

# Plastic surgery Syllabus

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# 1. Specialty Overview

## Overview

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 in 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.

There are about 60 plastic surgery units situated in teaching hospitals around the country. 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 or about 1: 205,000 population.

## Future Development

The specialty is planning to increase consultant numbers and this will be reflected by some increase in recognised training posts. For the Senate of Surgery recommendation of 1 consultant per 100,000 population and to allow a consultant delivered service, a doubling of consultant numbers to 600 will be required.

## Scope of Specialty

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.

One of the most interesting aspects of the specialty is the frequency with which plastic surgeons work with surgeons from other specialties such as general surgery, orthopaedics, otorhinolaryngology, and maxillofacial surgery. In these cases the reconstructive techniques that plastic surgeons have at their disposal are recognised. The specialty is also closely associated with aesthetic surgery where body parts are surgically altered to bring about an improvement in appearance.

Major research areas include wound healing and scar management. The specialty is known for the innovations and advances it has brought to the practice of surgery in general. This includes the use of microsurgical techniques, the understanding of the blood supply of the skin and soft tissues allowing the introduction of many types of flap used in clinical practice, and the introduction of tissue engineering methods in the development of skin substitutes.

## **Training**

The aim of the curriculum is 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, lasting an indicative 6 years, excluding training in areas of special interest, is made up of three stages, initial ST1 and 2; intermediate ST3 and 4; and final ST5 and 6. At the end of this period, having reached the required competencies and having successfully taken the Intercollegiate Examination, the candidate will be eligible to be awarded a CCT. Training in a special interest will normally mean that the award of a CCT will be deferred until this is completed.

### **Special Interest Training**

Increasingly, senior trainees undertake training in a special interest towards the end of training. So-called interface training lasting 1-2 years is available in the following areas:

- head and neck (with exposure to training from otorhinolaryngologists and maxillofacial surgeons)
- hand surgery (in combination with orthopaedic surgeons)
- cleft lip and palate (with otorhinolaryngologists and maxillofacial surgeons)
- breast surgery (with general surgeons)

Implicit in the wide ranging nature of the specialty is the requirement that a consultant in plastic surgery must command a high level of skill, experience and judgement in carrying out all the roles that his/her job entails. This in turn means that the training programme is seen as a whole and it is not envisaged that plastic surgeons will be considered trained if they fail to complete it.

By the end of training trainees including those following an academic pathway must demonstrate competence in all aspects of the syllabus including management of key index conditions.

**James Watson** - SAC Chair

**Eric Freedlander** - Content Editor

## 2. Key Conditions

### 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

#### GU

- 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

## 3. Initial Stage

### Four point scales

What the 4 point scale means for Knowledge

1. Knows of
2. Knows basic concepts
3. Knows generally
4. Knows both specifically and broadly

What the 4 point scales means for **Clinical Skills** and **Technical Skills and Procedures**

1. Has observed
2. Can do with assistance
3. Can do whole but may need assistance
4. Competent to do whole without assistance, including managing complications

## 3.1 Overview

### Overview of Initial Stage

By the end of this stage trainees, including those pursuing an academic pathway will have been exposed to a wide range of conditions and procedures. The module Generic Surgical Skills and Knowledge –all specialties is common to all the surgical specialties.

They will have to demonstrate competence in to the level detailed in the syllabus in the following areas:

- Emergency uncomplicated resuscitation of burns in children and adults.
- Emergency resuscitation of the acutely injured patient suffering from haemorrhagic shock.
- Assessment of hand trauma cases
- Initial assessment of cases of lower limb trauma involving compound fractures, soft tissue damage, skin loss, major nerve and/or vessel injury.
- The knowledge and basic understanding of the common conditions encountered in the specialties through which they have rotated.
- Basic operative skills relating to tissue handling, wound closure and simple lesion excision.
- The use of learning resources including scientific journals and textbooks, scientific meetings and seminars, and web based resources.
- The ability to constructively criticise medical literature.
- The approaches to scientific research including making appropriate ethical committee submissions.
- The candidate must also be seen to be developing appropriate professional skills as described in "Good Medical Practice."

### ST1 Placement in Plastic Surgery

The purpose of a four or six month attachment in plastic surgery is to:

- provide trainees with insight and skills in the acute management of hand, complex limb and facial trauma as well as thermal injury
- highlight the role of plastic surgeons and plastic surgical techniques in the reconstruction following severe injuries, burns and the consequences of malignancy

### Knowledge

- An understanding of the relevant anatomy, physiology and pathology of acute conditions including thermal injury, hand, limb and facial trauma
- An appreciation of the importance of good surgical technique involved in soft tissue handling and wound closure
- An understanding of wound management
- For career specialists some knowledge of common elective plastic surgery operations

### Clinical Skills

- An understanding of burns assessment and resuscitation
- An understanding of burn wound excision and grafting
- An understanding of burn wound dressings
- An awareness of the roles of nursing staff, physiotherapists and occupational therapists in rehabilitation

- The ability to systematically undertake an examination of the hand and upper limb, with particular reference to cases of hand trauma
- The ability to undertake, with supervision, exploration of hand trauma cases and in minor cases to undertake wound closure
- An awareness of the roles of physiotherapists, occupational therapists in rehabilitation of cases of hand trauma
- For career specialists, to begin to develop some ability to carry out some aspects of common elective plastic surgery operations

### **Technical Skills**

- To undertake, with supervision, excision of benign skin lesions and closure of simple wounds
- The opportunity to begin to develop surgical techniques including using the operating microscope
- The ability to undertake, with supervision, debridement of wounds.
- The ability to undertake, with supervision, the excision of a hand ganglion.
- The ability to undertake, with supervision, the repair of divided hand extensor tendon

### **Professional Skills**

- To observe the complementary roles of plastic surgeons and orthopaedic surgeons in the management of complex lower limb trauma

## 3.2 Conditions

### Generic Surgical Skills and Knowledge- All Specialties

Basic sciences
<b>Objective</b> <i>Underpinning basic science knowledge appropriate for the practice of surgery.</i>
<i>Applied anatomy: Knowledge of anatomy appropriate for surgery</i>
<i>Physiology: Knowledge of physiology relevant to surgical practice</i>
<i>Pathology: Knowledge of pathological principles underlying system specific pathology</i>
<i>Microbiology: Knowledge of microbiology relevant to surgical practice</i>
<i>Radiology: Knowledge of diagnostic and interventional radiology</i>
<b>Knowledge</b>
Applied anatomy:
4 Development, organs and structures, surface and imaging anatomy of thorax, abdomen, pelvis, perineum, limbs, neck as appropriate for surgical operations
Physiology:
4 Homeostasis
3 Thermoregulation
3 Metabolic pathways
4 Blood loss
4 Sepsis
4 Fluid balance and fluid replacement therapy
3 Metabolic abnormalities
Pathology:
4 Inflammation
4 Wound healing
4 Cellular injury
4 Vascular disorders
4 Disorders of growth, differentiation and morphogenesis
4 Tumours
3 Surgical immunology
3 Surgical haematology
Microbiology:
4 Surgically important microorganisms
4 Sources of infection
4 Asepsis and antisepsis
4 Sterilisation
4 Antibiotics
4 High risk patient management
Radiology:
3 Principles of diagnostic and interventional radiology
<b>Clinical Skills</b>
No content
<b>Technical Skills</b>
No content

## Professional Skills

No content

### Basic surgical skills

#### Objective

*Acquisition of basic surgical skills in instrument and tissue handling.*

*Incision of skin and subcutaneous tissue: Ability to incise superficial tissues accurately with suitable instruments.*

*Closure of skin and subcutaneous tissue: Ability to close superficial tissues accurately.*

*Knot tying: Ability to tie secure knots.*

*Haemostasis: Ability to achieve haemostasis of superficial vessels.*

*Tissue retraction: Use of suitable methods of retraction.*

*Use of drains: Knowledge of when to use a drain and which to choose.*

*Tissue handling: Ability to handle tissues gently with appropriate instruments.*

*Skill as assistant: Ability to assist helpfully, even when the operation is not familiar.*

#### Knowledge

Incision of skin and subcutaneous tissue:

- 4 Langer's lines
- 4 Healing mechanism
- 4 Choice of instrument
- 4 Safe practice
- 4 Basic Surgical Skills course

Closure of skin and subcutaneous tissue:

- 4 Options for closure
- 4 Suture and needle choice
- 4 Safe practice

Knot tying:

- 4 Choice of material

Haemostasis:

- 4 Techniques

Tissue retraction:

- 4 Choice of instruments

Use of drains:

- 4 Indications
- 4 Types
- 4 Management/removal

Tissue handling:

- 4 Choice of instruments

#### Clinical Skills

Incision of skin and subcutaneous tissue:

4 Ability to use scalpel, diathermy and scissors

Closure of skin and subcutaneous tissue:

4 Accurate and tension free apposition of wound edges

Knot tying:

4 Single handed

4 Double handed

4 Instrument

4 Superficial

4 Deep

Haemostasis:

4 Control of bleeding vessel (superficial)

4 Diathermy

4 Suture ligation

4 Tie ligation

4 Clip application

Tissue retraction:

4 Tissue forceps

4 Placement of wound retractors

Use of drains:

4 Insertion

4 Fixation

4 Removal

Tissue handling:

4 Appropriate application of instruments and respect for tissues

Skill as assistant:

4 Anticipation of needs of surgeon when assisting

**Technical Skills**

No content

**Professional Skills**

No content

## **The Assessment and Management of the Surgical Patient**

### **Objective**

*Ability to assess the patient and manage the patient, and propose surgical or non-surgical management.*

### **Knowledge**

No content

### **Clinical Skills**

3 Surgical history and examination (elective and emergency)

3 Construct a differential diagnosis

3 Plan investigations

3 Clinical decision making

3 Case work up and evaluation; risk management

3 Active participation in MDTs

3 Taking consent for intermediate level intervention; emergency and elective

3 Written clinical communication skills

3 Interactive clinical communication skills: patients

3 Interactive clinical communication skills: colleagues

**Technical Skills**

No content

**Professional Skills**

No content

**Perioperative care****Objective**

*Ability to manage patient care in the perioperative period.*

*Preoperative assessment and management: Ability to assess the patient adequately prior to operation and manage any preoperative problems appropriately.*

*Intraoperative care: Ability to conduct safe surgery in the operating theatre environment.*

*Postoperative care: Ability to care for the patient in the postoperative period.*

*Blood Products: Appropriate use of blood products.*

*Antibiotics: Appropriate use of antibiotics.*

**Knowledge**

Preoperative assessment and management:

- 4 Cardiorespiratory physiology
- 3 Diabetes mellitus
- 3 Renal failure
- 4 Pathophysiology of blood loss
- 4 Pathophysiology of sepsis
- 4 Risk factors for surgery and scoring systems
- 3 Principles of day surgery

Intraoperative care:

- 4 Safety in theatre
- 4 Sharps safety
- 4 Diathermy, laser use
- 4 Infection risks
- 3 Radiation use and risks
- 4 Tourniquets
- 3 Principles of local, regional and general anaesthesia

Postoperative care:

- 4 Cardiorespiratory physiology
- 3 Diabetes mellitus
- 3 Renal failure
- 4 Pathophysiology of blood loss
- 4 Pathophysiology of sepsis
- 4 Complications specific to particular operation
- 2 Critical care

Blood Products:

- 4 Components of blood
- 4 Alternatives to use of blood products

Antibiotics:

- 4 Common pathogens in surgical patients
- 4 Antibiotic sensitivities
- 4 Antibiotic side-effects
- 4 Principles of prophylaxis and treatment

**Clinical Skills**

Preoperative assessment and management:

- 4 History and examination
- 4 Interpretation of preop investigations
- 3 Management of comorbidity
- 4 Resuscitation

Intraoperative care:

- 4 Safe conduct of intraoperative care

Postoperative care:

- 4 Assessment of patient's condition
- 4 Postoperative analgesia
- 4 Fluid and electrolyte management
- 4 Monitoring of postoperative patient
- 4 Detection of impending organ failure
- 4 Initial management of organ failure
- 4 Use of MDT meetings

Blood Products:

- 4 Appropriate use of blood products
- 4 Management of the complications of blood product transfusion

Antibiotics:

- 4 Appropriate prescription of antibiotics

#### **Technical Skills**

No content

#### **Professional Skills**

Preoperative assessment and management:

- 0 Communication with patient and relatives
- 0 Liason with physicians and ITU staff

Intraoperative care:

- 0 Communication with other staff members

Postoperative care:

- 0 Communication with patient and relatives
- 0 Liason with physicians and ITU staff

Blood Products:

- 0 Communication with patient and relatives

### **Assessment of multiple injured patients including children**

#### **Objective**

*Safely assess the multiply injured patient.*

#### **Knowledge**

- 3 Anatomy
- 3 Pathogenesis of shock
- 1 Differences In Children

#### **Clinical Skills**

- 4 History and examination
- 3 Investigation
- 4 Resuscitation and early management according to ATLS and APLS guidelines

3 Referral to appropriate surgical subspecialties

**Technical Skills**

3 Central venous line insertion

3 Chest drain insertion

2 Diagnostic peritoneal lavage

**Professional Skills**

No content

**Bleeding diathesis**

**Objective**

*Understand, Recognise and Manage bleeding diathesis in the surgical patient.*

*Diagnosis: Diagnose possible bleeding diathesis in the surgical patient.*

*Treatment: Manage bleeding diathesis in the surgical patient.*

**Knowledge**

Diagnosis:

3 Mechanism of haemostasis

3 Pathology of impaired haemostasis e.g. haemophilia, liver disease, massive haemorrhage

Treatment:

3 Understands use of blood products

**Clinical Skills**

Diagnosis:

4 Recognition of conditions likely to lead to the diathesis

3 Recognition of abnormal bleeding during surgery

Treatment:

3 Avoidance by correct surgical techniques

3 Corrective measures, e.g. warming, packing

**Technical Skills**

No content

**Professional Skills**

Diagnosis:

0 Communication with laboratory staff

Treatment:

0 Communication with anaesthetist, theatre team and laboratory staff

**Venous thrombosis + embolism**

**Objective**

*Understanding of practice in the prevention and management of Venous thrombosis and Embolism.*

*Coagulation: Understanding of the physiology and pathophysiology of coagulation.*

*Diagnosis: Able to arrange basic investigation of patients with suspected venous thrombosis and embolism.*

*Treatment: Ability to initiate treatment of venous thrombosis and embolism.*

*Prophylaxis: Use of common methods of prophylaxis against venous thrombosis and embolism.*

**Knowledge**

<p>Coagulation:</p> <ul style="list-style-type: none"> <li>2 Clotting mechanism (Virchow Triad)</li> <li>2 Effect of surgery and trauma on coagulation</li> <li>2 Tests for thrombophilia and other disorders of coagulation</li> </ul> <p>Diagnosis:</p> <ul style="list-style-type: none"> <li>2 Methods of investigation for suspected thromboembolic disease</li> </ul> <p>Treatment:</p> <ul style="list-style-type: none"> <li>4 Anticoagulation, heparin and warfarin</li> <li>2 Role of V/Q scanning, CT angiography and thrombolysis</li> <li>2 Place of pulmonary embolectomy</li> </ul> <p>Prophylaxis:</p> <ul style="list-style-type: none"> <li>3 Knowledge of methods of prevention, mechanical and pharmacological</li> </ul> <p><b>Clinical Skills</b></p> <p>Coagulation:</p> <ul style="list-style-type: none"> <li>4 Recognition of patients at risk</li> </ul> <p>Diagnosis:</p> <ul style="list-style-type: none"> <li>3 Awareness of symptoms and signs associated with pulmonary embolism and DVT</li> <li>2 Role of duplex scanning, venography and d-dimer measurement</li> </ul> <p>Treatment:</p> <ul style="list-style-type: none"> <li>3 Initiate and monitor treatment</li> </ul> <p>Prophylaxis:</p> <ul style="list-style-type: none"> <li>4 Awareness at all times of the importance of prophylaxis</li> </ul> <p><b>Technical Skills</b></p> <p>No content</p> <p><b>Professional Skills</b></p> <p>Coagulation:</p> <ul style="list-style-type: none"> <li>0 Protocol management</li> </ul> <p>Diagnosis:</p> <ul style="list-style-type: none"> <li>0 Ability to organise and time appropriate investigation</li> </ul> <p>Treatment:</p> <ul style="list-style-type: none"> <li>0 Prioritisation of investigation and treatment</li> <li>0 Patient counselling</li> </ul> <p>Prophylaxis:</p> <ul style="list-style-type: none"> <li>0 Able to implement in the team setting the culture of prophylaxis</li> </ul>
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<p><b>Nutrition</b></p> <p><b>Objective</b></p> <p><i>Recognise the need for artificial nutritional support and arrange enteral nutrition.</i></p> <p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>3 Effects of malnutrition, both excess and depletion</li> <li>3 Methods of screening and assessment</li> </ul>
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**Clinical Skills**

3 Arrange access to suitable artificial nutritional support, preferably via a nutrition team:

Dietary supplements

2 Arrange access to suitable artificial nutritional support, preferably via a nutrition team:

Enteral nutrition

1 Arrange access to suitable artificial nutritional support, preferably via a nutrition team:

Parenteral nutrition

**Technical Skills**

No content

**Professional Skills**

No content

**Academic activity****Objective**

*An introduction to research methodology and to teaching others.*

*Research: Ability to perform a simple research study and present the results.*

*Teaching: Ability to teach small groups such as medical students.*

**Knowledge**

Research:

2 Research methodology

Teaching:

2 Teaching methods

**Clinical Skills**

Research:

2 Ability to analyse published evidence

Teaching:

3 Ability to teach small groups

**Technical Skills**

No content

**Professional Skills**

No content

**Management of the dying patient****Objective**

*Ability to manage the dying patient appropriately.*

*Palliative Care: Good management of the dying patient in consultation with the palliative care team.*

*Principles of organ donation: Knowledge of the principles of organ donation.*

**Knowledge**

Palliative Care:

3 Care of the terminally ill

4 Analgesia

3 Antiemetics

3 Laxatives

Principles of organ donation:

3 Circumstances in which consideration of organ donation is appropriate

3 Principles of brain death

3 Understanding the role of the coroner and the certification of death

**Clinical Skills**

Palliative Care:

3 Symptom control in the terminally ill patient

**Technical Skills**

No content

**Professional Skills**

Palliative Care:

0 Communication with the patient and relatives

0 Liason with the palliative care team

Principles of organ donation:

0 Communication with relatives

0 Liason with the transplant team

0 Learn to cope with crisis and mortality

**Endocrine and Metabolic Disorders**

**Objective**

*To identify, investigate and managesurgical patients with common metabolic disorders*

- *To identify, investigate and manage surgical patients with Thyrotoxicosis*
- *To identify, investigate and manage surgical patients with Hypothyroidism*
- *To identify, investigate and manage surgical patients with Hypercalcaemia*
- *Knowledge of the significance of corticosteroid therapy in patient care*
- *To identify, investigate and manage surgical patients with diabetes mellitus*
- *To identify, investigate and manage surgical patients with Hyponatraemia*

**Knowledge**

Thyrotoxicosis

4 Pathophysiology of thyroid hormone excess and associated risks from surgery

Hypothyroidism

4 Pathophysiology of thyroid hormone deficiency and associated risks from surgery

Hypercalcaemia

3 Causes and effects of hypercalcaemia

Cortico-steroid therapy

4 Complications

4 Steroid insufficiency

Diabetes Mellitus

4 Complications

Hyponatraemia

4 Pathophysiology of fluid and electrolyte balance

4 Causes of hyponatraemia

**Clinical Skills**

Thyrotoxicosis

4 History and examination

3 Investigation of thyrotoxicosis

Hypothyroidism

4 History and examination

4 Investigation

Hypercalcaemia

3 Investigation of hypercalcaemia

3 Treatment of hypercalcaemia

Cortico-steroid therapy  
4 Peri-operative management of patients on steroid therapy

Diabetes Mellitus  
4 Peri-operative management of diabetic patients

Hyponatraemia  
4 Treatment

**Technical Skills**

No content

**Professional Skills**

Liase with endocrinologists  
Liase with diabetic team

**Child Protection**

**Objective**

**Knowledge**

- 4 Working knowledge of Trust and ACPC Child Protection Procedures
- 4 Basic understanding of child protection law
- 4 Understanding of Children's rights
- 4 Working knowledge of types and catagories of child maltreatment, presentations, signs and other features (primarily physical, emotional, sexual, neglect, professional)
- 4 Understanding of one personal role, responsibilities and appropriate referral patterns in child protection
- 4 Understanding of the challenges of working in partnership with children and families

**Clinical Skills**

Ability to:

- 4 recognise the possibility of abuse or maltreatment
- 4 recognise limitations of own knowledge and experience and seek appropriate expert advice
- 4 urgently consult immediate senior in surgery to enable referral to paediatricians
- 4 keep appropriate written documentation relating to child protection matters
- 4 Communicate effectively with those involved with child protection, including children and their families

**Technical Skills**

No content

**Professional Skills**

No content

## Generic Plastic Surgery

### **Use of plastic surgery techniques including design and use of z-plasty, pedicled and myocutaneous flaps, free flaps**

#### **Objective**

*Competence in the management of the surgical patient and application of the specified plastic surgery techniques.*

#### **Knowledge**

- 3 Relevant anatomy and physiology.
- 3 Relevant associated disease and conditions.
- 3 Appropriate pre-operative investigations and patient assessment.
- 2 Range, indications and principles of relevant operations.
- 3 Post-operative complications and their management.
- 2 Recent advances.
- 2 Relevant anatomy, physiology, pharmacology, pathology relating to skin and flap blood supply
- 2 Random, axial pattern flaps.
- 2 Concept of vessel territories.

#### **Clinical Skills**

- 4 Assessment and non-operative management of the acute and elective surgical patient.
- 4 History taking.
- 4 Examination.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning.

#### **Technical Skills**

- 3 Z-plasty
- 2 V-Y advancement
- 3 Excision of lesion
- 3 Wide excision of lesion
- 3 SSG
- 3 FTSG
- 3 Excision & local flap
- 2 Random and axial pattern flaps
- 2 Rotation, transposition flaps
- 2 Pedicled cutaneous, fasciocutaneous, myocutaneous and osteocutaneous flaps
- 2 Free flaps

#### **Professional Skills**

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

## Burns

### Assessment, resuscitation and initial management of burns

#### Objective

*Competence in the early phase of burns management*

#### Knowledge

- 2 Relevant anatomy, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.
- 2 Relevant associated disease and conditions.
- 3 Appropriate pre-operative investigations and patient assessment.
- 2 Range, indications and principles of relevant operations.
- 2 Post-operative complications and their management.
- 2 Recent advances.
- 2 Relevant ancillary investigations, interventions e.g. psychological support, physiotherapy.
- 2 Mechanisms of burn injury.
- 2 Causes of burn injury.
- 3 IV resuscitation regimens.
- 3 Use of blood products, plasma volume expanders.
- 2 Non-accidental injuries.

#### Clinical Skills

- 3 Assessment and non-operative management of the acute burns patient
- 4 History taking.
- 4 Examination including assessment of burn surface area and depth.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning.

#### Technical Skills

- 3 Management of fluid & electrolyte balance
- 3 Assessment & resuscitation
- 3 Open venotomy
- 3 Escharotomy
- 1 Bronchoscopy
- 2 Endotracheal intubation
- 2 Tracheostomy
- 2 Burn wound management with dressings

#### Professional Skills

- 2 Teamworking with fellow medical, nursing and ancillary professionals.
- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

### Surgical management of burns

#### Objective

*Competence in the surgical aspects of burns management*

#### Knowledge

- 2 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.
- 2 Relevant associated disease and conditions.
- 3 Appropriate pre-operative investigations and patient assessment.
- 3 Range, indications and principles of relevant operations.
- 2 Post-operative complications and their management.
- 2 Recent advances.
- 2 Relevant ancillary investigations, interventions e.g. psychological support, physiotherapy, occupational therapy.
- 2 Knowledge of wound healing and tissue transplantation

#### Clinical Skills

- 3 Assessment and non-operative management of the burns patient.
- 4 History taking.
- 4 Examination.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning.

#### Technical Skills

- 2 Early tangential excision and split skin grafting
- 2 Late grafting
- 1 Use of allograft skin
- 1 Use of skin substitutes
- Professional Skills**
- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

### **Diagnosis and management of complications of burns including inhalational injury and septic shock**

#### **Objective**

*Competence in management of complications arising during treatment of burn injury*

#### **Knowledge**

- 2 Relevant anatomy, physiology, bacteriology, biochemistry, and pathology
- 2 Pathophysiology of smoke inhalation and effect on respiration
- 2 Pathophysiology of renal failure as relating to burn injury
- 2 Dietetics as relating to burn injury metabolism
- 2 Shock complicating resuscitation
- 2 Septic shock
- 2 Intensive care monitoring and treatment

#### **Clinical Skills**

- 2 Assessment of the burn patient.
- 4 History.
- 4 Examination.
- 3 IV resuscitation.
- 3 Provision of oxygen therapy via face mask.
- 1 Endotracheal intubation.
- 2 Skills of analysis and diagnostic synthesis, judgement.

#### **Technical Skills**

No content

#### **Professional Skills**

- 2 Teamworking and liaison with other involved professionals caring for the burn patient.
- 2 Ethical awareness and reasoning.
- 2 Practice of audit.

### **Late management and rehabilitation**

#### **Objective**

*Competence in burns management*

*Competence in late management, with understanding of the needs for patient rehabilitation*

#### **Knowledge**

- 2 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.
- 2 Relevant associated disease and conditions.
- 2 Range, indications and principles of relevant operations.
- 2 Post-operative complications and their management.
- 2 Recent advances.
- 2 Relevant ancillary investigations, interventions e.g., psychological support, physiotherapy, occupational therapy.
- 2 Relevant teamworking with other professionals
- 1 Prosthetics.

#### **Clinical Skills**

- 3 Assessment and non-operative management of the burns patient
- 4 History taking.
- 4 Examination.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

#### **Technical Skills**

- 2 Scar management including use of pressure garments
- Contracture release:
  - 2 Grafts
  - 2 Flaps

**Professional Skills**

2 Skills of analysis and diagnostic synthesis, judgement, surgical planning, team working, management (of resources, including time and colleagues), communication (with colleagues, patients and relatives), record keeping and reliability.

3 Ethical awareness and reasoning, consent taking skills.

2 Practice of audit.

## Hand and Upper Limb

### Trauma

#### Management of all aspects of hand trauma

##### Objective

*Competence in the diagnosis and management of hand trauma*

##### Knowledge

- 2 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.
- 2 Relevant associated disease and conditions.
- 2 Appropriate pre-operative investigations and patient assessment.
- 2 Range, indications and principles of relevant operations.
- 2 Post-operative complications and their management.
- 2 Recent advances.
- 2 Relevant ancillary investigations, interventions e.g. physiotherapy, occupational therapy.
- 2 Crush injuries.
- 1 Injection injuries.

##### Clinical Skills

- 3 Assessment and non-operative of the management of the acute surgical patient
- 4 History taking.
- 4 Examination including hand examination.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

##### Technical Skills

- 3 Wound exploration and debridement.
- 2 Primary microsurgical repair of peripheral nerve
- 2 Primary graft to peripheral nerve
- 2 Random pattern flap reconstruction of fingertip (cross-finger, Kutler, Kleinert)
- 1 Neurovascular island flap reconstruction (homodigital island, Littler)
- 3 Primary repair of extensor of hand
- 2 Primary repair of flexor of hand
- 2 Primary open reduction of small bone and fixation
- 3 Manipulation of fracture of bone
- 1 Replantation of digit, hand
- 1 Amputation of phalanx of finger
- 1 Provision of skin cover using grafts, flaps

##### Professional Skills

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

#### Surgical management of brachial plexus injuries

##### Objective

*An understanding of the principles of diagnosis, investigation and management of patients, children and adults, with closed brachial plexus injuries*

##### Knowledge

- 2 Relevant anatomy, physiology and pathology.
- 2 Relevant associated conditions including other trauma.
- 2 Appropriate pre-operative investigations and assessment including neurological assessment, nerve conduction studies. electromyography.
- 2 Range, indications and principles of relevant operations.
- 2 Postoperative complications and their management.
- 2 Relevant ancillary interventions including physiotherapy, occupational therapy.
- 2 Mechanisms of nerve injury and regeneration.

##### Clinical Skills

- 3 Assessment and non-operative management of these patients.
- 4 History
- 4 Examination including neurological examination.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning.

**Technical Skills**

- 1 Surgical exposure of brachial plexus
- 1 Exploration of brachial plexus.
- 1 Intraoperative nerve testing.
- 1 Neurolysis
- 1 Nerve grafting.
- 2 Nerve repair.
- 1 Nerve transfers
- 1 Tendon transfers.

**Professional Skills**

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

## Elective

### Diagnosis and management of congenital hand conditions

#### Objective

*Competence in the management of congenital hand conditions.*

#### Knowledge

- 2 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.
- 2 Relevant associated disease and conditions.
- 2 Appropriate pre-operative investigations and patient assessment.
- 2 Range, indications and principles of relevant operations.
- 2 Post-operative complications and their management.
- 2 Recent advances.
- 2 Relevant ancillary interventions e.g. physiotherapy, occupational therapy.
- 2 Classification of congenital hand and forearm anomalies.

#### Clinical Skills

- 3 Assessment and non-operative of the management of the elective surgical patient.
- 4 History taking.
- 3 Examination.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning.

#### Technical Skills

- 2 Correction of polydactyly (ulnar)
- 1 Correction of syndactyly.
- 1 Correction of duplicate thumb.
- 2 Correction of triggering of digit.
- 1 Release of constriction band.

#### Professional Skills

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

### Management of acquired conditions of the hand

#### Objective

*Competence in the management of elective, acquired hand and forearm conditions.*

#### Knowledge

- 2 Relevant embryology, anatomy, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.
- 2 Relevant associated disease and conditions.
- 2 Appropriate pre-operative investigations and patient assessment.
- 2 Range, indications and principles of relevant operations.
- 2 Post-operative complications and their management.
- 2 Recent advances.
- 2 Relevant ancillary investigations, interventions e.g. appropriate drug therapy, physiotherapy, occupational therapy.
- 1 Nerve compressions.
- 1 Vasospastic disorders.
- 1 Rheumatoid disease.
- 2 Dupuytren's contracture.
- 2 Ganglion.
- 1 Loss of motor function affecting the hand, principles of tendon transfer

#### Clinical Skills

- 3 Assessment and non-operative of the management of the acute and elective surgical patient
- 4 History taking.
- 3 Examination.
- 3 Digital nerve block
- 1 Regional nerve block
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

#### Technical Skills

- 2 Carpal tunnel release
- 1 Cubital tunnel release

- 2 Insertion of steroid (trigger finger, de Quervain's, carpal tunnel)
  - 1 Palmar fasciectomy
  - 1 Dermofasciectomy
  - 2 Excision of ganglion
  - 1 Tenosynovectomy (rheumatoid)
  - 1 Multiple transfer of tendon to tendon
  - 1 Secondary repair of tendon using temporary prosthesis
  - 1 Tenolysis of flexor
  - 1 Release of constriction of sheath of tendon (trigger finger, de Quervain's)
  - 1 Microvascular transfer of toe to thumb
  - 1 Pollicisation of finger
  - 1 Swanson MCPJ or PIPJ arthroplasty
  - 1 Trapezectomy
  - 1 Darrach procedure
  - 1 Bone-graft
  - 1 Fusion of wrist
  - 1 Primary arthrodesis and internal fixation
  - 1 Repair of capsule of joint for stabilisation of joint (eg Thumb UCL repair)
  - 1 Release of contracture of joint (Check rein ligament release)
  - 1 Wrist arthroscopy
- Professional Skills**
- 3 Ethical awareness and reasoning, consent taking skills.
  - 2 Practice of audit.

## Cleft Lip and Palate/Cranio Facial Anomalies

### Management of children and adults with cleft lip and palate

#### Objective

*Competence in the management of patients with cleft lip and/or cleft palate*

#### Knowledge

- 1 Relevant embryology, anatomy, physiology.
- 1 Incidence of clefting.
- 1 Related conditions and syndromes.
- 1 Preoperative assessment and investigation.
- 1 Range, indications and principles of operations.
- 1 Postoperative complications.
- 1 Speech therapy.
- 1 Hearing tests.
- 1 Orthodontics, paediatric and restorative dentistry.
- 1 Genetics relating to clefting.
- 2 Structure and function of MDTs.

#### Clinical Skills

- 3 Assessment and non-operative management.
- 4 History taking.
- 4 Examination.
- 2 Skills of analysis and diagnostic synthesis, judgement and surgical planning

#### Technical Skills

- 1 Presurgical orthodontics
- 1 Cleft lip repair and revision
- 1 Cleft palate repair and re-repair
- 1 Pharyngoplasty of varying types
- 1 Alveolar bone grafting
- 1 Maxillary and mandibular osteotomy
- 1 Speech assessment
- 1 Palatal videofluoroscopy
- 1 Nasendoscopy

#### Professional Skills

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.
- 2 Multidisciplinary teamworking

### Investigation and management of velopharyngeal incompetence

#### Objective

*Competence in the management of velopharyngeal incompetence and related speech problems with or without cleft palate*

#### Knowledge

- 2 Relevant anatomy, embryology and physiology.
- 2 Related syndromes and conditions.
- 2 Pre-operative assessment and investigation including speech assessment, nasometry, palatal videofluoroscopy, and nasendoscopy.
- 1 Range, indication and principles of relevant operations.
- 2 Post-operative complications and their management.
- 2 Speech therapy.
- 1 Hearing tests.
- 2 Structure and function of MDTs.

#### Clinical Skills

- 1 Assessment and non-operative management.
- 4 History taking.
- 4 Examination.
- 1 Skills of analysis, diagnostic synthesis, judgement and surgical planning.

#### Technical Skills

- 1 Palatal re-repair
- 1 Palatal exploration with intravelar veloplasty

- 1 Furlow's repair
- 1 Pharyngoplasty of varying types.

**Professional Skills**

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.
- 2 Multidisciplinary team working.

**Craniofacial deformities**

**Objective**

*To gain knowledge of the commoner craniofacial deformities*

**Knowledge**

- 1 Relevant embryology, anatomy, physiology and pathology.
- 1 Relevant associated disease and syndromes.
- 1 Relevant investigations including imaging; paediatric, neurological and ophthalmic assessment.
- 1 Range, indications and principles of relevant operations.
- 2 Postoperative complications and their management.

**Clinical Skills**

- 2 Assessment and pre-operative management of the elective surgical patient.
- 4 History taking.
- 3 Examination.

**Technical Skills**

- 1 Common craniofacial procedures.

**Professional Skills**

- 1 Multidisciplinary team working.

## Head and Neck

### Principles of diagnosis and management of maxillofacial trauma

#### Objective

*Competence in the diagnosis and principles of treatment of maxillofacial trauma*

#### Knowledge

- 2 Relevant anatomy, physiology and pathology.
- 2 Relevant associated disease and conditions.
- 2 Appropriate pre-operative investigations including imaging, and patient assessment.
- 1 Range, indications and principles of relevant operations.
- 2 Postoperative complications and their management.
- 1 Methods of internal, external fracture fixation.
- 2 Fracture healing.
- 2 Associated head and neck injuries.
- 3 Glasgow coma scale.

#### Clinical Skills

- 2 Assessment and pre-operative management of the acute surgical patient.
- 4 History taking.
- 4 Examination.
- 2 Skills analysis, diagnostic synthesis, judgement, surgical planning.

#### Technical Skills

- 1 Manipulation of nasal bone fractures.
- 1 Orbital fractures.
- 1 Elevation of malar complex fractures.
- 1 Reduction and fixation of mandibular fractures.

#### Professional Skills

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

### Excisional surgery for benign and malignant disease

#### Objective

*Competence in management of patients with benign or malignant tumours of the head and neck.*

#### Knowledge

- 2 Relevant embryology, anatomy, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.
- 2 Relevant associated disease and conditions.
- 2 Appropriate pre-operative investigations including imaging, and patient assessment.
- 2 Tumour staging.
- 2 Range, indications and principles of relevant operations.
- 2 Post-operative complications and their management.
- 1 Recent advances.
- 2 Relevant ancillary investigations, interventions e.g. radiotherapy, chemotherapy, psychological support, physiotherapy, occupational, speech therapy, dietetics.
- 2 Effects of sun exposure and other aetiological factors.
- 2 Premalignant cutaneous and intraoral conditions.
- 2 Structure and function of MDTs.

#### Clinical Skills

- 2 Assessment and non-operative of the management of the acute surgical patient
- 4 History taking.
- 4 Examination.
- 2 Fine needle aspiration cytology.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

#### Technical Skills

Excisional surgery:

- 2 Lip
  - 1 Oral cavity, including tongue, floor of mouth, buccal mucosa, retromolar trigone, alveolus and mandible, palate
- 1 Maxilla

- 2 Eyelid
- 2 Nose
- 2 Ear
- 2 Scalp
- 2 Scalp & Bone
- 1 Parotidectomy-superficial, radical
- 1 Submandibular gland

**Professional Skills**

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.
- 2 Multidisciplinary team working.

**Approaches to reconstruction of the head and neck including defects of the ear, eyelid, nose and lip and oral cavity**

**Objective**

*Competence in reconstruction of traumatic or excisional defects of the head and neck region.*

**Knowledge**

- 2 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.
- 2 Relevant associated disease and conditions.
- 2 Soft tissue facial injuries.
- 2 Appropriate pre-operative investigations including imaging, and patient assessment.
- 2 Range, indications and principles of relevant operations.
- 2 Post-operative complications and their management.
- 1 Prosthetics.
- 1 Recent advances.
- 1 Relevant ancillary investigations, interventions e.g. radiotherapy, psychological support, physiotherapy, occupational therapy, speech therapy etc.

**Clinical Skills**

- 2 Assessment and non-operative of the management of the elective surgical patient.
- 4 History taking.
- 4 Examination.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning.

**Technical Skills**

Reconstructive Surgery

Lip:

- 1 Lip shave
- 2 Wedge excision
- 1 Local flaps

Oral cavity:

- 2 Skin grafts
- 1 Local Flaps
- 1 Regional Flaps
- 1 Free flaps including cutaneous, myocutaneous, osteocutaneous
- 1 Autologous mandibular reconstruction

Eyelids:

- 2 Skin grafts
- 1 V-excision +/- lateral canthotomy
- 1 Cheek advancement
- 1 Chondromucosal grafts
- 1 Lid switch
- 1 Ptosis correction
- 1 Repair of lacrimal apparatus

Nose:

- 2 Skin grafts
- 1 Local flaps

- 1 Regional flaps
- 1 Cartilage/bone grafts
- 1 Branemark reconstruction

**Ear:**

- 1 Skin grafts
- 1 Local flaps
- 1 Autologous reconstruction using cartilage framework
- 1 Branemark reconstruction

**Scalp:**

- 1 Local Flaps
- 1 Regional Flaps
- 1 Free Flaps
- 1 Bone Grafts
- 1 Alloplastic materials
- 1 Tissue expansion

**Professional Skills**

- 2 Multidisciplinary team working, management (of resources, including time and colleagues), communication (with colleagues, patients and relatives), record keeping and reliability.
- 2 Manual surgical skills ? dexterity, tissue handling.
- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

**Management of patients requiring radical or selective neck dissection for malignant disease**

**Objective**

*Competence in the management of patients requiring neck dissection for malignant disease*

**Knowledge**

- 2 Relevant embryology, anatomy, physiology, pathology, microbiology.
- 2 Relevant associated diseases and conditions.
- 2 Appropriate pre-operative investigations (including imaging techniques) and patient management.
- 2 Range, indications and principles of relevant operations including the different types of neck dissection performed.
- 2 Postoperative complications and their management.
- 2 Classification of cervical lymph node groups.
- 2 FNA techniques.
- 1 Indications for sentinel node biopsy.
- 2 Structure and function of MDTs.
- 2 Relevant ancillary investigations and interventions, including radiotherapy, chemotherapy, physiotherapy, occupational therapy, and dietetics.

**Clinical Skills**

- 2 Assessment and non-operative management of the elective surgical patient.
- 4 History taking
- 4 Examination

**Technical Skills**

- 2 Cervical lymph node biopsy
- 2 Radical neck dissection
- 2 Selective neck dissections of various types

**Professional Skills**

- 2 Multidisciplinary team working
- 3 Ethical awareness and reasoning, consent taking skills
- 2 Practice of audit

**Approaches to management of facial palsy**

**Objective**

*Competence in management of patients children and adults, who have congenital or acquired facial palsy.*

**Knowledge**

- 2 Relevant embryology, anatomy, physiology, pathology.
- 2 Relevant associated disease and conditions.
- 2 Appropriate pre-operative investigations and patient assessment.
- 2 Range, indications and principles of relevant operations.
- 2 Post-operative complications and their management.
- 2 Recent advances.
- 2 Relevant ancillary interventions.

**Clinical Skills**

- 2 Assessment and non-operative of the management of the elective surgical patient.
- 4 History taking.
- 4 Examination.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

**Technical Skills**

- 1 Static procedures including fascial slings.
- 1 Eyelid procedures including gold weight insertion.
- 1 Facial nerve grafting.
- 1 Microvascular free muscle transfer.

**Professional Skills**

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

**Investigation and management of vascular and related abnormalities****Objective**

*Competence in the diagnosis and management of patients, children and adult, with congenital abnormalities of the head and neck*

**Knowledge**

- 2 Relevant anatomy, physiology, haematology and pathology.
- 2 Relevant associated diseases and conditions.
- 2 Classification of vascular and lymphatic malformations
- 2 Branchiogenic anomalies
- 1 Laser therapy
- 2 Steroid therapy
- 1 Interventional radiology
- 2 Postoperative complications
- 2 Relevant ancillary investigations and interventions, including ophthalmic assessment

**Clinical Skills**

- 2 Assessment and non-operative management
- 4 History taking
- 4 Examination

**Technical Skills**

- 1 Sclerotherapy.
- 2 Debulking of haemangioma, lymphangioma.
- 2 Excision and reconstruction of facial structures including eyelids and lips.
- 2 Excision branchial sinus, fistula and cyst.
- 1 Excision of thyroglossal cyst.

**Professional Skills**

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

## Management of patients requiring breast reconstruction, reduction and augmentation

<b>Breast augmentation</b>
<b>Objective</b> <i>Competence in the management of patients requesting breast augmentation for breast aplasia, hypoplasia and asymmetry.</i>
<b>Knowledge</b> 2 Relevant embryology, anatomy, physiology, and pathology of the breast. 2 Relevant associated disease and conditions including benign breast disease. 2 Safety of breast implants including issues relating to the effects of silicone on the body, and regulation of implants. 2 Appropriate pre-operative investigations and patient assessment including psychological assessment. 2 Post-operative complications and their management. 2 Recent advances and developments relating to implant manufacture.
<b>Clinical Skills</b> 3 Assessment of the elective surgical patient. 4 History taking. 4 Examination. 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning
<b>Technical Skills</b> 2 Breast augmentation using differing surgical approaches.
<b>Professional Skills</b> 3 Ethical awareness and reasoning, consent taking skills. 2 Practice of audit.

<b>Breast reduction</b>
<b>Objective</b> <i>Competence in management of patients requesting breast reduction.</i>
<b>Knowledge</b> 2 Relevant embryology, anatomy and physiology of the breast. 2 Relevant associated disease and conditions including benign breast disease and causes of mammary hypertrophy. 2 Appropriate pre-operative investigations and patient assessment including psychological assessment. 2 Range, indications and principles of relevant operations for breast reduction and breast mastopexy. 2 Post-operative complications and their management. 2 Recent advances in techniques for breast reduction. 2 Blood supply and innervation of the breast, breast skin and nipple/areolar complex. 2 Causes of gynecomastia
<b>Clinical Skills</b> 3 Assessment of the elective surgical patient. 4 History taking. 4 Examination. 2 Skills of analysis, judgement, surgical planning.
<b>Technical Skills</b> 2 Various operations for breast reduction. 2 Various operations for breast mastopexy. 1 Correction of the tuberous breast 2 Correction of gynecomastia
<b>Professional Skills</b> 3 Ethical awareness and reasoning, consent taking skills. 2 Practice of audit.

<b>Breast reconstruction</b>
<b>Objective</b>

*Competence in the management of patients requiring breast reconstruction.  
An understanding of the principles involved in multidisciplinary assessment of these patients.*

**Knowledge**

- 2 Relevant embryology, anatomy, physiology, and pathology of the breast.
- 2 Relevant associated disease and conditions including carcinoma of the breast and its treatment.
- 2 Appropriate pre-operative investigations and patient assessment.
- 2 Range, indications and principles of relevant operations.
- 2 Post-operative complications and their management.
- 2 Recent advances in flap design.
- 2 Breast implants and issues surrounding safety of silicone.
- 2 Relevant ancillary investigations, interventions including radiotherapy, chemotherapy, hormone therapy, psychological support.

**Clinical Skills**

- 3 Assessment of the elective surgical patient.
- 4 History taking.
- 4 Examination.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

**Technical Skills**

- 2 Axillary nodal dissection
- 2 FNA/Core Biopsy
- Breast Reconstruction:
  - 2 Implant only
  - 2 Tissue expansion
- Pedicled Flaps:
  - 2 Latissimus dorsi
  - 2 TRAM
- Free flaps
  - 1 Latissimus dorsi
  - 1 TRAM
  - 1 DIEP
  - 1 SGAP
  - 1 IGAP

- 2 Nipple/areolar reconstruction

**Professional Skills**

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.
- 2 Multidisciplinary team working.

## Trunk and GU

### Perineal reconstruction

#### Objective

*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.*

#### Knowledge

2 Relevant embryology, anatomy, physiology, pathology including microbiology, and histopathology.

2 Relevant associated disease and conditions.

1 Issues relating to patients requesting gender reassignment.

3 Appropriate pre-operative investigations and patient assessment.

2 Range, indications and principles of relevant operations.

2 Post-operative complications and their management.

2 Recent advances.

#### Clinical Skills

3 Assessment and non-operative management of the acute and elective surgical patient

4 History taking.

4 Examination.

2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

#### Technical Skills

2 Skin grafts

1 Bowel grafts

2 Random flaps

2 Myocutaneous flaps

1 Free flaps

#### Professional Skills

3 Ethical awareness and reasoning, consent taking skills.

2 Practice of audit.

### The principles of surgical management of hypospadias.

#### Objective

*To obtain competencies in the management of cases of hypospadias.*

*To understand the principles of management in cases of epispadias and exstrophy.*

#### Knowledge

2 Relevant embryology, anatomy, physiology, pathology.

2 Relevant associated syndromes and conditions.

3 Appropriate pre-operative investigations and patient assessment.

2 Range, indications and principles of relevant operations.

2 Post-operative complications and their management.

2 Recent advances.

#### Clinical Skills

3 Assessment and non-operative of the management of the elective surgical patient.

4 History taking.

4 Examination.

2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

#### Technical Skills

2 Operative procedures in common use for hypospadias and related conditions including 1 stage, 2 stage techniques.

#### Professional Skills

3 Ethical awareness and reasoning, consent taking skills.

2 Practice of audit.

### Surgical management of congenital and acquired defects of the chest wall, abdominal wall and trunk

**Objective**

*Competence in the assessment and management of defects involving the trunk, including traumatic defects*

**Knowledge**

- 2 Relevant embryology, anatomy, physiology, and pathology
- 2 Appropriate pre-operative investigations and patient assessment.
- 2 Range, indication and principles of relevant operations.
- 2 Tissue expansion techniques

**Clinical Skills**

- 3 Assessment of the acute and elective surgical patient -adult and child
- 4 History taking
- 4 Examination
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

**Technical Skills**

- 2 Operations for Poland's syndrome involving chest deformity
- 1 Operations to cover spinal defects in children with spina bifida
- 2 Operations to provide skin cover in traumatic injuries involving skin, soft tissue loss
- 2 Operations to provide skin cover following surgical resection of tumours including abdominal wall defects, chest wall defects.
- 1 Provision of skin cover in sternotomy wounds

**Professional Skills**

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

## Lower Limb

### The multidisciplinary assessment of management of tibial fractures involving skin loss

#### Objective

*Competence in the combined management of patients with compound tibial fractures involving skin loss*

#### Knowledge

- 2 Relevant anatomy, physiology, pathology.
- 2 Fracture healing.
- 2 Skin blood supply.
- 1 External fixators.
- 3 Appropriate pre-operative investigations and patient assessment.
- 2 Range, indications and principles of relevant operations.
- 3 Post-operative complications and their management.
- 3 Relevant ancillary investigations and interventions including imaging techniques, physiotherapy, occupational therapy.

#### Clinical Skills

- 3 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

- 2 Suture of nerve, artery

#### Local flaps:

- 2 Fasciocutaneous
- 2 Perforator
- 2 Muscle
- 2 Myocutaneous

#### Free flaps:

- 1 Skin
- 1 Muscle
- 1 Myocutaneous
- 1 Osteocutaneous

#### Professional Skills

- 3 Ethical awareness and reasoning, consent taking skills
- 2 Practice of audit
- 2 Multidisciplinary teamworking

### Trauma

#### Objective

*Competence in the management of lower limb trauma.*

#### Knowledge

- 2 Relevant anatomy, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.
- 3 Appropriate pre-operative investigations and patient assessment.
- 2 Degloving injuries and their mechanism.
- 2 Compartment syndrome.
- 2 Range, indications and principles of relevant operations.
- 4 Post-operative complications and their management.
- 3 Relevant ancillary investigations and interventions, e.g. imaging techniques, physiotherapy, occupational therapy.

#### Clinical Skills

- 3 Assessment and non-operative of the management of the acute surgical patient
- 4 History taking.
- 4 Examination including assessment of limb viability, compartment syndrome.
- 3 Use of doppler.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

#### Technical Skills

- 3 Superficial wounds:-
- 2 Debridement/SSG
- 2 Fasciotomy
- 2 Amputations Above knee/Below knee
- 2 Harvest iliac crest bone graft
- 2 Suture of nerve, artery.

Local Flaps:-

- 2 Fasciocutaneous
- 2 Perforator
- 2 Muscle
- 2 Myocutaneous

Free Flaps:-

- 1 Radial
- 1 Lateral thigh
- 1 Lat. dorsi
- 1 Rectus abdominus
- 1 Fibula
- 1 DCIA

**Professional Skills**

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.
- 2 Multidisciplinary teamworking

**The management of lymphoedema**

**Objective**

*Competence in the diagnosis and management of lymphoedema*

**Knowledge**

- 2 Relevant anatomy,embryology, physiology and pathology of the lymphatic system
- 2 Classification of lymphoedema
- 2 Non-operative management
- 2 Surgical management

**Clinical Skills**

- 3 Assessment of the elective surgical patient
- 4 History taking
- 4 Examination

**Technical Skills**

- 2 Various operations including Charles's procedure

**Professional Skills**

- 3 Ethical awareness and reasoning, consent taking skills
- 2 Practice of audit

## Skin and Soft Tissue Tumours

### All aspects of diagnosis and management of benign and malignant skin tumours including surgical reconstruction and regional node dissection

#### Objective

*Competence in diagnosis and management of skin lesions including benign skin and subcutaneous lesions, skin malignancy*

#### Knowledge

- 2 Relevant anatomy, embryology, physiology, and pathology including histopathology
- 2 Relevant associated disease
- 3 Appropriate pre-operative investigations and patient assessment
- 3 Benign skin lesions and subcutaneous lesions
- 3 Malignant melanoma and non-melanoma skin cancer
- 3 Incisional and excisional biopsy
- 3 Excision margins
- 2 Adjuvant therapy including radiotherapy, chemotherapy
- 2 Tumour staging
- 2 Minimum data sets
- 1 Moh's technique
- 1 Sentinel node biopsy
- 2 Recent advances
- 2 Palliative care

#### Clinical Skills

- 3 Assessment of the elective surgical patient
- 4 History taking
- 4 Examination

#### Technical Skills

- 3 Excision of sebaceous cyst
- 3 Excision and direct closure of simple skin lesions
- 3 Excision and direct closure basal cell carcinoma
- 3 Excision and graft malignant skin lesions
- 3 Excision malignant melanoma
- 2 Excision and flap repair
- 2 Regional lymph node dissection

#### Professional Skills

- 3 Ethical awareness and reasoning, consent taking skills
- 2 Practice of audit
- 3 Multidisciplinary teamworking

### Soft tissue sarcomas

#### Objective

*To achieve knowledge and understanding of the multidisciplinary management of soft tissue sarcomas*

#### Knowledge

- 2 Relevant embryology, anatomy, physiology and pathology.
- 3 Appropriate pre-operative investigations, including imaging, and patient assessment.
- 2 Range indications and principles of relevant operations.
- 3 Postoperative complications and their management.
- 2 Relevant ancillary investigations and interventions, including radiotherapy, chemotherapy.
- 2 Recent advances.
- 2 Biopsy techniques

#### Clinical Skills

- 3 Assessment and non-operative management of the elective surgical patient.
- 4 History taking.
- 4 Examination.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
- 2 FNA cytology.
- 2 Core biopsy.

**Technical Skills**

2 Incisional biopsy at various sites and of varying tissues including fat,connective tissue, muscle,nerve.

2 En-bloc excisional techniques at various sites

2 Flap reconstruction as required

2 Nerve repair

2 Vessel repair

**Professional Skills**

3 Ethical awareness and reasoning, consent taking skills.

2 Practice of audit.

2 Multidisciplinary teamworking.

## Aesthetic

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

#### **Objective**

*Competence in the practice of aesthetic plastic surgery.*

#### **Knowledge**

2 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.

2 Relevant associated disease.

2 Appropriate pre-operative investigations and patient assessment including psychological assessment.

2 Range, indications and principles of relevant operations in the different areas

2 Post-operative complications and their management.

2 Recent advances including development of new surgical techniques.

#### **Clinical Skills**

3 Assessment and non-operative of the management of the elective surgical patient.

4 History taking.

4 Examination.

2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

#### **Technical Skills**

Blepharoplasty-

2 upper

2 lower

3 Pinnaplasty

Breast -

2 augmentation

2 reduction

2 mastopexy

2 tuberous correction

2 Abdominoplasty

Face Lift-

1 skin

1 SMAS

Liposuction-

2 abdomen

2 thighs

2 trunk

1 Brachioplasty

1 Thigh lifts

1 Body lifts

Laser-

1 tattoo removal

1 skin lesion

1 peeling

1 Chemical peeling

2 Dermabrasion

1 Filler injections

Rhinoplasty-  
2 post trauma  
1 cosmetic

**Professional Skills**

3 Ethical awareness and reasoning, consent taking skills.  
2 Practice of audit.

## Wound Care

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

#### Objective

*Competence in the management of lacerations, soft tissue injuries and wounds*

#### Knowledge

- 2 Relevant anatomy, physiology, biochemistry, pharmacology, pathology including microbiology, haematology, immunology and histopathology.
- 2 Relevant associated disease and conditions.
- 2 Appropriate pre-operative investigations and patient assessment.
- 2 Range, indications and principles of relevant surgical techniques and operations.
- 2 Post-operative complications and their management.
- 2 Recent advances in wound healing
- 2 Varicose ulceration including aetiology
- 2 Wound dressings
- 2 Antibiotic therapy
- 2 Degloving injury
- 2 Principles of Doppler physics

#### Clinical Skills

- 3 Assessment and non-operative of the management of the acute and elective surgical patient
- 4 History taking.
- 4 Examination.
- 2 Use of Doppler
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

#### Technical Skills

- 2 Exploration of traumatic wounds
- 2 Assessment of tissue viability
- 2 Debridement of tissues
- 2 Surgical handling of soft tissues
- 2 Suturing of soft tissues and skin lacerations
- 2 Split skin grafting
- 2 Use of local and other flaps

#### Professional Skills

- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

### Pressure sore management including surgical management

#### Objective

*Competence in the management of patients developing pressure sores*

#### Knowledge

- 2 Relevant anatomy, physiology, pathology including microbiology.
- 2 Relevant associated disease and co-morbidity including neurological conditions and trauma.
- 2 Appropriate investigations, patient assessment and non-operative management.
- 2 Related dietetics
- 2 Aetiological factors
- 2 Range, indications and principles of relevant operations.
- 2 Post-operative complications and their management.
- 2 Recent advances including pressure relieving beds and mattresses, VAC therapy
- 2 Relevant ancillary interventions e.g. physiotherapy, occupational therapy.

#### Clinical Skills

- 3 Assessment and non-operative of the management of the elective surgical patient
- 4 History taking.
- 4 Examination.
- 2 Skills of analysis and diagnostic synthesis, judgement, surgical planning

#### Technical Skills

- 2 Debridement of pressure sores
- 1 Various procedures for closure of defects including flap closure
- Professional Skills**
- 3 Ethical awareness and reasoning, consent taking skills.
- 2 Practice of audit.

### **Scar management**

#### **Objective**

*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.*

#### **Knowledge**

- 2 Relevant physiology, pathology relating to wound healing and scar formation
- 2 Methods available to treat hypertrophic/keloid scars including pressure therapy and steroid therapy
- 2 Scar revision procedures

#### **Clinical Skills**

No content

#### **Technical Skills**

- 3 Steroid injection
- 2 Various scar revision operations including z-plasty, w-plasty

#### **Professional Skills**

No content

## 4. Intermediate Stage

### Four point scales

What the 4 point scale means for Knowledge

1. Knows of
2. Knows basic concepts
3. Knows generally
4. Knows both specifically and broadly

What the 4 point scales means for **Clinical Skills** and **Technical Skills and Procedures**

1. Has observed
2. Can do with assistance
3. Can do whole but may need assistance
4. Competent to do whole without assistance, including managing complications

## 4.1 Overview

By the end of ST4, the trainee will have been exposed to most of the major areas of practice within plastic surgery. To progress to the final stage the trainee will have demonstrated competence in the conditions and procedures listed to the level indicated.

He/she will be able to present outline management plans for the common conditions encountered in elective practice.

1. Should be emergency competent in the management of areas including hand trauma. This includes assessment, operative management and aftercare.
2. Should be able to formulate management plans for most cases of burns in adults in children and be able to adjust as appropriate resuscitation regimens in those cases where management is not straightforward. The trainee should also be able to carry out early excision and grafting in suitable cases of burns or scalds. By this stage he/she should have a clear understanding of the role of psychology in burn care, the importance of rehabilitation in burn care.
3. Should be able to demonstrate competencies in breast surgery including reconstruction. This includes flap reconstruction.
4. Should demonstrate competencies in reconstructive procedures required after excision of major defects or after major trauma. This includes flap reconstruction including developing competence in microsurgical reconstructive techniques.
5. Should have demonstrated competencies in common areas of paediatric plastic surgical practice. May have had exposure to cases of cleft lip and palate and hypospadias and if so will have demonstrated competencies relating to knowledge of and operative skills relating to these cases.

(The trainee's level of knowledge should be at a level during these 2 years of training to enable him/her to attain a pass mark in the written MCQ/EMQ component of the Intercollegiate Specialty Examination.)

## 4.2 Conditions

### Generic Plastic Surgery

#### **Use of plastic surgery techniques including design and use of z-plasty, pedicled and myocutaneous flaps, free flaps**

##### **Objective**

*Competence in the management of the surgical patient and application of the specified plastic surgery techniques.*

##### **Knowledge**

- 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**

- 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**

- 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

##### **Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.

## Burns

### Assessment, resuscitation and initial management of burns

#### Objective

*Competence in the early phase of burns management*

#### Knowledge

- 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.
- 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, plasma volume expanders.
- 3 Non-accidental injuries.

#### Clinical Skills

- 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

- 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

#### Professional Skills

- 3 Teamworking with fellow medical, nursing and ancillary professionals.
- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.

### Surgical management of burns

#### Objective

*Competence in the surgical aspects of burns management*

#### Knowledge

- 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

- 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

- 3 Early tangential excision and split skin grafting
  - 3 Late grafting
  - 2 Use of allograft skin
  - 2 Use of skin substitutes
- Professional Skills**
- 4 Ethical awareness and reasoning, consent taking skills.
  - 3 Practice of audit.

### **Diagnosis and management of complications of burns including inhalational injury and septic shock**

**Objective**

*Competence in management of complications arising during treatment of burn injury*

**Knowledge**

- 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**

No content

**Professional Skills**

- 3 Teamworking and liaison with other involved professionals caring for the burn patient.
- 3 Ethical awareness and reasoning.
- 3 Practice of audit.

### **Late management and rehabilitation**

**Objective**

*Competence in burns management*

*Competence in late management, with understanding of the needs for patient rehabilitation*

**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

**Technical Skills**

- 3 Scar management including use of pressure garments
- Contracture release:
- 3 Grafts
  - 3 Flaps

**Professional Skills**

3 Skills of analysis and diagnostic synthesis, judgement, surgical planning, team working, management (of resources, including time and colleagues), communication (with colleagues, patients and relatives), record keeping and reliability.

4 Ethical awareness and reasoning, consent taking skills.

3 Practice of audit.

## Hand and Upper Limb

### Trauma

#### Management of all aspects of hand trauma

##### Objective

*Competence in the diagnosis and management of hand trauma*

##### 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

- 4 Wound exploration and debridement.
- 3 Primary microsurgical repair of peripheral nerve
- 3 Primary graft to peripheral nerve
- 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

##### Professional Skills

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.

#### Surgical management of brachial plexus injuries

##### Objective

*An understanding of the principles of diagnosis, investigation and management of patients, children and adults, with closed brachial plexus injuries*

##### Knowledge

- 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 Postoperative complications and their management.
- 3 Relevant ancillary interventions including physiotherapy, occupational therapy.
- 3 Mechanisms of nerve injury and regeneration.

##### Clinical Skills

- 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**

- 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 transfers
- 2 Tendon transfers.

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.

## Elective

### Diagnosis and management of congenital hand conditions

#### Objective

*Competence in the management of congenital hand conditions.*

#### 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 interventions e.g. physiotherapy, occupational therapy.
- 3 Classification of congenital hand and forearm anomalies.

#### 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

- 3 Correction of polydactyly (ulnar)
- 3 Correction of syndactyly.
- 2 Correction of duplicate thumb.
- 3 Correction of triggering of digit.
- 2 Release of constriction band.
- 1 Pollicisation
- 1 Toe to thumb transfer

#### Professional Skills

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.

### Management of acquired conditions of the hand

#### Objective

*Competence in the management of elective, acquired hand and forearm conditions.*

#### Knowledge

- 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

- 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

- 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
- 2 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
- 2 Trapezectomy
- 2 Darrach procedure
- 2 Bone-graft
- 2 Fusion of wrist
- 3 Primary arthrodesis and internal fixation
- 2 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
- Professional Skills**
- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.

## Cleft Lip and Palate/Cranio Facial Anomalies

### Management of children and adults with cleft lip and palate

#### Objective

*Competence in the management of patients with cleft lip and/or cleft palate*

#### Knowledge

- 2 Relevant embryology, anatomy, physiology.
- 2 Incidence of clefting.
- 2 Related conditions and syndromes.
- 2 Preoperative assessment and investigation.
- 2 Range, indications and principles of operations.
- 2 Postoperative 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

- 4 Assessment and non-operative management.
- 4 History taking.
- 4 Examination.
- 3 Skills of analysis and diagnostic synthesis, judgement and surgical planning

#### Technical Skills

- 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

#### Professional Skills

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.
- 3 Multidisciplinary teamworking

### Investigation and management of velopharyngeal incompetence

#### Objective

*Competence in the management of velopharyngeal incompetence and related speech problems with or without cleft palate*

#### Knowledge

- 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

- 2 Assessment and non-operative management.
- 4 History taking.
- 4 Examination.
- 2 Skills of analysis, diagnostic synthesis, judgement and surgical planning.

#### Technical Skills

- 2 Palatal re-repair
- 2 Palatal exploration with intravelar veloplasty

- 2 Furlow's repair
- 2 Pharyngoplasty of varying types.

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.
- 3 Multidisciplinary team working.

**Craniofacial deformities**

**Objective**

*To gain knowledge of the commoner craniofacial deformities*

**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 Postoperative complications and their management.

**Clinical Skills**

- 3 Assessment and pre-operative management of the elective surgical patient.
- 4 History taking.
- 4 Examination.

**Technical Skills**

- 2 Common craniofacial procedures.

**Professional Skills**

- 2 Multidisciplinary team working.

## Head and Neck

### Principles of diagnosis and management of maxillofacial trauma

#### Objective

*Competence in the diagnosis and principles of treatment of maxillofacial trauma*

#### Knowledge

- 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 Postoperative 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

- 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

- 2 Manipulation of nasal bone fractures.
- 2 Orbital fractures.
- 2 Elevation of malar complex fractures.
- 2 Reduction and fixation of mandibular fractures.

#### Professional Skills

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.

### Excisional surgery for benign and malignant disease

#### Objective

*Competence in management of patients with benign or malignant tumours of the head and neck.*

#### Knowledge

- 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

- 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

Excisional surgery:

- 3 Lip
- 2 Oral cavity, including tongue, floor of mouth, buccal mucosa, retromolar trigone, alveolus and mandible, palate
- 2 Maxilla

- 3 Eyelid
- 3 Nose
- 3 Ear
- 3 Scalp
- 3 Scalp & Bone
- 2 Parotidectomy-superficial, radical
- 2 Submandibular gland

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.
- 3 Multidisciplinary team working.

**Approaches to reconstruction of the head and neck including defects of the ear, eyelid, nose and lip and oral cavity**

**Objective**

*Competence in reconstruction of traumatic or excisional defects of the head and neck region.*

**Knowledge**

- 3 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.
- 3 Relevant associated disease and conditions.
- 3 Soft tissue facial injuries.
- 3 Appropriate pre-operative investigations including imaging, and patient assessment.
- 3 Range, indications and principles of relevant operations.
- 3 Post-operative complications and their management.
- 2 Prosthetics.
- 2 Recent advances.
- 2 Relevant ancillary investigations, interventions e.g. radiotherapy, psychological support, physiotherapy, occupational therapy, speech therapy etc.

**Clinical Skills**

- 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**

Reconstructive Surgery

Lip:

- 3 Lip shave
- 3 Wedge excision
- 2 Local flaps

Oral cavity:

- 3 Skin grafts
- 2 Local Flaps
- 2 Regional Flaps
- 2 Free flaps including cutaneous, myocutaneous, osteocutaneous
- 2 Autologous mandibular reconstruction

Eyelids:

- 3 Skin grafts
- 2 V-excision +/- lateral canthotomy
- 2 Cheek advancement
- 2 Chondromucosal grafts
- 2 Lid switch
- 2 Ptosis correction
- 2 Repair of lacrimal apparatus

Nose:

- 3 Skin grafts
- 2 Local flaps

- 2 Regional flaps
- 2 Cartilage/bone grafts
- 2 Branemark reconstruction

**Ear:**

- 2 Skin grafts
- 2 Local flaps
- 2 Autologous reconstruction using cartilage framework
- 2 Branemark reconstruction

**Scalp:**

- 2 Local Flaps
- 2 Regional Flaps
- 2 Free Flaps
- 2 Bone Grafts
- 2 Alloplastic materials
- 2 Tissue expansion

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.

**Management of patients requiring radical or selective neck dissection for malignant disease**

**Objective**

*Competence in the management of patients requiring neck dissection for malignant disease*

**Knowledge**

- 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 Postoperative 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**

- 3 Assessment and non-operative management of the elective surgical patient.
- 4 History taking
- 4 Examination

**Technical Skills**

- 3 Cervical lymph node biopsy
- 3 Radical neck dissection
- 3 Selective neck dissections of various types

**Professional Skills**

- 3 Multidisciplinary team working
- 4 Ethical awareness and reasoning, consent taking skills
- 3 Practice of audit

**Approaches to management of facial palsy**

**Objective**

*Competence in management of patients children and adults, who have congenital or acquired facial palsy.*

**Knowledge**

- 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**

- 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**

- 2 Static procedures including fascial slings.
- 2 Eyelid procedures including gold weight insertion.
- 2 Facial nerve grafting.
- 2 Microvascular free muscle transfer.

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.

**Investigation and management of vascular and related abnormalities**

**Objective**

*Competence in the diagnosis and management of patients, children and adult, with congenital abnormalities of the head and neck*

**Knowledge**

- 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 Postoperative 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**

- 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.

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.

## Management of patients requiring breast reconstruction, reduction and augmentation

<p><b>Breast augmentation</b></p> <p><b>Objective</b> <i>Competence in the management of patients requesting breast augmentation for breast aplasia, hypoplasia and asymmetry.</i></p> <p><b>Knowledge</b></p> <ul style="list-style-type: none"><li>3 Relevant embryology, anatomy, physiology, and pathology of the breast.</li><li>3 Relevant associated disease and conditions including benign breast disease.</li><li>3 Safety of breast implants including issues relating to the effects of silicone on the body, and regulation of implants.</li><li>3 Appropriate pre-operative investigations and patient assessment including psychological assessment.</li><li>3 Post-operative complications and their management.</li><li>3 Recent advances and developments relating to implant manufacture.</li></ul> <p><b>Clinical Skills</b></p> <ul style="list-style-type: none"><li>4 Assessment of the elective surgical patient.</li><li>4 History taking.</li><li>4 Examination.</li><li>3 Skills of analysis and diagnostic synthesis, judgement, surgical planning</li></ul> <p><b>Technical Skills</b></p> <ul style="list-style-type: none"><li>3 Breast augmentation using differing surgical approaches.</li></ul> <p><b>Professional Skills</b></p> <ul style="list-style-type: none"><li>4 Ethical awareness and reasoning, consent taking skills.</li><li>3 Practice of audit.</li></ul>
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<p><b>Breast reduction</b></p> <p><b>Objective</b> <i>Competence in management of patients requesting breast reduction.</i></p> <p><b>Knowledge</b></p> <ul style="list-style-type: none"><li>3 Relevant embryology, anatomy and physiology of the breast.</li><li>3 Relevant associated disease and conditions including benign breast disease and causes of mammary hypertrophy.</li><li>3 Appropriate pre-operative investigations and patient assessment including psychological assessment.</li><li>3 Range, indications and principles of relevant operations for breast reduction and breast mastopexy.</li><li>3 Post-operative complications and their management.</li><li>3 Recent advances in techniques for breast reduction.</li><li>3 Blood supply and innervation of the breast, breast skin and nipple/areolar complex.</li></ul> <p><b>Clinical Skills</b></p> <ul style="list-style-type: none"><li>4 Assessment of the elective surgical patient.</li><li>4 History taking.</li><li>4 Examination.</li><li>3 Skills of analysis, judgement, surgical planning.</li></ul> <p><b>Technical Skills</b></p> <ul style="list-style-type: none"><li>3 Various operations for breast reduction.</li><li>3 Various operations for breast mastopexy.</li><li>2 Correction of the tuberous breast</li></ul> <p><b>Professional Skills</b></p> <ul style="list-style-type: none"><li>4 Ethical awareness and reasoning, consent taking skills.</li><li>3 Practice of audit.</li></ul>
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<p><b>Breast reconstruction</b></p> <p><b>Objective</b> <i>Competence in the management of patients requiring breast reconstruction.</i></p>
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*An understanding of the principles involved in multidisciplinary assessment of these patients.*

**Knowledge**

- 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**

- 4 Assessment of the elective surgical patient.
- 4 History taking.
- 4 Examination.
- 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning

**Technical Skills**

- 3 Axillary nodal dissection
- 3 FNA/Core Biopsy
- Breast Reconstruction:
  - 3 Implant only
  - 3 Tissue expansion
- Pedicled Flaps:
  - 3 Latissimus dorsi
  - 3 TRAM
- Free flaps
  - 2 Latissimus dorsi
  - 2 TRAM
  - 2 DIEP
  - 1 SGAP/IGAP

- 3 Nipple/areolar reconstruction

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.
- 3 Multidisciplinary team working.

## Trunk and GU

### Perineal reconstruction

#### Objective

*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.*

#### Knowledge

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

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

3 Skin grafts

2 Bowel grafts

3 Random flaps

3 Myocutaneous flaps

2 Free flaps

#### Professional Skills

4 Ethical awareness and reasoning, consent taking skills.

3 Practice of audit.

### The principles of surgical management of hypospadias.

#### Objective

*To obtain competencies in the management of cases of hypospadias.*

*To understand the principles of management in cases of epispadias and exstrophy.*

#### 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

3 Operative procedures in common use for hypospadias and related conditions including 1 stage, 2 stage techniques.

#### Professional Skills

4 Ethical awareness and reasoning, consent taking skills.

3 Practice of audit.

### Surgical management of congenital and acquired defects of the chest wall, abdominal wall and trunk

**Objective**

*Competence in the assessment and management of defects involving the trunk, including traumatic defects*

**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**

- 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

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.

## Lower Limb

<p><b>Trauma</b></p> <p><b>Objective</b> <i>Competence in the management of lower limb trauma.</i></p> <p><b>Knowledge</b> 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.</p> <p><b>Clinical Skills</b> 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</p> <p><b>Technical Skills</b> 4 Superficial wounds 3 Debridement/SSG 3 Fasciotomy 3 Amputations Above knee/Below knee 3 Harvest iliac crest bone graft 3 Suture of nerve, artery. Local Flaps:- 3 Fasciocutaneous 3 Perforator 3 Muscle 3 Myocutaneous Free Flaps:- 2 Radial 2 Lateral thigh 2 Lat. dorsi 2 Rectus abdominus 2 Fibula 2 DCIA</p> <p><b>Professional Skills</b> 4 Ethical awareness and reasoning, consent taking skills. 3 Practice of audit. 3 Multidisciplinary teamworking</p>
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### The multidisciplinary assessment and management of tibial fractures involving skin loss

**Objective**  
*Competence in the combined management of patients with compound tibial fractures involving skin loss*

**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**

- 3 Suture of nerve, artery

Local flaps:

- 3 Fasciocutaneous
- 3 Perforator
- 3 Muscle
- 3 Myocutaneous

Free flaps:

- 2 Skin
- 2 Muscle
- 2 Myocutaneous
- 2 Osteocutaneous

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills
- 3 Practice of audit
- 3 Multidisciplinary teamworking

**The management of lymphoedema**

**Objective**

*Competence in the diagnosis and management of lymphoedema*

**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**

- 3 Various operations including Charles's procedure

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills
- 3 Practice of audit

## Skin and Soft Tissue Tumours

### All aspects of diagnosis and management of benign and malignant skin tumours including surgical reconstruction and regional node dissection

#### Objective

*Competence in diagnosis and management of skin lesions including benign skin and subcutaneous lesions, skin malignancy*

#### 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

- 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
- 3 Regional lymph node dissection

#### Professional Skills

- 4 Ethical awareness and reasoning, consent taking skills
- 3 Practice of audit
- 4 Multidisciplinary teamworking

### Soft tissue sarcomas

#### Objective

*To achieve knowledge and understanding of the multidisciplinary management of soft tissue sarcomas*

#### 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 Postoperative 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.
- 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
- 3 FNA cytology.
- 3 Core biopsy.

**Technical Skills**

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

**Professional Skills**

4 Ethical awareness and reasoning, consent taking skills.

3 Practice of audit.

3 Multidisciplinary teamworking.

## Aesthetic

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

#### **Objective**

*Competence in the practice of aesthetic plastic surgery.*

#### **Knowledge**

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**

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**

Blepharoplasty-

3 upper

3 lower

4 Pinnaplasty

3 Correction of the constricted ear

Breast -

3 augmentation

3 reduction

3 mastopexy

3 tuberous correction

3 Abdominoplasty

Face Lift-

2 skin

2 SMAS

Liposuction-

3 abdomen

3 thighs

3 trunk

2 Brachioplasty

2 Thigh lifts

2 Body lifts

Laser-

2 tattoo removal

2 skin lesion

2 peeling

2 Chemical peeling

3 Dermabrasion

2 Filler injections

Rhinoplasty-

3 post trauma

2 cosmetic

**Professional Skills**

4 Ethical awareness and reasoning, consent taking skills.

3 Practice of audit.

## Wound Care

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

#### **Objective**

*Competence in the management of lacerations, soft tissue injuries and wounds*

#### **Knowledge**

3 Relevant anatomy, physiology, biochemistry, 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 surgical techniques and operations.

3 Post-operative complications and their management.

3 Recent advances in wound healing

3 Facial wounds involving eyelids (including lacrimal apparatus), nose, lips, ears and deeper tissues including salivary glands, facial nerve

3 Varicose ulceration including aetiology

3 Wound dressings

3 Antibiotic therapy

3 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.

3 Use of Doppler

3 Skills of analysis and diagnostic synthesis, judgement, surgical planning

#### **Technical Skills**

4 Exploration of traumatic wounds

3 Assessment of tissue viability

4 Debridement of tissues

4 Surgical handling of soft tissues

4 Suturing of soft tissues and skin lacerations

3 Nerve repair

4 Split skin grafting

3 Use of local and other flaps

#### **Professional Skills**

4 Ethical awareness and reasoning, consent taking skills.

3 Practice of audit.

### **Pressure sore management including surgical management**

#### **Objective**

*Competence in the management of patients developing pressure sores*

#### **Knowledge**

3 Relevant anatomy, physiology, pathology including microbiology.

3 Relevant associated disease and co-morbidity including neurological conditions and trauma.

3 Appropriate investigations, patient assessment and non-operative management.

3 Related dietetics

3 Aetiological factors

3 Range, indications and principles of relevant operations.

3 Post-operative complications and their management.

3 Recent advances including pressure relieving beds and mattresses, VAC therapy

3 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.
- 3 Skills of analysis and diagnostic synthesis, judgement, surgical planning

**Technical Skills**

- 3 Debridement of pressure sores
- 3 Various procedures for closure of defects including flap closure

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 3 Practice of audit.

**Scar management**

**Objective**

*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.*

**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**

No content

**Technical Skills**

- 4 Steroid injection
- 3 Various scar revision operations including z-plasty, w-plasty

**Professional Skills**

No content

## 5. Final Stage

### Four point scales

What the 4 point scale means for Knowledge

1. Knows of
2. Knows basic concepts
3. Knows generally
4. Knows both specifically and broadly

What the 4 point scales means for **Clinical Skills** and **Technical Skills and Procedures**

1. Has observed
2. Can do with assistance
3. Can do whole but may need assistance
4. Competent to do whole without assistance, including managing complications

## 5.1 Overview

### Overview of Final Stage

By the end of ST6 trainees including those following an academic pathway should have reached a level of competence to allow him/her to practise safely independently. During ST6 the oral and clinical components of the Intercollegiate Examination will be taken. All major areas of the curriculum will have been covered and the necessary competences achieved.

By this time in training the trainee will not only have demonstrated clinical skills and knowledge relating to the key and other conditions but will have demonstrated and developed the necessary operative skills and judgement required to manage the complications that commonly arise without assistance.

By the end of ST6 the trainee may well have begun to develop a special interest in one of the major areas within the specialty, e.g. hand surgery, head and neck surgery or burns.

## 5.2 Conditions

### Generic Plastic Surgery

#### **Use of plastic surgery techniques including design and use of z-plasty, pedicled and myocutaneous flaps, free flaps**

##### **Objective**

*Competence in the management of the surgical patient and application of the specified plastic surgery techniques.*

##### **Knowledge**

- 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.
- 4 History taking.
- 4 Examination.
- 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning.

##### **Technical Skills**

- 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

##### **Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

## Burns

### Assessment, resuscitation and initial management of burns

#### Objective

*Competence in the early phase of burns management*

#### Knowledge

- 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, plasma volume expanders.
- 4 Non-accidental injuries.

#### Clinical Skills

- 4 Assessment and non-operative 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

- 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

#### Professional Skills

- 4 Teamworking with fellow medical, nursing and ancillary professionals.
- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

### Surgical management of burns

#### Objective

*Competence in the surgical aspects of burns management*

#### Knowledge

- 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

- 4 Early tangential excision and split skin grafting
- 4 Late grafting
- 4 Use of allograft skin
- 4 Use of skin substitutes

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

**Diagnosis and management of complications of burns including inhalational injury and septic shock**

**Objective**

*Competence in management of complications arising during treatment of burn injury*

**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**

No content

**Professional Skills**

- 4 Teamworking and liaison with other involved professionals caring for the burn patient.
- 4 Ethical awareness and reasoning.
- 4 Practice of audit.

**Late management and rehabilitation**

**Objective**

*Competence in burns management*

*Competence in late management, with understanding of the needs for patient rehabilitation*

**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

**Technical Skills**

- 4 Scar management including use of pressure garments
- Contracture release:
  - 4 Grafts
  - 4 Flaps

**Professional Skills**

- 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning.
- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

## Hand and Upper Limb

### Trauma

#### Management of all aspects of hand trauma

##### Objective

*Competence in the diagnosis and management of hand trauma*

##### Knowledge

- 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

- 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

- 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

##### Professional Skills

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

#### Surgical management of brachial plexus injuries

##### Objective

*An understanding of the principles of diagnosis, investigation and management of patients, children and adults, with closed brachial plexus injuries*

##### Knowledge

- 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 Postoperative complications and their management.
- 4 Relevant ancillary interventions including physiotherapy, occupational therapy.
- 4 Mechanisms of nerve injury and regeneration.

##### Clinical Skills

- 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**

- 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 transfers
- 3 Tendon transfers.

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

## Elective

### Diagnosis and management of congenital hand conditions

#### Objective

*Competence in the management of congenital hand conditions.*

#### Knowledge

- 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

- 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

- 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.

#### Professional Skills

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

### Management of acquired conditions of the hand

#### Objective

*Competence in the management of elective, acquired hand and forearm conditions.*

#### Knowledge

- 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

- 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

- 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
- Professional Skills**
- 4 Ethical awareness and reasoning, consent taking skills.
  - 4 Practice of audit.

## Cleft Lip and Palate/Cranio Facial Anomalies

### Management of children and adults with cleft lip and palate

#### Objective

*Competence in the management of patients with cleft lip and/or cleft palate*

#### Knowledge

- 4 Relevant embryology, anatomy, physiology.
- 4 Incidence of clefting.
- 4 Related conditions and syndromes.
- 4 Preoperative assessment and investigation.
- 4 Range, indications and principles of operations.
- 4 Postoperative 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

- 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

#### Professional Skills

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.
- 4 Multidisciplinary teamworking

### Investigation and management of velopharyngeal incompetence

#### Objective

*Competence in the management of velopharyngeal incompetence and related speech problems with or without cleft palate*

#### 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

- 4 Palatal re-repair
- 4 Palatal exploration with intravelar veloplasty

- 4 Furlow's repair
- 4 Pharyngoplasty of varying types.

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.
- 4 Multidisciplinary team working.

**Craniofacial deformities**

**Objective**

*To gain knowledge of the commoner craniofacial deformities*

**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 Postoperative complications and their management.

**Clinical Skills**

- 4 Assessment and pre-operative management of the elective surgical patient.
- 4 History taking.
- 4 Examination.

**Technical Skills**

- 2 Common craniofacial procedures.

**Professional Skills**

- 4 Multidisciplinary team working.

## Head and Neck

### Principles of diagnosis and management of maxillofacial trauma

#### Objective

*Competence in the diagnosis and principles of treatment of maxillofacial trauma*

#### Knowledge

- 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 Postoperative 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

- 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

- 4 Manipulation of nasal bone fractures.
- 3 Exploration of orbital fractures.
- 3 Elevation of malar complex fractures.
- 2 Reduction and fixation of mandibular fractures.

#### Professional Skills

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

### Excisional surgery for benign and malignant disease

#### Objective

*Competence in management of patients with benign or malignant tumours of the head and neck.*

#### Knowledge

- 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

- 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

Excisional surgery:

- 4 Lip
- 4 Oral cavity, including tongue, floor of mouth, buccal mucosa, retromolar trigone, alveolus and mandible, palate

- 4 Maxilla
- 4 Eyelid
- 4 Nose
- 4 Ear
- 4 Scalp
- 4 Scalp & Bone
- 4 Parotidectomy-superficial, radical
- 4 Submandibular gland

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.
- 4 Multidisciplinary team working.

**Approaches to reconstruction of the head and neck including defects of the ear, eyelid, nose and lip and oral cavity**

**Objective**

*Competence in reconstruction of traumatic or excisional defects of the head and neck region.*

**Knowledge**

- 4 Relevant anatomy, embryology, physiology, biochemistry and pharmacology, pathology including microbiology, haematology, immunology and histopathology.
- 4 Relevant associated disease and conditions.
- 4 Soft tissue facial injuries.
- 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.
- 2 Prosthetics.
- 4 Recent advances.
- 4 Relevant ancillary investigations, interventions e.g. radiotherapy, psychological support, physiotherapy, occupational therapy, speech therapy etc.

**Clinical Skills**

- 4 Assessment and non-operative management of the acute and elective surgical patient.
- 4 History taking.
- 4 Examination.
- 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning.

**Technical Skills**

Reconstructive Surgery

Lip:

- 4 Lip shave
- 4 Wedge excision
- 4 Local flaps

Oral cavity:

- 4 Skin grafts
- 4 Local Flaps
- 4 Regional Flaps
- 4 Free flaps including cutaneous, myocutaneous, osteocutaneous
- 4 Autologous mandibular reconstruction

Eyelids:

- 4 Skin grafts
- 4 V-excision +/- lateral canthotomy
- 4 Cheek advancement
- 4 Chondromucosal grafts
- 4 Lid switch
- 4 Ptosis correction
- 4 Repair of lacrimal apparatus

Nose:

- 4 Skin grafts
- 4 Local flaps

- 4 Regional flaps
- 4 Cartilage/bone grafts
- 4 Branemark reconstruction

Ear:

- 4 Skin grafts
- 4 Local flaps
- 4 Autologous reconstruction using cartilage framework
- 4 Branemark reconstruction

Scalp:

- 4 Local Flaps
- 4 Regional Flaps
- 4 Free Flaps
- 4 Bone Grafts
- 4 Alloplastic materials
- 4 Tissue expansion

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

**Management of patients requiring radical or selective neck dissection for malignant disease**

**Objective**

*Competence in the management of patients requiring neck dissection for malignant disease*

**Knowledge**

- 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 Postoperative 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**

- 4 Assessment and non-operative management of the elective surgical patient.
- 4 History taking
- 4 Examination

**Technical Skills**

- 4 Cervical lymph node biopsy
- 4 Radical neck dissection
- 4 Selective neck dissections of various types

**Professional Skills**

- 4 Multidisciplinary team working
- 4 Ethical awareness and reasoning, consent taking skills
- 4 Practice of audit

**Approaches to management of facial palsy**

**Objective**

*Competence in management of patients children and adults, who have congenital or acquired facial palsy.*

**Knowledge**

- 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**

- 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**

- 4 Static procedures including fascial slings.
- 4 Eyelid procedures including gold weight insertion.
- 4 Facial nerve grafting.
- 4 Microvascular free muscle transfer.

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

**Investigation and management of vascular and related abnormalities**

**Objective**

*Competence in the diagnosis and management of patients, children and adult, with congenital abnormalities of the head and neck*

**Knowledge**

- 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 Postoperative complications
- 4 Relevant ancillary investigations and interventions, including ophthalmic assessment

**Clinical Skills**

- 4 Assessment and non-operative management
- 4 History taking
- 4 Examination

**Technical Skills**

- 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.

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

## Management of patients requiring breast reconstruction, reduction and augmentation

<b>Breast augmentation</b>
<b>Objective</b> <i>Competence in the management of patients requesting breast augmentation for breast aplasia, hypoplasia and asymmetry.</i>
<b>Knowledge</b> 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.
<b>Clinical Skills</b> 4 Assessment of the elective surgical patient. 4 History taking. 4 Examination. 4 Skills of analysis and diagnostic synthesis, judgement, surgical planning
<b>Technical Skills</b> 4 Breast augmentation using differing surgical approaches.
<b>Professional Skills</b> 4 Ethical awareness and reasoning, consent taking skills. 4 Practice of audit.

<b>Breast reduction</b>
<b>Objective</b> <i>Competence in management of patients requesting breast reduction.</i>
<b>Knowledge</b> 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
<b>Clinical Skills</b> 4 Assessment of the elective surgical patient. 4 History taking. 4 Examination. 4 Skills of analysis, judgement, surgical planning.
<b>Technical Skills</b> 4 Various operations for breast reduction. 4 Various operations for breast mastopexy. 4 Correction of the tuberous breast 4 Correction of gynaecomastia
<b>Professional Skills</b> 4 Ethical awareness and reasoning, consent taking skills. 4 Practice of audit.

<b>Breast reconstruction</b>
<b>Objective</b>

*Competence in the management of patients requiring breast reconstruction.  
An understanding of the principles involved in multidisciplinary assessment of these patients.*

**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**

- 4 Axillary nodal dissection
- 4 FNA/Core Biopsy
- Breast Reconstruction:
  - 4 Implant only
  - 4 Tissue expansion
- Pedicled Flaps:
  - 4 Latissimus dorsi
  - 4 TRAM
- Free flaps
  - 4 Latissimus dorsi
  - 4 TRAM
  - 4 DIEP
  - 3 SGAP
  - 3 IGAP

- 4 Nipple/areolar reconstruction

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.
- 4 Multidisciplinary team working.

## Trunk and GU

### Perineal reconstruction

#### Objective

*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.*

#### 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

4 History taking.

4 Examination.

4 Skills of analysis and diagnostic synthesis, judgement, surgical planning

#### Technical Skills

4 Skin grafts

4 Bowel grafts

4 Random flaps

4 Myocutaneous flaps

4 Free flaps

#### Professional Skills

4 Ethical awareness and reasoning, consent taking skills.

4 Practice of audit.

### The principles of surgical management of hypospadias.

#### Objective

*To obtain competencies in the management of cases of hypospadias.*

*To understand the principles of management in cases of epispadias and exstrophy.*

#### Knowledge

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

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

4 Operative procedures in common use for hypospadias and related conditions including 1 stage, 2 stage techniques.

#### Professional Skills

4 Ethical awareness and reasoning, consent taking skills.

4 Practice of audit.

### Surgical management of congenital and acquired defects of the chest wall, abdominal wall and trunk

#### Objective

*Competence in the assessment and management of defects involving the trunk, including traumatic defects*

**Knowledge**

- 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**

- 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**

- 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

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

## Lower Limb

### The multidisciplinary assessment of management of tibia fractures involving skin loss

#### Objective

*Competence in the combined management of patients with compound tibia fractures involving skin loss*

#### Knowledge

- 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

- 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

- 4 Suture of nerve, artery

#### Local flaps:

- 4 Fasciocutaneous
- 4 Perforator
- 4 Muscle
- 4 Myocutaneous

#### Free flaps:

- 4 Skin
- 4 Muscle
- 4 Myocutaneous
- 4 Osteocutaneous

#### Professional Skills

- 4 Ethical awareness and reasoning, consent taking skills
- 4 Practice of audit
- 4 Multidisciplinary teamworking

### Trauma

#### Objective

*Competence in the management of lower limb trauma.*

#### Knowledge

- 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

- 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

- 4 Superficial wounds:-

- 4 Debridement/SSG
- 4 Fasciotomy
- 4 Amputations Above knee/Below knee
- 4 Harvest iliac crest bone graft
- 4 Suture of nerve, artery.

Local Flaps:-

- 4 Fasciocutaneous
- 4 Perforator
- 4 Muscle
- 4 Myocutaneous

Free Flaps:-

- 4 Radial
- 4 Lateral thigh
- 4 Lat. dorsi
- 4 Rectus abdominus
- 4 Fibula
- 4 DCIA

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.
- 4 Multidisciplinary teamworking

**The management of lymphoedema**

**Objective**

*Competence in the diagnosis and management of lymphoedema*

**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**

- 4 Various operations including Charles's procedure

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills
- 4 Practice of audit

## Skin and Soft Tissue Tumours

### All aspects of diagnosis and management of benign and malignant skin tumours including surgical reconstruction and regional node dissection

#### Objective

*Competence in diagnosis and management of skin lesions including benign skin and subcutaneous lesions, skin malignancy*

#### 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

- 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
- 4 Regional lymph node dissection

#### Professional Skills

- 4 Ethical awareness and reasoning, consent taking skills
- 4 Practice of audit
- 4 Multidisciplinary teamworking

### Soft tissue sarcomas

#### Objective

*To achieve knowledge and understanding of the multidisciplinary management of soft tissue sarcomas*

#### 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 Postoperative 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**

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

**Professional Skills**

4 Ethical awareness and reasoning, consent taking skills.

4 Practice of audit.

4 Multidisciplinary teamworking.

## Aesthetic

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

#### **Objective**

*Competence in the practice of aesthetic plastic surgery.*

#### **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

4 Post-operative complications and their management.

4 Recent advances including development of new surgical techniques.

#### **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**

Blepharoplasty-

4 upper

4 lower

4 Pinnaplasty

4 Correction of the constricted ear

Breast -

4 augmentation

4 reduction

4 mastopexy

4 tuberous correction

4 Abdominoplasty

Face Lift-

4 skin

4 SMAS

Liposuction-

4 abdomen

4 thighs

4 trunk

4 Brachioplasty

4 Thigh lifts

4 Body lifts

Laser-

4 tattoo removal

4 skin lesion

4 peeling

4 Chemical peeling

4 Dermabrasion

4 Filler injections

Rhinoplasty-

4 trauma

4 cosmetic

**Professional Skills**

4 Ethical awareness and reasoning, consent taking skills.

4 Practice of audit.

## Wound Care

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

#### Objective

*Competence in the management of lacerations, soft tissue injuries and wounds*

#### Knowledge

- 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

- 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

#### Professional Skills

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

### Pressure sore management including surgical management

#### Objective

*Competence in the management of patients developing pressure sores*

#### 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**

- 4 Debridement of pressure sores
- 4 Various procedures for closure of defects including flap closure

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

**Scar management****Objective**

*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.*

**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**

No content

**Technical Skills**

- 4 Steroid injection
- 4 Various scar revision operations including z-plasty, w-plasty

**Professional Skills**

- 4 Ethical awareness and reasoning, consent taking skills.
- 4 Practice of audit.

## 6. Special Interest Stage

### Four point scales

What the 4 point scale means for Knowledge

1. Knows of
2. Knows basic concepts
3. Knows generally
4. Knows both specifically and broadly

What the 4 point scales means for **Clinical Skills** and **Technical Skills and Procedures**

1. Has observed
2. Can do with assistance
3. Can do whole but may need assistance
4. Competent to do whole without assistance, including managing complications

## 6.1 Overview

## 6.2 Conditions

# 7. Professional and Generic Skills

## 7.1. Initial

### **Professional Competencies to be acquired during the initial stage of surgical training.**

#### **Medical Expert (Good Clinical Care; Maintaining Good Medical Practice)**

The specialty specific knowledge, clinical skills and technical skills and procedures relating to symptoms and conditions that a trainee will encounter during this stage of training are listed separately. The competencies listed below are generic competencies, which underpin the specialty specific competencies.

##### *Skills*

- Elicits a history that is relevant, concise, accurate and appropriate to the patient's problem

##### *Behaviour*

- Demonstrates effective consultation skills in presenting well documented assessments and recommendations in written and/or verbal form in response to a request from another healthcare provider
- Demonstrates the attitudes and the skills necessary to retrieve and implement the information necessary to provide healthcare services to patients in meeting the needs and expectations of the community
- Demonstrates insight into his/her limitations by self assessment

#### **Communicator (Good Clinical Care; Maintaining Good Medical Practice)**

##### **1. Effective doctor/patient communication**

###### *Objective*

To establish a doctor/patient relationship characterised by understanding, trust, respect, empathy and confidentiality

###### *Skills*

- Able to gather information regarding the patient's beliefs, concerns and expectations about the condition and consider the influence of factors such as the patient's age, gender, ethnic, cultural and socio-economic background and spiritual values on that illness
- Able to elicit information regarding the beliefs, concerns and expectations of patients with regard to their presenting conditions.
- Able to evaluate factors such as the patient's age, gender, ethnic, cultural, socio-economic and spiritual values and the impact that these may have on the management of that patient and condition.
- Able to deliver information to the patient and family humanely and in a way that is understandable, encourages discussion and promotes the patient's participation in decision making to the level appropriate for the situation.
- Able to work with patients who present significant communication challenges such as anger or confusion, or an ethno-cultural background different from the doctor's own.

## 2. Communication with Colleagues

### *Objective*

To appreciate the importance of co-operation with other healthcare professionals involved in patient care and to ensure that the roles of these professionals are clear, consistent, understood by all involved, and that, appropriate and timely information is delivered to patients and their families.

### *Skills*

- Able to communicate effectively with colleagues within and outside of the team
- Able to evaluate the roles and responsibilities of individuals within the clinical team and to ensure that these are understood by all concerned in the context of individual and general patient care.

### **Collaborator (Good Clinical Care; Working with Colleagues)**

#### *Objective*

To achieve competence in the formulation and implementation of appropriate care plans in the clinical situation, in collaboration with members of an interdisciplinary team, incorporating assessment, investigation, treatment and continuing care.

#### *Skills*

- To achieve a goal related to patient care, a research problem, an educational activity or an administrative responsibility by using the expertise and being aware of the limitations of all members of an interdisciplinary team

### **Manager (Working with Colleagues; Probity)**

#### *Objective*

be able to work effectively as a member of a team or a partnership and to accomplish tasks whether one is a team leader or a team member

### **Health Advocate (Good Clinical Care; Probity)**

#### *Objective*

To demonstrate an understanding of determinants of health and public policy in relation to individual patients by identifying the patient's status with respect to one or more determinants of health (i.e. unemployment)

#### *Skills*

- Adapts the assessment and management accordingly (i.e. the medical history to the patients social circumstances); and
- Assesses the patient's ability to access various services in the health and social system and offer appropriate assistance.

### **Scholar (Maintaining Good Medical Practice; Teaching and Training, Appraising and Assessing; Probity)**

## 1. Clinical

### *Objective*

To demonstrate a rigorous approach to clinical problem solving

### *Skills*

- Can pose a clinical question
  - Recognises and identifies gaps in knowledge and expertise around a clinical question
  - Formulates a plan to fill the gap by:
    - conducting an appropriate literature search based upon a clinical question
    - assimilating and critically appraise the literature
    - developing a system to store and retrieve relevant literature
    - consulting others (physicians and other healthcare professionals) in a collegiate manner
  - Proposes a solution to the clinical question
  - Implements the solution in practice. Evaluate the outcome and reassess the solution (re-enter the loop at c-i or c-ii)
  - Identifies practice areas for research
2. **Education and Teaching**

### *Objective*

Can demonstrate an understanding of, and the ability to apply, the principles of adult education, with respect to oneself and others

### *Skills*

- Uses his/her understanding of preferred learning methods in dealing with students, trainees and colleagues

Professional (Relationships with Patients; Probity)
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1. **Discipline-Based Objectives**

### *Objective*

Displays attitudes commonly accepted as essential to Professionalism

### *Skills*

- Use appropriate strategies to maintain and advance professional competence
  - Continually evaluates one's abilities, knowledge and skills and know one's limitations of professional competence
2. **Personal Professional Boundary Objectives**

### *Objective*

To balance personal and professional roles and responsibilities and to demonstrate ways of attempting to resolve conflicts and role strain

### *Skills*

- Adopts specific strategies to heighten personal and professional awareness and explore and resolve interpersonal difficulties in professional relationships

### 3. **Ethics and Professional Bodies**

#### *Objective*

To recognise, analyse and know how to deal with unprofessional behaviours in clinical practice, taking into account local and national regulations

#### *Knowledge*

- Knows and understand the professional, legal and ethical codes of the General Medical Council and any other codes to which the physician is bound

#### *Skills*

- Recognises, analyses and attempts to resolve in clinical practice ethical issues such as truth telling, consent, advanced directives, confidentiality, end-of-life care, conflict of interest, resource allocation, research ethics etc
- Understands and is able to apply relevant legislation that relates to the health care system in order to guide one's clinical practice
- Recognises, analyses and knows how to deal with unprofessional behaviours in clinical practice, taking into account local and national regulations

## 7.2. Intermediate

### Professional Competencies to be acquired during the intermediate stage of surgical training. (New competencies are in bold)

#### Medical Expert (Good Clinical Care; Maintaining Good Medical Practice)

The specialty specific knowledge, clinical skills and technical skills and procedures relating to symptoms and conditions that a trainee will encounter during this stage of training are listed separately. The competencies listed below are generic competencies, which underpin the specialty specific competencies.

##### Skills

- Elicits a history that is relevant, concise, accurate and appropriate to the patient's problem

##### Behaviour

- Demonstrates effective consultation skills in presenting well documented assessments and recommendations in written and/or verbal form in response to a request from another healthcare provider
- Demonstrates the attitudes and the skills necessary to retrieve and implement the information necessary to provide healthcare services to patients in meeting the needs and expectations of the community
- Demonstrates insight into his/her limitations by self assessment

#### Communicator (Good Clinical Care; Maintaining Good Medical Practice)

##### 1. Effective doctor/patient communication

###### Objective

To establish a doctor/patient relationship characterised by understanding, trust, respect, empathy and confidentiality

###### Skills

- Able to gather information regarding the patient's beliefs, concerns and expectations about the condition and consider the influence of factors such as the patient's age, gender, ethnic, cultural and socio-economic background and spiritual values on that illness
  - Able to elicit information regarding the beliefs, concerns and expectations of patients with regard to their presenting conditions.
  - Able to evaluate factors such as the patient's age, gender, ethnic, cultural, socio-economic and spiritual values and the impact that these may have on the management of that patient and condition.
  - Able to deliver information to the patient and family humanely and in a way that is understandable, encourages discussion and promotes the patient's participation in decision making to the level appropriate for the situation.
  - Able to work with patients who present significant communication challenges such as anger or confusion, or an ethno-cultural background different from the doctor's own.
- ##### 2. Communication with Colleagues

###### Objective

To appreciate the importance of co-operation with other healthcare professionals involved in patient care and to ensure that the roles of these professionals are clear, consistent, understood by all involved, and that, appropriate and timely information is delivered to patients and their families.

#### *Skills*

- Able to communicate effectively with colleagues within and outside of the team
- Able to evaluate the roles and responsibilities of individuals within the clinical team and to ensure that these are understood by all concerned in the context of individual and general patient care.

### **Collaborator (Good Clinical Care; Working with Colleagues)**

#### *Objective*

To achieve competence in the formulation and implementation of appropriate care plans in the clinical situation, in collaboration with members of an interdisciplinary team, following assessment, investigation, treatment and continuing care.

#### *Skills*

- To achieve a goal related to patient care, a research problem, an educational activity or an administrative responsibility by using the expertise and being aware of the limitations of all members of an interdisciplinary team

### **Manager (Working with Colleagues; Probity)**

#### *Objective*

To be able to work effectively as a member of a team or a partnership and to accomplish tasks whether one is a team leader or a team member.

### **Health Advocate (Good Clinical Care; Probity)**

#### *Objective*

To demonstrate an understanding of determinants of health and public policy in relation to individual patients by identifying the patient's status with respect to one or more determinants of health (i.e. unemployment)

#### **Knowledge**

- **Demonstrates an understanding of determinants of health and public policy in relation to:**
  - **Practice populations by work with specialty society and other organizations in identifying current "at risk" groups within a given specialty practice and applying the available knowledge about prevention to "at risk" groups within the practice; and contributing "group data" for better understanding of health problems within the population**
  - **General Population by describing in broad terms the key issues currently under debate regarding changes in the National Health System, indicating how these might affect societal health care outcomes and advocating to decrease the burden of illness (at a community or societal level) of a condition or problem relevant to**

**his/her specialty society, community based advocacy group, or other public education bodies, or private organizations**

- **Demonstrates an understanding of the determinants of health by identifying the most important determinants of health (i.e. poverty, unemployment, early childhood education, social support systems), being familiar with underlying research evidence, and applying this understanding to common problems and conditions in the trainees specialty**
- **Demonstrates an understanding of public health policy by describing how public policy is developed; identifying current policies that affect health, either positively or negatively (i.e. communicable diseases, tobacco, substance abuse); and citing examples of how policy was changed as a result of actions by physicians**

*Skills*

- Adapts the assessment and management accordingly (i.e. the medical history to the patients social circumstances); and
- Assesses the patient's ability to access various services in the health and social system and offer appropriate assistance.

**Scholar (Maintaining Good Medical Practice; Teaching and Training, Appraising and Assessing; Probity)**

**1. Clinical**

*Objective*

To demonstrate a rigorous approach to clinical problem solving

*Skills*

- Can pose a clinical question
  - Recognises and identifies gaps in knowledge and expertise around a clinical question
  - Formulates a plan to fill the gap by:
    - conducting an appropriate literature search based upon a clinical question
    - assimilating and critically appraise the literature
    - developing a system to store and retrieve relevant literature
    - consulting others (physicians and other healthcare professionals) in a collegiate manner
  - Proposes a solution to the clinical question
  - Implements the solution in practice. Evaluate the outcome and reassess the solution (re-enter the loop at c-i or c-ii)
  - Identifies practice areas for research
- 2. Education and Teaching**

*Objective*

Can demonstrate an understanding of, and the ability to apply, the principles of adult education, with respect to oneself and others.

**To be able to develop and deliver a teaching module or unit and supporting lecture notes for an undergraduate or peer teaching session.**

*Skills*

- Uses his/her understanding of preferred learning methods in dealing with students, trainees and colleagues
- **Plans educational activities which clearly set out aims and intended learning outcomes**
- **Prepares appropriate teaching materials which meet learners' needs**

***Behaviours***

- **Shows a commitment to teaching and learning**
3. **Research**

***Objective***

**To demonstrate a rigorous approach to research through: a successful application to the ethics committee; or a successfully completing a formal audit application; or presenting to a local mortality and morbidity meeting; or presenting to a national meeting.**

***Skills***

- **To be able to pose a research question (clinical, basic or population health)**
- **Develops a proposal to solve the research question:**
  - **Conduct an appropriate literature search on the research question**
  - **Identify, consult and collaborate with appropriate content experts to conduct the research**
  - **Propose the methodological approach to solve the question**
- **Carries out the research outlined in the proposal**
- **Defends and disseminate the results of the research**
- **Identifies areas for further research that flow from the results**

<b>Professional (Relationships with Patients; Probity)</b>
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1. **Discipline-Based Objectives**

*Objective*

Displays attitudes commonly accepted as essential to professionalism

*Skills*

- Use appropriate strategies to maintain and advance professional competence
- Continually evaluates one's abilities, knowledge and skills and know one's limitations of professional competence

2. **Personal Professional Boundary Objectives**

*Objective*

To balance personal and professional roles and responsibilities and to demonstrate ways of attempting to resolve conflicts and role strain

*Skills*

- Adopts specific strategies to heighten personal and professional awareness and explore and resolve interpersonal difficulties in professional relationships

### 3. **Ethics and Professional Bodies**

#### *Objective*

To recognise, analyse and know how to deal with unprofessional behaviours in clinical practice, taking into account local and national regulations

#### *Knowledge*

- Knows and understand the professional, legal and ethical codes of the General Medical Council and any other codes to which the physician is bound

#### *Skills*

- Recognises, analyses and attempts to resolve in clinical practice ethical issues such as truth telling, consent, advanced directives, confidentiality, end-of-life care, conflict of interest, resource allocation, research ethics etc
- Understands and is able to apply relevant legislation that relates to the health care system in order to guide one's clinical practice
- Recognises, analyses and knows how to deal with unprofessional behaviours in clinical practice, taking into account local and national regulations

## 7.3. Final

**Professional Competencies to be acquired during the final stage of surgical training. (New competencies are in bold)**

### **Medical Expert (Good Clinical Care; Maintaining Good Medical Practice)**

The specialty specific knowledge, clinical skills and technical skills and procedures relating to symptoms and conditions that a trainee will encounter during this stage of training are listed separately. The competencies listed below are generic competencies, which underpin the specialty specific competencies.

#### *Skills*

- Elicits a history that is relevant, concise, accurate and appropriate to the patient's problem

#### *Behaviour*

- Demonstrates effective consultation skills in presenting well documented assessments and recommendations in written and/or verbal form in response to a request from another healthcare provider
- Demonstrates the attitudes and the skills necessary to retrieve and implement the information necessary to provide healthcare services to patients in meeting the needs and expectations of the community
- Demonstrates insight into his/her limitations by self assessment
- **Demonstrates medical expertise in situations other than those involving direct patient care**

### **Communicator (Good Clinical Care; Maintaining Good Medical Practice)**

#### **1. Effective doctor/patient communication**

##### *Objective*

To establish a doctor/patient relationship characterised by understanding, trust, respect, empathy and confidentiality

##### *Skills*

- Able to gather information regarding the patient's beliefs, concerns and expectations about the condition and consider the influence of factors such as the patient's age, gender, ethnic, cultural and socio-economic background and spiritual values on that illness
  - Able to elicit information regarding the beliefs, concerns and expectations of patients with regard to their presenting conditions.
  - Able to evaluate factors such as the patient's age, gender, ethnic, cultural, socio-economic and spiritual values and the impact that these may have on the management of that patient and condition.
  - Able to deliver information to the patient and family humanely and in a way that is understandable, encourages discussion and promotes the patient's participation in decision making to the level appropriate for the situation.
  - Able to work with patients who present significant communication challenges such as anger or confusion, or an ethno-cultural background different from the doctor's own.
- 2. Communication with Colleagues**

### *Objective*

To appreciate the importance of co-operation with other healthcare professionals involved in patient care and to ensure that the roles of these professionals are clear, consistent, understood by all involved, and that, appropriate and timely information is delivered to patients and their families.

### *Skills*

- Communicates effectively with colleagues within and outside of the team
- Evaluates the roles and responsibilities of individuals within the clinical team and to ensure that these are understood by all concerned in the context of individual and general patient care.

## **Collaborator (Good Clinical Care; Working with Colleagues)**

### *Objective*

To achieve competence in the formulation and implementation of appropriate care plans in the clinical situation, in collaboration with members of an interdisciplinary team, following assessment, investigation, treatment and continuing care.

**To understand how healthcare governance influences patient care, research and educational activities at a local, regional and national level**

### *Skills*

- To achieve a goal related to patient care, a research problem, an educational activity or an administrative responsibility by using the expertise and being aware of the limitations of all members of an interdisciplinary team
- **Ability to accept, consider and respect the opinion of others team members, while contributing specialty-specific expertise him/herself in an interdisciplinary team meeting**
- **Ability to communicate with members of an interdisciplinary team in the resolution of conflicts, provide feedback, and where appropriate, assume a leadership role**

## **Manager (Working with Colleagues; Probity)**

### *Objectives*

To be able to work effectively as a member of a team or a partnership and to accomplish tasks whether one is a team leader or a team member.

**To make clinical decisions and judgments based upon sound evidence for the benefit of individuals and the population served.**

### *Skills*

- **Is able to function effectively in a healthcare organization from individual clinical practice to organisations at the local, regional and national level**
- **Through understanding the structure, financing, and operation of the NHS and its facilities, is able to function effectively within it playing an active role in its change**
- **Ability to access and apply a broad base of information to the care of patients in community care, hospital and other healthcare settings**
- **Uses population based approaches to healthcare services and recognises their implication for medical practice**

- **Uses planning, budgeting, evaluation to maximise the outcomes of a patient care**

<b>Health Advocate (Good Clinical Care; Probity)</b>
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*Objective*

To demonstrate an understanding of determinants of health and public policy in relation to individual patients by identifying the patient's status with respect to one or more determinants of health (i.e. unemployment)

*Skills*

- Adapts the assessment and management accordingly (i.e. the medical history to the patients social circumstances); and
- Assesses the patient's ability to access various services in the health and social system and offer appropriate assistance.

<b>Scholar (Maintaining Good Medical Practice; Teaching and Training, Appraising and Assessing; Probity)</b>
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**1. Clinical**

*Objective*

To demonstrate a rigorous approach to clinical problem solving

*Skills*

- Can pose a clinical question
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  - developing a system to store and retrieve relevant literature
  - consulting others (physicians and other healthcare professionals) in a collegiate manner
- Proposes a solution to the clinical question
- Implements the solution in practice. Evaluate the outcome and reassess the solution (re-enter the loop at c-i or c-ii)
- Identifies practice areas for research

**2. Education and Teaching**

*Objective*

Can demonstrate an understanding of, and the ability to apply, the principles of adult education, with respect to oneself and others.

To develop and deliver a teaching module or unit and supporting lecture notes for an undergraduate or peer teaching session.

**To supervise and mentor learners (trainees) in a work setting.**

**To teach trainees in a work setting**

### *Skills*

- Uses his/her understanding of preferred learning methods in dealing with students, trainees and colleagues
- Plans educational activities which clearly set out aims and intended learning outcomes
- Prepares appropriate teaching materials which meet learners' needs
- **Provides effective feedback to learners**
- **Optimises opportunistic teaching and learning in**
  - **Operating theatre**
  - **Bedside**
  - **Outpatients**
- **Can highlight ways in which their clinical teaching might be improved**
- **Able to evaluate the use of reflective practice, learning agreements, portfolios and journals**
- **Uses different methods of assessment appropriate to what is being assessed e.g. knowledge, skills, judgment and professionalism**
- **Can differentiate between appraisal and assessment**

### *Behaviours*

- Shows a commitment to teaching and learning
- **Shows a willingness to supervise the work of less experienced colleagues**
- **Shows sensitivity to the needs of learner and responds appropriately.**

## 3. **Research**

### *Objective*

**To demonstrate a rigorous approach to research through: the publication of a paper in a peer review journal; or participation in a systematic review with defined outcomes; publishing guidance at trust, regional, specialty or national level.**

### *Skills*

- To be able to pose a research question (clinical, basic or population health)
- Develops a proposal to solve the research question:
  - Conduct an appropriate literature search on the research question
  - Identify, consult and collaborate with appropriate content experts to conduct the research
  - Propose the methodological approach to solve the question
- Carries out the research outlined in the proposal
- Defends and disseminate the results of the research
- Identifies areas for further research that flow from the results

## **Professional (Relationships with Patients; Probity)**

### 1. **Discipline-Based Objectives**

#### *Objective*

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**2. Personal Professional Boundary Objectives**

*Objective*

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*Skills*

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**3. Ethics and Professional Bodies**

*Objective*

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*Knowledge*

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*Skills*

- Recognises, analyses and attempts to resolve in clinical practice ethical issues such as truth telling, consent, advanced directives, confidentiality, end-of-life care, conflict of interest, resource allocation, research ethics etc
- Understands and is able to apply relevant legislation that relates to the health care system in order to guide one's clinical practice
- Recognises, analyses and knows how to deal with unprofessional behaviours in clinical practice, taking into account local and national regulations