 4 Late grafting 4 Use of allograft skin 4 Use of skin substitutes

Topic	Diagnosis and management of complications of burns including inhalational injury and septic shock
Category	ST7/8 General
Sub-category:	Trauma
Objective	<i>Competence in management of complications arising during treatment of burn injury</i>
Knowledge	4 Relevant anatomy, physiology, bacteriology, biochemistry, and pathology 4 Pathophysiology of smoke inhalation and effect on respiration 4 Pathophysiology of renal failure as relating to burn injury 4 Dietetics as relating to burn injury metabolism 4 Shock complicating resuscitation 4 Septic shock 4 Intensive care monitoring and treatment
Clinical Skills	4 Assessment of the burn patient. 4 History. 4 Examination. 4 IV resuscitation. 4 Provision of oxygen therapy via face mask. 3 Endotracheal intubation. 4 Skills of analysis and diagnostic synthesis, judgement.
Technical Skills and Procedures	N/A

Topic	Late management and rehabilitation
Category	ST7/8 General
Sub-category:	Trauma
Objective	<i>Competence in burns management</i> <i>Competence in late management, with understanding of the needs for patient rehabilitation</i>
Knowledge	4 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 4 Relevant associated disease and conditions. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances. 4 Relevant ancillary investigations, interventions e.g., psychological support, physiotherapy, occupational therapy. 4 Relevant teamworking with other professionals 3 Prosthetics.
Clinical Skills	4 Assessment and non-operative management of the burns patient 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning 4 Scar management including use of pressure garments
Technical Skills and Procedures	Contracture release:4 Grafts Contracture release:4 Flaps

Topic	Surgical management of brachial plexus injuries
Category	ST7/8 General
Sub-category:	Trauma
Objective	<i>An understanding of the principles of diagnosis, investigation and management of patients, children and adults, with closed brachial plexus injuries</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant anatomy, physiology and pathology. 4 Relevant associated conditions including other trauma. 4 Appropriate pre-operative investigations and assessment including neurological assessment, nerve conduction studies. electromyography. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Relevant ancillary interventions including physiotherapy, occupational therapy. 4 Mechanisms of nerve injury and regeneration.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative management of these patients. 4 History 4 Examination including neurological examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Surgical exposure of brachial plexus 4 Exploration of brachial plexus. 3 Intraoperative nerve testing. 4 Neurolysis 4 Nerve grafting. 4 Nerve repair. 4 Nerve transfer 3 Tendon transfer.

Topic	Diagnosis and management of congenital hand conditions
Category	ST7/8 General
Sub-category:	Hand and Upper Limb
Objective	Competence in the management of congenital hand conditions.
Knowledge	<ul style="list-style-type: none"> 4 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 4 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances. 4 Relevant ancillary interventions e.g. physiotherapy, occupational therapy. 4 Classification of congenital hand and forearm anomalies.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the elective surgical patient. 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Correction of polydactyly (ulnar) 4 Correction of syndactyly. 4 Correction of duplicate thumb. 4 Correction of triggering of digit. 4 Release of constriction band. Pollicisation Toe to thumb transfer

Topic	Management of acquired conditions of the hand
Category	ST7/8 General
Sub-category:	Hand and Upper Limb

Objective	<i>Competence in the management of elective, acquired hand and forearm conditions.</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant embryology, anatomy, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 4 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances. 4 Relevant ancillary investigations, interventions e.g. appropriate drug therapy, physiotherapy, occupational therapy. 4 Nerve compressions. 4 Vasospastic disorders. 4 Rheumatoid disease. 4 Dupuytren's contracture. 4 Ganglion. 4 Loss of motor function affecting the hand, principles of tendon transfer
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the acute and elective surgical patient 4 History taking. 4 Examination. 4 Digital nerve block 4 Regional nerve block 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Carpal tunnel release 4 Cubital tunnel release 4 Insertion of steroid (trigger finger, de Quervain's, carpal tunnel) 4 Palmar fasciectomy 4 Dermofasciectomy 4 Excision of ganglion 4 Tenosynovectomy (rheumatoid) 3 Multiple transfer of tendon to tendon 4 Secondary repair of tendon using temporary prosthesis 4 Tenolysis of flexor 4 Release of constriction of sheath of tendon (trigger finger, de Quervain's) 4 Microvascular transfer of toe to thumb 3 Pollicisation of finger 4 Swanson MCPJ or PIPJ arthroplasty 3 Trapezectomy 4 Darrach procedure 4 Bone-graft 4 Fusion of wrist 4 Primary arthrodesis and internal fixation 4 Repair of capsule of joint for stabilisation of joint (eg Thumb UCL repair) 4 Release of contracture of joint (Check rein ligament release) 3 Wrist arthroscopy

Topic	Management of children and adults with cleft lip and palate
Category	ST7/8 General
Sub-category:	Cleft Lip and Palate/Cranio Facial Anomalies
Objective	<i>Competence in the management of patients with cleft lip and/or cleft palate</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant embryology, anatomy, physiology. 4 Incidence of clefting. 4 Related conditions and syndromes. 4 Pre-operative assessment and investigation. 4 Range, indications and principles of operations. 4 Post-operative complications. 3 Speech therapy. 3 Hearing tests. 2 Orthodontics, paediatric and restorative dentistry. 3 Genetics relating to clefting.

	4 Structure and function of MDTs.
Clinical Skills	4 Assessment and non-operative management. 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement and surgical planning
Technical Skills and Procedures	2 Presurgical orthodontics 4 Cleft lip repair and revision 4 Cleft palate repair and re-repair 4 Pharyngoplasty of varying types 4 Alveolar bone grafting 2 Maxillary and mandibular osteotomy 3 Speech assessment 3 Palatal videofluoroscopy 3 Nasendoscopy

Topic	Investigation and management of velopharyngeal incompetence
Category	ST7/8 General
Sub-category:	Cleft Lip and Palate/Cranio Facial Anomalies
Objective	<i>Competence in the management of velopharyngeal incompetence and related speech problems with or without cleft palate</i>
Knowledge	4 Relevant anatomy, embryology and physiology. 4 Related syndromes and conditions. 4 Pre-operative assessment and investigation including speech assessment, nasometry, palatal videofluoroscopy, and nasendoscopy. 4 Range, indication and principles of relevant operations. 4 Post-operative complications and their management. 3 Speech therapy. 3 Hearing tests. 4 Structure and function of MDTs.
Clinical Skills	4 Assessment and non-operative management. 4 History taking. 4 Examination. 4 Skills of analysis, diagnostic synthesis, judgement and surgical planning.
Technical Skills and Procedures	4 Palatal re-repair 4 Palatal exploration with intravelar veloplasty 4 Furlow's repair 4 Pharyngoplasty of varying types.

Topic	Craniofacial deformities
Category	ST7/8 General
Sub-category:	Cleft Lip and Palate/Cranio Facial Anomalies
Objective	<i>To gain knowledge of the commoner craniofacial deformities</i>
Knowledge	4 Relevant embryology, anatomy, physiology and pathology. 4 Relevant associated disease and syndromes. 4 Relevant investigations including imaging; paediatric, neurological and ophthalmic assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management.
Clinical Skills	4 Assessment and pre-operative management of the elective surgical patient. 4 History taking. 4 Examination.
Technical Skills and Procedures	2 Common craniofacial procedures.

Topic	Principles of diagnosis and management of maxillofacial trauma
Category	ST7/8 General
Sub-category:	Head and Neck
Objective	<i>Competence in the diagnosis and principles of treatment of maxillofacial trauma</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant anatomy, physiology and pathology. 4 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations including imaging, and patient assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 3 Methods of internal, external fracture fixation. 4 Fracture healing. 3 Associated head and neck injuries. 4 Glasgow coma scale.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and pre-operative management of the acute surgical patient. 4 History taking. 4 Examination. 4 Skills analysis, diagnostic synthesis, judgement, surgical planning.
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Manipulation of nasal bone fractures. 3 Exploration of orbital fractures. 3 Elevation of malar complex fractures. 2 Reduction and fixation of mandibular fractures.

Topic	Excisional surgery for benign and malignant disease
Category	ST7/8 General
Sub-category:	Head and Neck
Objective	<i>Competence in management of patients with benign or malignant tumours of the head and neck.</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant embryology, anatomy, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 4 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations including imaging, and patient assessment. 4 Tumour staging. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances. 4 Relevant ancillary investigations, interventions e.g. radiotherapy, chemotherapy, psychological support, physiotherapy, occupational, speech therapy, dietetics. 4 Effects of sun exposure and other aetiological factors. 4 Premalignant cutaneous and intraoral conditions. 4 Salivary gland tumours 4 Structure and function of MDTs.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the acute surgical patient 4 History taking. 4 Examination. 4 Fine needle aspiration cytology. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> Excisional surgery: 4 Lip Excisional Surgery: 4 Oral cavity, including tongue, floor of mouth, buccal mucosa, retromolar trigone, alveolus and mandible, palate Excisional Surgery: 4 Maxilla Excisional Surgery: 4 Eyelid Excisional Surgery: 4 Nose Excisional Surgery: 4 Ear Excisional Surgery: 4 Scalp Excisional Surgery: 4 Scalp & Bone 4 Parotidectomy-superficial, radical 4 Submandibular gland excision

Topic	Approaches to reconstruction of the head and neck including defects of the ear, eyelid, nose and lip and oral cavity
Category	ST7/8 General
Sub-category:	Head and Neck
Objective	<i>Competence in reconstruction of traumatic or excisional defects of the head and neck region.</i>
Knowledge	<p>4 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.</p> <p>4 Relevant associated disease and conditions.</p> <p>4 Soft tissue facial injuries.</p> <p>4 Appropriate pre-operative investigations including imaging, and patient assessment.</p> <p>4 Range, indications and principles of relevant operations.</p> <p>4 Post-operative complications and their management.</p> <p>2 Prosthetics.</p> <p>4 Recent advances.</p> <p>4 Relevant ancillary investigations, interventions e.g. radiotherapy, psychological support, physiotherapy, occupational therapy, speech therapy etc.</p>
Clinical Skills	<p>4 Assessment and non-operative management of the acute and elective surgical patient.</p> <p>4 History taking.</p> <p>4 Examination.</p> <p>4 Skills of analysis and diagnostic synthesis, judgement, surgical planning.</p>
Technical Skills and Procedures	<p>Reconstructive Surgery Lip: 4 Lip shave</p> <p>Reconstructive Surgery Lip: 4 Wedge excision</p> <p>Reconstructive Surgery Lip: 4 Local flaps</p> <p>Oral cavity: 4 Skin grafts</p> <p>Oral cavity: 4 Local Flaps</p> <p>Oral cavity: 4 Regional Flaps</p> <p>Oral cavity: 4 Free flaps including cutaneous, myocutaneous, osteocutaneous</p> <p>Oral cavity: 4 Autologous mandibular reconstruction</p> <p>Eyelid reconstruction:</p> <p>4 Skin grafts</p> <p>4 V-excision +/- lateral canthotomy</p> <p>4 Cheek advancement</p> <p>4 Chondromucosal grafts</p> <p>4 Lid switch</p> <p>4 Ptosis correction</p> <p>4 Repair of lacrimal apparatus</p> <p>Nose:</p> <p>4 Skin grafts</p> <p>4 Local flaps</p> <p>4 Regional flaps</p> <p>4 Cartilage/bone grafts</p> <p>4 Branemark reconstruction</p> <p>Ear:</p> <p>4 Skin grafts</p> <p>4 Local flaps</p> <p>4 Autologous reconstruction using cartilage framework</p> <p>4 Branemark reconstruction</p> <p>Scalp:</p> <p>4 Local Flaps</p> <p>4 Regional Flaps</p> <p>4 Free Flaps</p> <p>4 Bone Grafts</p> <p>4 Alloplastic materials</p>

	4 Tissue expansion
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Topic	Management of patients requiring radical or selective neck dissection for malignant disease
Category	ST7/8 General
Sub-category:	Head and Neck
Objective	<i>Competence in the management of patients requiring neck dissection for malignant disease</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant embryology, anatomy, physiology, pathology, microbiology. 4 Relevant associated diseases and conditions. 4 Appropriate pre-operative investigations (including imaging techniques) and patient management. 4 Range, indications and principles of relevant operations including the different types of neck dissection performed. 4 Post-operative complications and their management. 4 Classification of cervical lymph node groups. 4 FNA techniques. 4 Indications for sentinel node biopsy. 4 Structure and function of MDTs. 4 Relevant ancillary investigations and interventions, including radiotherapy, chemotherapy, physiotherapy, occupational therapy, and dietetics.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative management of the elective surgical patient. 4 History taking 4 Examination
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Cervical lymph node biopsy 4 Radical neck dissection 4 Selective neck dissections of various types

Topic	Approaches to management of facial palsy
Category	ST7/8 General
Sub-category:	Congenital and acquired deformities
Objective	<i>Competence in management of patients children and adults, who have congenital or acquired facial palsy.</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant embryology, anatomy, physiology, pathology. 4 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances. 4 Relevant ancillary interventions.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the elective surgical patient. 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Static procedures including fascial slings. 4 Eyelid procedures including gold weight insertion. 4 Facial nerve grafting. 4 Microvascular free muscle transfer.

Topic	Investigation and management of vascular and related abnormalities
Category	ST7/8 General
Sub-category:	Congenital and acquired deformities
Objective	<i>Competence in the diagnosis and management of patients, children and adult, with congenital abnormalities of the head and neck</i>

Knowledge	<ul style="list-style-type: none"> 4 Relevant anatomy, physiology, haematology and pathology. 4 Relevant associated diseases and conditions. 4 Classification of vascular and lymphatic malformations 4 Branchiogenic anomalies 4 Laser therapy 4 Steroid therapy 4 Interventional radiology 4 Post-operative complications 4 Relevant ancillary investigations and interventions, including ophthalmic assessment
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative management 4 History taking 4 Examination
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Sclerotherapy. 4 Debulking/excision of haemangioma, lymphangioma. 4 Excision of lesions and reconstruction of facial structures including eyelids and lips. 4 Excision branchial sinus, fistula and cyst. 4 Excision of thyroglossal cyst.

Topic	Breast augmentation
Category	ST7/8 General
Sub-category:	Management of patients requiring breast reconstruction, reduction and augmentation
Objective	<i>Competence in the management of patients requesting breast augmentation for breast aplasia, hypoplasia and asymmetry.</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant embryology, anatomy, physiology, and pathology of the breast. 4 Relevant associated disease and conditions including benign breast disease. 4 Safety of breast implants including issues relating to the effects of silicone on the body, and regulation of implants. 4 Appropriate pre-operative investigations and patient assessment including psychological assessment. 4 Post-operative complications and their management. 4 Recent advances and developments relating to implant manufacture.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment of the elective surgical patient. 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Breast augmentation using differing surgical approaches.

Topic	Breast reduction
Category	ST7/8 General
Sub-category:	Management of patients requiring breast reconstruction, reduction and augmentation
Objective	<i>Competence in management of patients requesting breast reduction.</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant embryology, anatomy and physiology of the breast. 4 Relevant associated disease and conditions including benign breast disease and causes of mammary hypertrophy. 4 Appropriate pre-operative investigations and patient assessment including psychological assessment. 4 Range, indications and principles of relevant operations for breast reduction and breast mastopexy. 4 Post-operative complications and their management. 4 Recent advances in techniques for breast reduction. 4 Blood supply and innervation of the breast, breast skin and nipple/areolar complex. 4 Causes of gynaecomastia
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment of the elective surgical patient. 4 History taking. 4 Examination.

	4 Skills of analysis, judgement, surgical planning.
Technical Skills and Procedures	4 Various operations for breast reduction. 4 Various operations for breast mastopexy. 4 Correction of the tuberous breast 4 Correction of gynaecomastia

Topic	Breast reconstruction
Category	ST7/8 General
Sub-category:	Management of patients requiring breast reconstruction, reduction and augmentation
Objective	<i>Competence in the management of patients requiring breast reconstruction. An understanding of the principles involved in multidisciplinary assessment of these patients.</i>
Knowledge	4 Relevant embryology, anatomy, physiology, and pathology of the breast. 4 Relevant associated disease and conditions including carcinoma of the breast and its treatment. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances in flap design. 4 Breast implants and issues surrounding safety of silicone. 4 Relevant ancillary investigations, interventions including radiotherapy, chemotherapy, hormone therapy, psychological support.
Clinical Skills	4 Assessment of the elective surgical patient. 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	4 Axillary nodal dissection 4 FNA/Core Biopsy Breast Reconstruction: 4 Implant only Breast Reconstruction: 4 Tissue expansion Pedicle Flaps: 4 Latissimus dorsi Pedicle Flaps: 4 TRAM Free Flaps: 4 Latissimus dorsi Free Flaps: 4 TRAM Free flaps: 4 DIEP Free Flaps: 4 SGAP Free Flaps: 4 IGAP 4 Nipple/areolar reconstruction

Topic	Perineal reconstruction
Category	ST7/8 General
Sub-category:	Trunk and GU
Objective	<i>To be able to undertake perineal reconstruction in cases of trauma and following excisional procedures for malignant and premalignant conditions affecting the vulva and perineum. Knowledge of techniques available for penile reconstruction. Knowledge of techniques available for vaginal reconstruction.</i>
Knowledge	4 Relevant embryology, anatomy, physiology, pathology including microbiology, and histopathology. 4 Relevant associated disease and conditions. 3 Issues relating to patients requesting gender re-assignment. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances.
Clinical Skills	4 Assessment and non-operative management of the acute and elective surgical patient

	<ul style="list-style-type: none"> 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Skin grafts 4 Bowel grafts 4 Random flaps 4 Myocutaneous flaps 4 Free flaps

Topic	The principles of surgical management of hypospadias.
Category	ST7/8 General
Sub-category:	Trunk and GU
Objective	<i>To obtain competencies in the management of cases of hypospadias. To understand the principles of management in cases of epispadias and exstrophy.</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant embryology, anatomy, physiology. pathology. 4 Relevant associated syndromes and conditions. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the elective surgical patient. 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	4 Operative procedures in common use for hypospadias and related conditions including 1 stage, 2 stage techniques.

Topic	Surgical management of congenital and acquired defects of the chest wall, abdominal wall and trunk
Category	ST7/8 General
Sub-category:	Trunk and GU
Objective	<i>Competence in the assessment and management of defects involving the trunk, including traumatic defects</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant embryology, anatomy, physiology, and pathology 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indication and principles of relevant operations. 4 Tissue expansion techniques
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment of the acute and elective surgical patient -adult and child 4 History taking 4 Examination 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Operations for Poland's syndrome involving chest deformity 4 Operations to cover spinal defects in children with spina bifida 4 Operations to provide skin cover in traumatic injuries involving skin, soft tissue loss 4 Operations to provide skin cover following surgical resection of tumours including abdominal wall defects, chest wall defects. 4 Provision of skin cover in sternotomy wounds

Topic	The multidisciplinary assessment of management of tibial fractures involving skin loss
Category	ST7/8 General
Sub-category:	Lower Limb
Objective	<i>Competence in the combined management of patients with compound tibial fractures involving skin loss</i>

Knowledge	<ul style="list-style-type: none"> 4 Relevant anatomy, physiology, pathology. 4 Fracture healing. 4 Skin blood supply. 4 External fixators. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Relevant ancillary investigations and interventions including imaging techniques, physiotherapy, occupational therapy.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative management of the acute surgical patient. 4 History taking 4 Examination including combined assessment of limb viability and function.
Technical Skills and Procedures	<ul style="list-style-type: none"> Nerve repair Vessel repair 4 Local flaps: Fasciocutaneous 4 Local flaps: Perforator 4 Local flaps: Muscle 4 Local flaps: Myocutaneous 4 Free flaps: Skin 4 Free flaps: Muscle 4 Free flaps: Myocutaneous 4 Free flaps: Osteocutaneous

Topic	Trauma
Category	ST7/8 General
Sub-category:	Lower Limb
Objective	<i>Competence in the management of lower limb trauma.</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant anatomy, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 4 Appropriate pre-operative investigations and patient assessment. 4 Degloving injuries and their mechanism. 4 Compartment syndrome. 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Relevant ancillary investigations and interventions, e.g. imaging techniques, physiotherapy, occupational therapy.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the acute surgical patient 4 History taking. 4 Examination including assessment of limb viability, compartment syndrome. 4 Use of doppler. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Superficial wounds 4 Debridement/SSG 4 Fasciotomy 4 Amputations above knee/below knee 4 Harvest iliac crest bone graft Vessel repair Nerve repair 4 Local Flaps: Fasciocutaneous 4 Local flaps: Perforator 4 Local flaps: Muscle 4 Local flaps: Myocutaneous 4 Free Flaps: Radial Free flaps: other

Topic	The management of lymphoedema
Category	ST7/8 General

Sub-category:	Lower Limb
Objective	<i>Competence in the diagnosis and management of lymphoedema</i>
Knowledge	4 Relevant anatomy, embryology, physiology and pathology of the lymphatic system 4 Classification of lymphoedema 4 Non-operative management 4 Surgical management
Clinical Skills	4 Assessment of the elective surgical patient 4 History taking 4 Examination
Technical Skills and Procedures	4 Various operations including Charles's procedure

Topic	All aspects of diagnosis and management of benign and malignant skin tumours including surgical reconstruction and regional node dissection
Category	ST7/8 General
Sub-category:	Skin and Soft Tissue Tumours
Objective	<i>Competence in diagnosis and management of skin lesions including benign skin and subcutaneous lesions, skin malignancy</i>
Knowledge	4 Relevant anatomy, embryology, physiology, and pathology including histopathology 4 Relevant associated disease 4 Appropriate pre-operative investigations and patient assessment 4 Benign skin lesions and subcutaneous lesions 4 Malignant melanoma and non-melanoma skin cancer 4 Incisional and excisional biopsy 4 Excision margins 4 Adjuvant therapy including radiotherapy, chemotherapy 4 Tumour staging 4 Minimum data sets 3 Moh's technique 4 Sentinel node biopsy 4 Recent advances 4 Palliative care
Clinical Skills	4 Assessment of the elective surgical patient 4 History taking 4 Examination
Technical Skills and Procedures	4 Excision of sebaceous cyst 4 Excision and direct closure of simple skin lesions 4 Excision and direct closure basal cell carcinoma 4 Excision and graft malignant skin lesions 4 Excision malignant melanoma 4 Excision and flap repair Regional lymph dissection axilla Regional lymph dissection groin Regional lymph dissection neck

Topic	The assessment and management of patients requiring aesthetic alterations of body parts including face, eyelids, nose and ears.
Category	ST7/8 General
Sub-category:	Aesthetic
Objective	<i>Competence in the practice of aesthetic plastic surgery.</i>
Knowledge	4 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology. 4 Relevant associated disease. 4 Appropriate pre-operative investigations and patient assessment including psychological assessment. 4 Range, indications and principles of relevant operations in the different areas

	<ul style="list-style-type: none"> 4 Post-operative complications and their management. 4 Recent advances including development of new surgical techniques.
Clinical Skills	<ul style="list-style-type: none"> 4 Assessment and non-operative of the management of the elective surgical patient. 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Blepharoplasty-upper 4 Blepharoplasty-lower 4 Pinnaplasty 4 Correction of the constricted ear 4 Breast-augmentation 4 Breast-reduction 4 Breast-mastopexy 4 Breast-tuberous correction 4 Abdominoplasty 4 Face Lift-skin 4 Face-Lift SMAS 4 Liposuction-abdomen 4 Liposuction-thighs 4 Liposuction-trunk 4 Brachioplasty 4 Thigh lifts 4 Body lifts 4 Laser-tattoo removal 4 Laser-skin lesion 4 Laser-peeling 4 Laser-chemical peeling 4 Laser-Dermabrasion 4 Laser-Filler injections 4 Rhinoplasty-post trauma 4 Rhinoplasty-cosmetic

Topic	Management of wounds including contaminated, infected wounds and those involving skin loss
Category	ST7/8 General
Sub-category:	Wound Care
Objective	<i>Competence in the management of lacerations, soft tissue injuries and wounds</i>
Knowledge	<ul style="list-style-type: none"> 4 Relevant anatomy, physiology, biochemistry, pharmacology, pathology including microbiology, haematology, immunology and histopathology. 4 Relevant associated disease and conditions. 4 Appropriate pre-operative investigations and patient assessment. 4 Range, indications and principles of relevant surgical techniques and operations. 4 Post-operative complications and their management. 4 Recent advances in wound healing 4 Varicose ulceration including aetiology 4 Wound dressings 4 Antibiotic therapy

	4 Degloving injury 3 Principles of Doppler physics
Clinical Skills	4 Assessment and non-operative of the management of the acute and elective surgical patient 4 History taking. 4 Examination. 4 Use of Doppler 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	4 Exploration of traumatic wounds 4 Assessment of tissue viability 4 Debridement of tissues 4 Surgical handling of soft tissues 4 Suturing of soft tissues and skin lacerations 4 Nerve repair 4 Split skin grafting 4 Use of local and other flaps

Topic	Pressure sore management including surgical management
Category	ST7/8 General
Sub-category:	Wound Care
Objective	<i>Competence in the management of patients developing pressure sores</i>
Knowledge	4 Relevant anatomy, physiology, pathology including microbiology. 4 Relevant associated disease and co-morbidity including neurological conditions and trauma. 4 Appropriate investigations, patient assessment and non-operative management. 4 Related dietetics 4 Aetiological factors 4 Range, indications and principles of relevant operations. 4 Post-operative complications and their management. 4 Recent advances including pressure relieving beds and mattresses, VAC therapy 4 Relevant ancillary interventions e.g. physiotherapy, occupational therapy.
Clinical Skills	4 Assessment and non-operative of the management of the elective surgical patient 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
Technical Skills and Procedures	4 Debridement of pressure sores 4 Various procedures for closure of defects including flap closure

Topic	Soft tissue sarcomas
Category	ST7/8 General
Sub-category:	Skin and Soft Tissue Tumours
Objective	<i>To achieve knowledge and understanding of the multidisciplinary management of soft tissue sarcomas</i>
Knowledge	4 Relevant embryology, anatomy, physiology and pathology. 4 Appropriate pre-operative investigations, including imaging, and patient assessment. 4 Range indications and principles of relevant operations. 4 Post-operative complications and their management. 3 Relevant ancillary investigations and interventions, including radiotherapy, chemotherapy. 4 Recent advances. 4 Biopsy techniques
Clinical Skills	4 Assessment and non-operative management of the elective surgical patient. 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning. 4 FNA cytology.

	4 Core biopsy.
Technical Skills and Procedures	4 Incisional biopsy at various sites and of varying tissues including fat, connective tissue, muscle, nerve. 4 En-bloc excisional techniques at various sites 4 Flap reconstruction as required 4 Nerve repair 4 Vessel repair

Topic	Scar management
Category	ST7/8 General
Sub-category:	Wound Care
Objective	<i>To gain understanding of the mechanisms involved in scar formation particularly hypertrophic and keloid scarring. To gain competence in dealing with hypertrophic and keloid scars and in scar revision procedures.</i>
Knowledge	4 Relevant physiology, pathology relating to wound healing and scar formation 4 Methods available to treat hypertrophic/keloid scars including pressure therapy and steroid therapy 4 Scar revision procedures
Clinical Skills	N/A
Technical Skills and Procedures	4 Steroid injection 4 Various scar revision operations including z-plasty, w-plasty

Topic	Basic sciences
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
Sub-category:	Basic science as applied to Cleft surgery
Objective	<i>To understand basic sciences in relation to cleft lip and palate patients</i>
Knowledge	4 Process and timing of facial (including dental), branchial arch and otological development during pregnancy and their relationship to investigations and their limitations 3 Teratogenesis and genetics 4 Common syndromes 3 Relationship to other syndromes 4 Pathogenesis and aetiological risks 4 Normal anatomy and the variations found in cleft lip and palate patients 4 Cardio-respiratory physiology of newborn, energy requirements, growth, development milestones in the first year of life, IV fluid management, principles of resuscitation 4 Feeding mechanisms, swallowing, relation of infant feeding and later speech mechanisms, nasal and Eustachian tube and middle ear physiology 3 Speech and language development
Clinical Skills	History and Examination: 4 Applies above principles Data Interpretation: 4 Evaluates diagnostic imaging (CT and MRI) in light of the anatomy and its variations 4 Applies physiological principles to laboratory and other investigations to patient care To integrate the previous sections into patient management
Technical Skills and Procedures	N/A

Topic	Patient management and family care
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
Sub-category:	
Objective	<i>To apply the principles of patient care, develop team working and liaise with the family and other carers</i>
Knowledge	<ul style="list-style-type: none"> 4 Understanding the expertise and role of other disciplines in cleft management 4 Fitness and principles of anaesthesia in relations to problems encountered here 4 Principles and techniques of primary and secondary cleft surgery of lip and palate, including unilateral alveolar bone graft 4 Ethical issues around management 4 Post-operative management, including introduction of feeding 3 Evidence based medicine and audit 3 Principles of biomedical research and clinical care
Clinical Skills	<p>History and Examination:</p> <ul style="list-style-type: none"> 4 Elicit relevant history including difficult circumstances 4 Elicit pregnancy history 4 Obtains information from the family 4 Examine the head and neck using diagnostic endoscopic equipment if necessary 4 Communicates effectively with patient and other members of the team <p>Data Interpretation:</p> <ul style="list-style-type: none"> 4 Interpret haematological, biochemical and other relevant investigations 4 Evaluate diagnostic imaging (CT and MRI) in light of the anatomy and its variations <p>Patient Management:</p> <ul style="list-style-type: none"> 4 Empathizes with family 4 Prioritise patient's needs 4 Assess patient needs prior to theatre 4 Fluid balance 4 Anti microbial and other drug therapy 4 Taking consent 4 Team working with medical and other workers such as dieticians, speech therapists 4 Records and presents data accurately
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 APLS/PALS 3 Diagnostic fiberoptic endoscopy 4 Applies basic principles of surgery and uses instruments and other modalities as listed in the logbook 3 Involved with research and audit

Topic	Surgical skills
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
Sub-category:	
Objective	<i>To integrate knowledge and behaviour with the developing surgical skills</i>
Knowledge	<ul style="list-style-type: none"> 4 Details and variations of the primary surgical procedures. These include surgical anatomy, pathological anatomy, techniques and timing, rationale of different sequences 4 Details and variations of the secondary surgical procedures. These include surgical anatomy, pathological anatomy, techniques and timing, rationale of different sequences 4 Preparation for bone grafting, correct assessment of evolution of secondary dentition, 3 Understands orthodontic investigations and treatment. 3 Understands planning, surgical principles in orthognathic appliances and their usage, including methods of distraction osteogenesis 4 Understands the surgery required to correct and repair the nasal deformities

Clinical Skills	Please refer to Patient management and family care
Technical Skills and Procedures	<ul style="list-style-type: none"> 4 Operative skill to repair the lip, palate and appropriate other structures according to Unit protocol 4 Ability to make appropriate lip revision, ability to make appropriate fistula closure 4 Assessing appropriateness of referral for speech investigations, assessing likely co-operation of patient, basic interpretation of results for repair of velo-pharyngeal dysfunction <ul style="list-style-type: none"> 3 Ability to undertake alveolar bone grafting and orthognathic surgery 4 Ability to undertake septorhinoplasty with and without augmentation

Topic	Team working
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
Sub-category:	Multidisciplinary management
Objective	<i>None</i>
Knowledge	Understanding the expertise and role of other disciplines in cleft management
Clinical Skills	Effective communication with other disciplines Presentation of clinical cases
Technical Skills and Procedures	<i>None</i>

Topic	Communication
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
Sub-category:	Multidisciplinary management
Objective	<i>None</i>
Knowledge	Methods and timing of involvement of other disciplines in cleft care
Clinical Skills	Appropriate involvement of other professionals
Technical Skills and Procedures	<i>None</i>

Topic	Empathy and sensitivity, ethics, consent
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
Sub-category:	Multidisciplinary management
Objective	<i>None</i>
Knowledge	Range of patient and parent reaction to cleft deformity and its consequences Knowledge of ethical issues in cleft management
Clinical Skills	Identifying patients and parents concerns Take consent effectively for primary cleft operations Ability to discuss ethical issues and potential complications
Technical Skills and Procedures	<i>None</i>

Topic	Antenatal diagnosis
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
Sub-category:	Multidisciplinary management
Objective	<i>None</i>

Knowledge	Possibilities and limitations of antenatal diagnosis Likelihood of undiagnosed coexistent abnormalities
Clinical Skills	Ability to ascertain details of antenatal diagnosis Ability to prioritise information Ability to use simple language in discussing diagnoses
Technical Skills and Procedures	None

Topic	Organisation and planning
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
Sub-category:	Multidisciplinary management
Objective	<i>None</i>
Knowledge	Systematic approach to patient management
Clinical Skills	Starting with important tasks Improvement of efficiency Discussing prioritisation with colleagues in the team
Technical Skills and Procedures	None

Topic	Data and record management
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
Sub-category:	Multidisciplinary management
Objective	<i>None</i>
Knowledge	Understand how data are recorded by different specialties in cleft management
Clinical Skills	Contribute accurate records Understand significance of data recorded by others
Technical Skills and Procedures	None

Topic	Audit/Evidence based medicine
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
Sub-category:	Multidisciplinary management
Objective	<i>None</i>
Knowledge	Principles of EBM Important clinical trials in cleft management Ongoing audit in cleft management
Clinical Skills	Critically appraise evidence Competent use of paper and electronic data sources Ability to discuss evidence with parents and patients at appropriate level Ability to carry out audit project
Technical Skills and Procedures	None

Topic	Research
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 1 Key Objectives to be achieved in the first 6 months
Sub-category:	Multidisciplinary management

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

Topic	Embryology
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Core knowledge
Objective	<i>None</i>
Knowledge	Process and timing of facial, branchial arch and otological development Teratogenic effects
Clinical Skills	Ability to relate deformity/anomaly to embryology
Technical Skills and Procedures	<i>None</i>

Topic	Genetics, syndromes
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Core knowledge
Objective	<i>None</i>
Knowledge	Genetics of cleft lip and palate Cleft syndromes Common cranio-facial syndromes Cleft syndromes with risk of disability in other systems
Clinical Skills	Sensitive discussion of new findings Use of clinical genetics inputs
Technical Skills and Procedures	<i>None</i>

Topic	Growth and development in infant/child nutrition
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Core knowledge
Objective	<i>None</i>
Knowledge	Cardio-respiratory physiology of newborn Energy requirements Growth Development milestones in the first year of life IV fluid management Principles of resuscitation (APLS/PALS) Feeding mechanisms, swallowing, relation of infant feeding and later speech mechanisms, nasal and Eustachian tube and middle ear physiology
Clinical Skills	Use of growth charts, recognising growth/development exceptions in syndromic patients, appropriate referral of developmental delay, learning difficulties, childhood disability
Technical Skills and Procedures	<i>None</i>

Topic	Speech Development
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Core knowledge
Objective	<i>None</i>
Knowledge	Feeding mechanisms, swallowing, relation of infant feeding and later speech mechanisms, nasal and Eustachian tube and middle ear physiology Range of normal speech development mechanisms at risk in cleft, effect of otitis media with effusion, speech skills at school entry
Clinical Skills	Effective liaison with Speech Therapists, effective liaison with ENT, appropriate interventions in pre-school child and school child
Technical Skills and Procedures	None

Topic	Peri-operative Management
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Core knowledge
Objective	<i>None</i>
Knowledge	Range of normal pre-operative parameters in children, significant dangers for anaesthetics and operation, principles of post-operative fluid management, antibiotic policy
Clinical Skills	Appropriate examination, liaison with Anaesthetics and Ward staff, counselling of parents, post-operative fluids and feeding management, thresholds for Intensive Care interventions
Technical Skills and Procedures	None

Topic	Antenatal management
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Antenatal management
Objective	<i>None</i>
Knowledge	Possibilities and limitations of antenatal diagnosis, likelihood of undiagnosed coexistent abnormalities
Clinical Skills	Ability to ascertain details of antenatal diagnosis, ability to prioritise information, ability to use simple language in discussing diagnoses Ability to conduct ante-natal counselling, demonstrate appropriate liaison with Fetal Medicine Department
Technical Skills and Procedures	None

Topic	Airway
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Post natal management
Objective	<i>None</i>

Knowledge	Airway in Pierre Robin, choanal and laryngeal anomalies
Clinical Skills	Airway management in collaboration with other professionals
Technical Skills and Procedures	None

Topic	Feeding
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Post natal management
Objective	<i>None</i>
Knowledge	Energy requirements and preferred methods of feeding in clefts, feeding problems in syndromic and premature babies
Clinical Skills	Liaise with other professionals on optimisation of cleft patients' feeding
Technical Skills and Procedures	None

Topic	Counselling
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Post natal management
Objective	<i>None</i>
Knowledge	Understanding of techniques and priorities of informing parents of new patients
Clinical Skills	Counselling parents of new patients, ability to use simple language, ability to demonstrate priorities to parents
Technical Skills and Procedures	None

Topic	Principles of pre-surgical orthodontics
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Post natal management
Objective	<i>None</i>
Knowledge	Awareness of orthodontic preferences, awareness of situations indicating pre-surgical orthodontics
Clinical Skills	Appropriate discussion with Orthodontic colleagues
Technical Skills and Procedures	None

Topic	Primary lip repair
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Primary surgery
Objective	<i>None</i>
Knowledge	Surgical anatomy, pathological anatomy, techniques and timing, rationale of different sequences
Clinical Skills	N/A
Technical Skills and Procedures	Operative skill to repair the lip and appropriate other structures according to Unit protocol

Topic	Primary Palate repair
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Primary surgery
Objective	<i>None</i>
Knowledge	Surgical anatomy, pathological anatomy, techniques and timing, rationale of different sequences
Clinical Skills	<i>N/A</i>
Technical Skills and Procedures	Operative skill to repair the palate and appropriate other structures according to Unit protocol

Topic	Lip revision and fistula closure
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Secondary surgery
Objective	<i>None</i>
Knowledge	Appropriate assessment of lip/fistula disability, awareness of patient perceptions
Clinical Skills	None
Technical Skills and Procedures	Ability to make appropriate lip revision, ability to make appropriate fistula closure

Topic	Investigation of velo-pharyngeal function
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Secondary surgery
Objective	<i>None</i>
Knowledge	Indications for speech investigations, methods and limitations, radiation protection
Clinical Skills	<i>N/A</i>
Technical Skills and Procedures	Assessing appropriateness of referral for speech investigations, assessing likely co-operation of patient, basic interpretation of results Full interpretation of the results and formation of clinical plan

Topic	Secondary palatal surgery, surgical management of VPI
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Secondary surgery
Objective	<i>None</i>
Knowledge	Anatomy and physiology of palatal function and abnormalities after cleft closure, pathophysiology of VPI
Clinical Skills	<i>N/A</i>
Technical Skills and Procedures	Judgement on correct operations for secondary repair and control of VPI, skilful dissection of palate after previous repair, surgical skills in speech surgery, pharyngoplasty

Topic	Alveolar bone graft
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with

	18 months
Sub-category:	Secondary surgery
Objective	<i>None</i>
Knowledge	Preparation for bone grafting, correct assessment of evolution of secondary dentition, understanding of orthodontic investigations and treatment
Clinical Skills	None
Technical Skills and Procedures	Surgical skills in alveolar bone grafting, correct peri-operative management

Topic	Rhinoplasty
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Secondary surgery
Objective	<i>None</i>
Knowledge	Anatomy and pathological anatomy of the cleft nose, understanding of corrective procedures
Clinical Skills	None
Technical Skills and Procedures	Demonstrate surgical skills in cleft rhinoplasty, management of cleft airway and nasal septum

Topic	Cleft related orthognathic surgery
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Secondary surgery
Objective	<i>None</i>
Knowledge	Understanding of anatomy and pathological anatomy, understanding of planning, surgical principles in orthognathic appliances and their usage, methods of distraction osteogenesis
Clinical Skills	None
Technical Skills and Procedures	Ability to perform orthognathic surgery under supervision

Topic	Basic Otology and hearing assessment
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Multidisciplinary teamworking
Objective	<i>None</i>
Knowledge	Interpretation of audiogram and tympanometry study, understanding the principles of brain stem evoked response audiometry
Clinical Skills	Ability to refer from appropriate history and audiogram
Technical Skills and Procedures	None

Topic	Orthodontics
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Multidisciplinary teamworking
Objective	<i>None</i>

Knowledge	Understanding of orthodontic role in cleft care, planning AGB, planning orthognathic surgery, orthodontic measurement of mid-facial growth
Clinical Skills	Appropriate liaison with Orthodontists
Technical Skills and Procedures	None

Topic	Speech and language therapy
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Multidisciplinary teamworking
Objective	<i>None</i>
Knowledge	Speech and language therapy input into cleft management, tools for examining speech development, surgical and orthodontic assistance to speech therapy
Clinical Skills	Appropriate liaison with Speech and language therapists, partaking in policy formation for patients concerning speech management
Technical Skills and Procedures	None

Topic	Paediatric and restorative dentistry
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Multidisciplinary teamworking
Objective	<i>None</i>
Knowledge	Understanding of the role of Paediatric Dentists, understanding basics of oral and dental hygiene, understanding principles of restorative dentistry
Clinical Skills	Appropriate referral to Paediatric and Restorative Dentist
Technical Skills and Procedures	None

Topic	Child and adolescent psychology
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Multidisciplinary teamworking
Objective	<i>None</i>
Knowledge	Awareness of the role of Psychologists in childhood and adolescence, understanding of situations requiring psychology therapy
Clinical Skills	Care in selection of appropriate patients/families for referral
Technical Skills and Procedures	None

Topic	Children with disabilities
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Multidisciplinary teamworking
Objective	<i>None</i>
Knowledge	Understanding the role of Community Paediatrics and associated professionals, special needs teaching, awareness of communication disorders
Clinical Skills	Appropriate liaison with community agencies, ability to write relevant reports
Technical Skills	None

and Procedures	
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Topic	Ethical issues
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Multidisciplinary teamworking
Objective	<i>None</i>
Knowledge	Understanding of consent in older children and adolescents, Gillick competence, ethics of new procedures
Clinical Skills	Ability to take consent from older children and adolescents, ability to communicate medical ethics to parents and older children
Technical Skills and Procedures	None

Topic	General paediatric issues
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Multidisciplinary teamworking
Objective	<i>None</i>
Knowledge	Understanding resuscitation of children Understanding issues of non-accidental injury and child protection
Clinical Skills	Maintenance of APLS/PALS skills Ability to recognise signs of NAI, risk factors, family pathology, awareness of NAI referral pathways to child protection
Technical Skills and Procedures	None

Topic	Management of residual cleft deformity in adults
Category	ST7 - ST8 Special Interest Cleft Lip and Palate Stage 2 objectives to be achieved with 18 months
Sub-category:	Multidisciplinary teamworking
Objective	<i>None</i>
Knowledge	Understanding of situation at cessation of facial growth, basic understanding of nasal septal deformity, understanding of adult self-image problems, understanding of adult communication problems
Clinical Skills	Ability to assemble appropriate professionals to solve adults' concerns
Technical Skills and Procedures	None