

The Intercollegiate Surgical Curriculum

Educating the surgeons of the future

Paediatric Surgery Syllabus

2010

ISCP

INTERCOLLEGIATE
SURGICAL
CURRICULUM
PROGRAMME

Table of Contents

| | |
|--|----|
| Overview and objectives of the Paediatric Surgery curriculum | 2 |
| Areas of Special Interest | 5 |
| Key Topics..... | 9 |
| Initial Stage Overview..... | 10 |
| Initial Stage Topics | 13 |
| Intermediate Stage Overview | 27 |
| Intermediate Stage Topics | 29 |
| Final Stage Overview..... | 63 |
| Elective Procedures..... | 63 |
| Paediatric Urology Special Interest Overview | 65 |

Overview and objectives of the Paediatric Surgery curriculum

Paediatric Surgery is that branch of medicine that deals with the diseases, trauma and malformations of childhood years (fetal period to teenage years).

- Consultant surgeons working in this area of clinical practice will have undergone a specific training programme to furnish the knowledge, skills and professional attitudes necessary for dealing with children and their families.
- At present the majority of specialised children's surgery is performed in designated children's hospitals, or in paediatric surgical units within larger hospitals. In these settings, teams of health professionals led by consultant paediatric surgeons provide the necessary services to diagnose, treat and support the rehabilitation of children with various ailments.
- The routine workload has a very general focus with most consultants developing experience and skills across the breadth of surgery. To facilitate this, the training is broadly based and comprehensive.
- As a consequence of the breadth and variation in complexity of conditions seen and dealt with in the specialty, there are wide variations in the nature of Paediatric Surgical practice across the UK. This is impacted on by how much of the General Surgery of Childhood (simple minor surgery) is performed in District General Hospitals by suitably trained adult General Surgeons and Urologists, by the establishment of a small number of supra regional specialist units for e.g. bladder exstrophy surgery and surgery for biliary atresia and in the involvement in certain areas of work by other surgical specialties e.g. thoracic surgery by Cardiothoracic Surgeons. As a consequence of this, trainees by the start of the final stage of the syllabus, will have to have a clear idea of which areas of work they would wish to undertake as Consultants, and focus more closely on gaining experience in these areas of work.
- Most consultants will also have a commitment to an emergency workload though the nature of delivery of that will vary between different units.
- There is an increasing trend for consultants to develop further specific expertise in areas of special interest which include:
 - Neonatal Surgery
 - Urological Surgery
 - Hepatobiliary Surgery
 - Gastrointestinal Surgery
 - Oncological Surgery.

Eleri Cusick
Graham Lamont
Graham Haddock
Editors

The Purposes of Training

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

This includes:

- Competence to manage patients presenting on an unselected emergency paediatric surgical 'take', diagnosing, assessing and treating or referring on as appropriate.
- Competence in the management of patients presenting with a range of symptoms and elective conditions as specified in the core syllabus for the specialty of paediatric surgery.
- Competence to manage an additional range of elective and emergency conditions by virtue of appropriate training and assessment opportunities obtained during training.
- Professional competences as specified in the syllabus and derived from Good Medical Practice of the General Medical Council of the UK and, more recently, on the Medical Leadership Competency Framework produced by PMETB .

The Training Pathway

- Specialty training programmes are the route to achieving a Certificate of Completion of Training (CCT) in Paediatric Surgery. Under current guidelines this certificate is mandatory before a UK trained surgeon can apply for a consultant position in the U.K.
 - Entry to training programmes is via competitive selection and successful candidates will have met the requirements set down in the person specification for the post.
 - The programme of training in paediatric surgery is currently an indicative 8 years' duration and aims to furnish trainees with the knowledge, skills and attitudes to gain a CCT in paediatric surgery. Alternatively, completion of a two or three year Early Years Surgical Training programme and competitive entry to specialty training at ST3 level is being introduced as another pathway to CCT in Paediatric Surgery (see below).
 - Programmes are designed to provide exposure to a wide range of surgical problems in children during training, commensurate with the requirements of the curriculum.
 - In addition trainees may be exposed to more focused practice in various paediatric specialties, and it is possible that on a case by case basis, trainees who are pursuing special interests will elect to have their CCT deferred.
 - New consultants are expected to manage the broad range of conditions presenting to them, within the limits of their experience and expertise. This may involve appropriate referrals within the team to colleagues having specific expertise, or to national designated centres for specified rare conditions.
 - The syllabus outlines, for the benefit of trainers, trainees and assessors, the knowledge and skills to be acquired and applied, together with the levels of performance expected at various waypoints during training.
 - The four stages early years, intermediate, final and special interest reflect progress through the specialty.
 - Early years (CT1 – CT) which exposes the trainee to a number of surgical specialties (also known as Core Training) – CT 1-2. In this Training Programme at least 6 – 12 months would have to be spent in Paediatric Surgery to allow the trainee to acquire the necessary competencies to allow progression to ST3 in Paediatric Surgery.
 - The intermediate stage (ST3 and 4) introduces specialist paediatric surgical skills
 - The final stage (ST5 to ST8) develops these specialist skills further
 - The special interest part of the final stage (ST7 and 8) enables further development of paediatric specialisation and consolidation of specialist skills and forms the transition to CCT.
 - The syllabus is not rigid to the extent that it is well recognised there will be variations in the profiles of placement allocated during each stage. The annual review and learning agreements ensure that the overall syllabus requirements are met during each stage, regardless of sequence.
 - The use of the term 'patient/parent' is used to acknowledge all who have legal responsibility for the child, including guardians and professional carers.
-

The Scope and Standards of Paediatric Surgical Practice at CCT

On completion of the training programme Paediatric Surgical Trainees, including those pursuing an academic pathway, will be expected to have completed the competence based curriculum successfully. This includes the following broad areas:

Professional Behaviour and Leadership Skills

This is defined in detail in the syllabus on professional behaviour and leadership skills but there is particular emphasis on:

- Understanding the specific features of the management of children's health and illness
- Appropriate professional behaviours in dealing with children and families
- The ability to both lead and work within the relevant teams

General Surgery

- Assessment and management of children with acute abdominal pathology
- Assessment and management of trauma (including APLS certification)
- Assessment and management of children with abdominal wall herniae
- Long term management of those children presenting with index neonatal conditions
- Assessment and management of children with oncological diagnoses

Neonatal Surgery

- Assessment and management of neonates with acute abdominal pathology
- Assessment and management of neonates with abdominal wall defects
- Assessment and management of neonates with major index conditions e.g. Hirschsprung's disease, anorectal malformations, oesophageal atresia
- Assessment and management of pyloric stenosis

Urology

- Assessment and management of children with urinary tract infection
 - Assessment and management of children with both upper and lower urinary tract abnormalities to include disorders of sex development including hypospadias
 - Assessment and management of children with bladder dysfunction
-

Areas of Special Interest

Neonatal Surgery

This is defined as the surgery of infants up to 44 weeks post conceptual age (gestational age + postnatal age).

With the availability of antenatal diagnosis, neonatal surgical care also includes antenatal counselling of parents and other health professionals.

Neonatal surgery is an essential component of paediatric surgery and contributes significantly to the emergency workload of any general paediatric surgeon.

Urological Surgery

Paediatric urology is the surgical management of congenital and acquired anomalies of the genitourinary system in neonates and children. It forms a major component of the paediatric surgical workload.

BAPU, the British Association of Paediatric Urologists, is an active group and there are moves to have Paediatric Urology officially recognised as a sub-speciality. The majority of the work is elective and some specialist paediatric urologists elect not to take part in general paediatric surgery on-call.

All paediatric surgeons must undertake some training in paediatric urology which comprises a significant proportion of the Intercollegiate Exam in Paediatric Surgery, while those aiming for a paediatric urology post must train in general paediatric surgery.

For those intending a career in paediatric urology subspecialist training posts are available in designated posts including Birmingham, London (Great Ormond Street and the Evelina Hospital), Southampton, Leeds and Manchester. Certain conditions e.g. bladder exstrophy are managed in designated supra-regional centres: London (Great Ormond Street) and Manchester.

Hepatobiliary Surgery

This special interest area is supra regional being based in Kings Hospital, London, Birmingham Children's Hospital and Leeds. Although complex operative surgery is based in these units a full understanding of paediatric hepatobiliary surgery is part of general paediatric surgery.

By nature of the small number of surgeons required at Consultant level training in this special interest is tightly controlled.

Gastrointestinal Surgery

Gastrointestinal surgery is a major component of general paediatric surgery with the majority of paediatric surgeons involved to some extent. The division into upper and lower GI is less distinct than in adult general surgery but there is subspecialisation with inflammatory bowel disease being managed by a smaller number of surgeons.

Antireflux surgery provides a steady workload but more complex procedures such as gastro-oesophageal disconnection are generally limited to a small number of enthusiasts.

Oncological Surgery

Paediatric oncological surgery should be exclusively managed in tertiary centres by those trained and having expertise in this specific branch.

It is likely to be the full time or part time special interest of 1 or 2 surgeons within each centre.

It is expected that all paediatric surgical trainees will cover this aspect of paediatric surgery but those with a special interest may have to plan targeted training to reach the level of expertise and confidence appropriate for a consultant

Laparoscopic Surgery

Laparoscopic and, to a lesser extent, thoracoscopic surgery, are now firmly established in all Paediatric Surgical Training Centres. The minimal access approach can now be regarded as one way to perform a wide range of operative procedures in Paediatric Surgery. This revision of the syllabus establishes laparoscopic surgical techniques and operative procedures as key skills for all Paediatric Surgical trainees.

Thoracic Surgery

Some thoracic surgery, in some centres, is undertaken by Cardiothoracic Surgeons. In many centres, this work is undertaken by Paediatric Surgeons. Conditions seen include congenital cystadenomatoid malformation of the lung, congenital lobar emphysema, empyema and surgery for oesophageal atresia.

Academic Surgery

Though the acquisition of academic skills and experience form an integral part of the training in Paediatric Surgery, there are a number of specific posts available in the UK for academic training to be delivered for those wishing to pursue a formal academic career pathway.

The most structured approach to this is now by formal appointment to an Academic Clinical Fellow (ACF) post or Academic Clinical Lectureship (ACL). These posts are centrally funded and appointed to by open competition on a national basis. They form part of the managed programmes with Deaneries providing both clinical and academic training. For further information, please go to the website of the NIHR Co-ordinating Centre for Research Capacity Development (<http://www.nccrcd.nhs.uk>).

Trainees interested in pursuing academic training are advised to contact their Training Programme Director.

The Configuration and Delivery of Paediatric Surgical Services

'Surgical Care of the Young: The organisation of a first class service' (July 07) provides a clear framework for the configuration and delivery of paediatric surgical services. This involves guidelines for provision both within and outside tertiary centres.

Future Trends in Paediatric Surgery

The provision of the General Surgery of Childhood throughout the UK is becoming a serious issue of concern for service providers in the Health Service. As adult General Surgeons retire and are replaced by new Consultants who have no training in this area of work, a steady drift of work involving a large volume of relatively minor operative procedures towards the tertiary centres is expected in the next 10 years. This will require significant reconfiguration of service provision in many parts of the UK and may require trainees with a CCT in Paediatric Surgery to consider accepting Consultant posts with a significant proportion of the workload devoted to these minor cases.

Key Topics

On completion of the training programme, the Paediatric Surgical Trainee will be expected to have demonstrated competence in all aspects of the published syllabus. These would include the following areas:

Generic

- Understanding the specific features of the management of childrens health and illness
- Self directed learning
- Ability to assess published evidence in relation to clinical care
- Ability to teach
- Appropriate professional behaviours in dealing with children and families
- The ability to both lead and work within appropriate teams
- The ability to participate in antenatal diagnosis and counselling

General Surgery

- Assessment and management of children with acute abdominal pathology
- Assessment and management of trauma (including APLS certification)
- Assessment and management of children with abdominal wall herniae
- Long term management of those children presenting with index neonatal conditions
- Assessment and management of children with oncological diagnoses

Neonatal Surgery

- Assessment and management of neonates with acute abdominal pathology
- Assessment and management of neonates with abdominal wall defects
- Assessment and management of neonates with major index conditions e.g. Hirschsprungs disease, anorectal malformations, oesophageal atresia
- Assessment and management of pyloric stenosis

Urology

- Assessment and management of children with urinary tract infection
- Assessment and management of children with both upper and lower urinary tract abnormalities to include disorders of sex development (including hypospadias)
- Assessment and management of children with bladder dysfunction

Initial Stage Overview

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

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

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

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

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

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

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

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

Module 2: Common surgical conditions

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

Module 3 Basic surgical skills

- To prepare oneself for surgery
- To safely administer appropriate local anaesthetic agents
- To handle surgical instruments safely
- To handle tissues safely
- To incise and close superficial tissues accurately
- To tie secure knots
- To safely use surgical diathermy
- To achieve haemostasis of superficial vessels.
- To use a suitable surgical drain appropriately.

- To assist helpfully, even when the operation is not familiar.
- To understand the principles of anastomosis
- To understand the principles of endoscopy including laparoscopy

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

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

Module 5: Peri-operative care of the surgical patient

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

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

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

Module 7: Surgical care of the paediatric patient

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

Module 8: Management of the dying patient

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

Module 9: Organ and tissue transplantation

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

Module 10: Professional behaviour

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

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

1. Basic science

To understand the basic anatomy that surgeons will encounter during the management of children and the embryology related to congenital anomalies.

To understand the normal physiological processes at different ages. To understand the effects of disease and trauma on these processes

To understand surgical pathology that can affect children at different ages.

2. Child with abdominal pain

To be able to assess and initiate management of a child presenting with abdominal pain including appropriate communication with relevant family or carers

To be able to assess and initiate management of a child presenting with intussusception including appropriate communication with relevant family or carers

3. The vomiting child

To be able to assess and initiate management of a child presenting with vomiting including appropriate communication with relevant family or carers

4. Trauma in children

Appropriate communication with relevant family or carers

5. Child with groin conditions

To be able to assess and initiate management of a child presenting with groin pathology (including undescended testis, hernia, hydrocele and painful swellings of the genitalia) including appropriate communication with relevant family or carers

6. Abdominal wall pathology

To be able to assess and initiate management of a child presenting with including abnormalities of the abdominal wall (including umbilical hernia, supra-umbilical hernia and epigastric hernia) including appropriate communication with relevant family or carers

7. Paediatric urology

To be able to assess and initiate management of a child presenting with including abnormalities of the urinary tract (including urinary tract infection) including appropriate communication with relevant family or carers

8. Child with Constipation

To be able to assess and initiate management of a child presenting with constipation including appropriate communication with relevant family or carers

9. Head or neck swelling

To be able to assess and initiate management of a child presenting with a swelling of head or neck including appropriate communication with relevant family or carers

10. Emergency paediatric surgery

To be able to assess and initiate management of a child presenting with a superficial abscess including appropriate communication with relevant family or carers

To be able to assess and initiate management of a child presenting with an in growing toe-nail including appropriate communication with relevant family or carers

– This distinguishes the anatomical and clinical features which makes the management of children special.

Initial Stage Topics

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

| | |
|--|---|
| | <ul style="list-style-type: none"> • Surgical biochemistry • Pathology of neoplasia • Classification of tumours • Tumour development and growth including metastasis • Principles of staging and grading of cancers • Principles of cancer therapy including surgery, radiotherapy, chemotherapy, immunotherapy and hormone therapy • Principles of cancer registration • Principles of cancer screening • The pathology of specific organ systems relevant to surgical care including cardiovascular pathology, respiratory pathology, gastrointestinal pathology, genitourinary disease, breast, exocrine and endocrine pathology, central and peripheral, neurological systems, skin, lymphoreticular and musculoskeletal systems <p>Microbiology:</p> <ul style="list-style-type: none"> • Surgically important micro organisms including blood borne viruses • Soft tissue infections including cellulitis, abscesses, necrotising fasciitis, gangrene • Sources of infection • Sepsis and septic shock • Asepsis and antisepsis • Principles of disinfection and sterilisation • Antibiotics including prophylaxis and resistance • Principles of high risk patient management • Hospital acquired infections <p>Imaging:</p> <ul style="list-style-type: none"> • Principles of diagnostic and interventional imaging including x-rays, ultrasound, CT, MRI. PET, radio nucleotide scanning |
|--|---|

| Module 2 | Common Surgical Conditions | |
|-----------|--|---|
| Objective | <p>This section assumes that trainees have general medical competences consistent with a doctor leaving Foundation in the UK. It also assumes an ongoing commitment to keeping these skills and knowledge up to date as laid out in GMP. It is predicated on the value that surgeons are doctors who carry our surgery and require competence.</p> <p>To demonstrate understanding of the relevant basic scientific principles for each of these surgical conditions and to be able to provide the relevant clinical care as defined in modules assessment and management as defined in Modules 1 and 4.</p> | |
| Topics | <p>Presenting symptoms or syndromes</p> <ul style="list-style-type: none"> • Abdominal pain • Abdominal swelling • Change in bowel habit • Gastrointestinal haemorrhage • Rectal bleeding • Dysphagia • Dyspepsia • Jaundice | <p>To include the following conditions</p> <ul style="list-style-type: none"> • Appendicitis • Gastrointestinal malignancy • Inflammatory bowel disease • Diverticular disease • Intestinal obstruction • Adhesions • Abdominal hernias • Peritonitis • Intestinal perforation • Benign oesophageal disease • Peptic ulcer disease • Benign and malignant hepatic, gall bladder and pancreatic disease • Haemorrhoids and perianal disease • Abdominal wall stomata |
| | <p>Breast disease</p> <ul style="list-style-type: none"> • Breast lumps and nipple discharge | <p>To include the following conditions</p> <ul style="list-style-type: none"> • Benign and malignant breast lumps • Mastitis and breast abscess |

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

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

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

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

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

| | |
|--|--|
| | <p>3 Case work up and evaluation; risk management</p> <p>3 Active participation in clinical audit events</p> <p>3 Appropriate prescribing</p> <p>3 Taking consent for intermediate level intervention; emergency and elective</p> <p>3 Written clinical communication skills</p> <p>3 Interactive clinical communication skills: patients</p> <p>3 Interactive clinical communication skills: colleagues</p> |
|--|--|

| Module 5 | Peri-operative care |
|-----------------|---|
| Objective | <p>To assess and manage preoperative risk</p> <p>To manage patient care in the peri-operative period</p> <p>To conduct safe surgery in the operating theatre environment</p> <p>To assess and manage bleeding including the use of blood products</p> <p>To care for the patient in the post-operative period including the assessment of common complications</p> <p>To assess, plan and manage post-operative fluid balance</p> <p>To assess and plan perioperative nutritional management</p> |
| Knowledge | <p>Pre-operative assessment and management:</p> <ul style="list-style-type: none"> • Cardiorespiratory physiology • Diabetes mellitus and other relevant endocrine disorders • Fluid balance and homeostasis • Renal failure • Pathophysiology of sepsis – prevention and prophylaxis • Thromboprophylaxis • Laboratory testing and imaging • Risk factors for surgery and scoring systems • Pre-medication and other preoperative prescribing • Principles of day surgery <p>Intraoperative care:</p> <ul style="list-style-type: none"> • Safety in theatre including patient positioning and avoidance of nerve injuries • Sharps safety • Diathermy, laser use • Infection risks • Radiation use and risks • Tourniquet use including indications, effects and complications • Principles of local, regional and general anaesthesia • Principles of invasive and non-invasive monitoring • Prevention of venous thrombosis • Surgery in hepatitis and HIV carriers • Fluid balance and homeostasis <p>Post-operative care:</p> <ul style="list-style-type: none"> • Post-operative monitoring • Cardiorespiratory physiology • Fluid balance and homeostasis • Diabetes mellitus and other relevant endocrine disorders • Renal failure • Pathophysiology of blood loss • Pathophysiology of sepsis including SIRS and shock • Multi-organ dysfunction syndrome • Post-operative complications in general • Methods of postoperative analgesia <p>To assess and plan nutritional management</p> <ul style="list-style-type: none"> • Post-operative nutrition • Effects of malnutrition, both excess and depletion • Metabolic response to injury • Methods of screening and assessment of nutritional status |

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

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

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

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

| | |
|-----------------|--|
| Module 7 | Surgical care of the Paediatric patient |
| Objective | <p>To assess and manage children with surgical problems, understanding the similarities and differences from adult surgical patients</p> <p>To understand the issues of child protection and to take action as appropriate</p> |

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

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

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

Requirement to meet the ST3 in Paediatric Surgery

In order to meet the job specifications of an ST3 trainee an early year's trainee must take a clear role in the paediatric surgical team managing clinic and ward based children and their parents and carers under supervision, including the management of acute paediatric surgical admissions. They will need to be able to take part in an outpatient clinic and see patients with their carers themselves with the consultant available for advice.

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

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

The range of conditions a trainee needs to manage is laid out below and in the depth demonstrated in a text book such as Jones Clinical Paediatric Surgery Diagnosis and Management
 Editors JM Hutson, M O'Brien, AA Woodward, SW Beasley
 6th Edition 2008 Melbourne Blackwell
 Essentials of Paediatric Urology D Thomas, A Rickwood, P Duffy

1. Basic science

To understand the basic anatomy that surgeons will encounter during the management of children and the embryology related to congenital anomalies.

To understand the normal physiological processes at different ages. To understand the effects of disease and trauma on these processes

To understand surgical pathology that can affect children at different ages.

2. Child with abdominal pain

To be able to assess and initiate management of a child presenting with abdominal pain including appropriate communication with relevant family or carers

To be able to assess and initiate management of a child presenting with intussusception including appropriate communication with relevant family or carers

3. The vomiting child

To be able to assess and initiate management of a child presenting with vomiting including appropriate communication with relevant family or carers

4. Trauma in children

To be able to assess and initiate the immediate management of a child presenting with trauma including appropriate communication with relevant family or carers

5. Child with groin conditions

To be able to assess and initiate management of a child presenting with groin pathology (including undescended testis, hernia, hydrocele and painful swellings of the genitalia) including appropriate communication with relevant family or carers

6. Abdominal wall pathology

To be able to assess and initiate management of a child presenting with including abnormalities of the abdominal wall (including umbilical hernia, supra-umbilical hernia and epigastric hernia) including appropriate communication with relevant family or carers

7. Paediatric urology

To be able to assess and initiate management of a child presenting with including abnormalities of the urinary tract (including urinary tract infection and haematuria) including appropriate communication with relevant family or carers

8. Child with Constipation

To be able to assess and initiate management of a child presenting with constipation including appropriate communication with relevant family or carers

9. Head or neck swelling

To be able to assess and initiate management of a child presenting with a swelling of head or neck including appropriate communication with relevant family or carers

10. Emergency paediatric surgery

To be able to assess and initiate management of a child presenting as an emergency with a range of paediatric surgical conditions including appropriate communication with relevant family or carers and senior staff.

– This distinguishes the anatomical and clinical features which makes the management of children special.

| Early Years training in Paediatric surgery | |
|---|--|
| Sub Topic | Anatomy |
| Objective | To understand the basic anatomy that surgeons will encounter during the management of children, and the embryological development of anatomical systems. |
| Knowledge | <p>CARDIOVASCULAR: Embryogenesis of heart and major vessels, and formation of the lymphatic system Common anatomical variations of heart chambers, valves and major vessels Surgical anatomy of heart and major arteries + veins in thorax, neck, abdomen and groins</p> <p>RESPIRATORY: Embryogenesis of trachea and bronchial tree Lung development Common anatomical variations of respiratory tree and lungs to include vascular anomalies Surgical anatomy of pleura, lung and trachea and bronchial tree</p> <p>GASTROINTESTINAL TRACT AND ABDOMINAL WALL: Embryogenesis of the GIT to include formation of the solid organs, anorectum, and abdominal wall Common anatomical variations in the formation of the GIT and abdominal wall Surgical anatomy of the GIT and its relations to other systems</p> <p>RENAL: Embryogenesis of the upper and lower renal tract to include male and female genital development Common anatomical variations of the renal tract and genitalia Surgical anatomy of the renal tract, and associated genital structures to include relationships to other systems</p> <p>NEUROLOGICAL: Embryogenesis of the brain and spinal cord, and of the supporting structures (skull, vertebral column) Common anatomical variations of the brain and spinal cord Surgical anatomy of the brain, spinal cord and major somatic nerves (to include relationships to other systems)</p> <p>MUSCULO SKELETAL: Embryogenesis of the skeleton and muscle development Common anatomical variations of skeleton Surgical anatomy of skeleton where relevant to other systems</p> |

| Sub Topic | Clinical |
|------------------|---|
| Objective | To be able to assess a child presenting acutely with acute surgical pathology (see examples below) as the suspected diagnosis or To be able to assess a child presenting acutely with non acute surgical pathology (see example below) as the |

| | |
|--|---|
| | <p>suspected diagnosis</p> <p>To be able to assess a child presenting with</p> <ul style="list-style-type: none"> • abdominal pain either acutely or through the OP clinic. • vomiting either acutely or through the OP clinic. • 'groin pathology' • abnormalities of the abdominal wall • abnormalities in the urinary tract • constipation as the primary presenting symptom • head/neck swelling as the primary presenting symptom <p>To be able to formulate a differential diagnosis and an investigation and management plan</p> <p>To be able to treat the child appropriately up to and including operative intervention if required</p> <p>To be able to communicate the above information at the required level to patients/ parents/ other team members</p> |
| Knowledge | <p>Knowledge in general</p> <p>Investigation protocols and local variations thereof</p> <p>Differential diagnosis</p> <p>Place and value of investigations</p> <p>Place of operative intervention, and associated outcomes</p> <p>Patterns of symptoms and relation to likely pathology and age of child</p> <p>Medical management</p> <p>Indications for surgery</p> <p>Knowledge in particular</p> <p>Causes of obstruction</p> <p>Pyloric disease</p> <p>Intussusception</p> <p>Significance of bile stained vomiting</p> <p>Hernia</p> <p>Hydrocele</p> <p>Undescended Testis</p> <p>Penile conditions</p> <p>Scrotal conditions</p> <p>Urinary tract infection</p> <p>Causes and principles of management of constipation</p> <p>Ingrowing toenail</p> <p>Common swellings of the neck in children</p> <p>The normal development of the foreskin</p> <p>Likely effects of different types of trauma and relation to age of child</p> |
| Clinical Skills | <p>Ability to assess child</p> <p>Ability to assess ill child including an assessment of severity of dehydration.</p> <p>Ability to communicate with child, parents and carers</p> <p>Ability to form a viable investigation and treatment plan</p> <p>Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>Appendicectomy (open/laparoscopic) (2)</p> <p>Pyloromyotomy (2)</p> <p>Inguinal herniotomy (non-neonatal) (2)</p> <p>Umbilical and epigastric hernia repair (2)</p> <p>Surgery for hydrocele (2) Prepuceoplasty (1)</p> <p>Circumcision (2)</p> <p>Surgery for undescended testis (1)</p> <p>Surgery for acute scrotum (2)</p> <p>Insertion of supra-pubic catheter (2)</p> <p>Cystourethroscopy (2)</p> <p>Ingrowing toenail surgery (2)</p> |

| | |
|--|--|
| | Open and air enema reduction of intussusception (1) Upper GI endoscopy (1) Chest drain insertion (1) Suction rectal biopsy (2) Manual evacuation of stool (2) Examination under anaesthetic of rectum (2) Anal stretch (2) Excision of skin lesion (2) Excision/biopsy of lymph node (1) Incision and drainage of abscess (2) |
|--|--|

Assessment

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

Specific evidence includes

| Assessment type | Subject |
|---|---|
| DOPS a selection of types and numbers of each type according to learning agreements | Insertion of a suprapubic catheter Circumcision Suction rectal biopsy Manual evacuation of stool EUA Rectum Anal stretch Abscess drainage Herniotomy Testicular torsion |
| Case Based Discussion | four per six months of attachment |
| CEX | History taking from a child and their carers Examining a child Taking consent |
| PBAs | Appendicectomy Inguinal herniotomy Pyloromyotomy Surgery for hydrocele Repair of umbilical hernia |
| Training Supervisors report | Evidenced by the above WPBAs |
| ARCP for each specified training interval | As per local Deanery specifications |
| MRCS | Generic syllabus |

Intermediate Stage Overview

Entry into ST3

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

The aim of the intermediate stage (ST3 and 4) is to allow the trainee to continue to develop the skills knowledge and attitude required to practise Paediatric Surgery in the U.K health system.

Trainee will build on the basic skills and competences achieved in the initial stage of the programme, gaining exposure to the more specialised areas of practice. It is expected that the trainees will continue to build on their clinical experiences and be able to demonstrate competent practice in the operations detailed at the end of the initial stage.

The curriculum goals are presented in a modular fashion for ease of reference and recording of achievement rather than as a suggested teaching package. In some centres the trainees may work for firms in which there is an element of specialisation (paediatric urology is a prime example of this), but in other units there may be a more widespread range of experience to be obtained. There will obviously be areas of duplicate coverage and again this curriculum should be viewed as a framework to aid understanding rather than as a proscriptive document.

The different sections will contain a mixture of information on relevant conditions, symptom patterns and associated surgical operations. This is in an attempt to represent the variety of clinical practice. Overall these goals outlined are simply guides to progress and should be used by trainees, trainers and Programme Directors to help plan rotational placements to ensure a full breadth of training.

Acquisition of competencies in Paediatric Urology will depend on what year the trainee is in when exposed to this aspect of Paediatric Surgery and in which centre the trainee gets this exposure. If the trainee wishes to acquire the ST7/8 or Paediatric Urology module competencies, it is recommended that the trainee applies for one of the subspecialty posts in the designated Paediatric Urology centres (see final stage and Paediatric Urology Special Interest module later in the syllabus).

The following modules are included:

- Gastrointestinal
- Neonatology
- General Urology
- Thoracic
- Oncology
- Endocrine
- Surgical Disciplines
- Research and Audit
- Teaching and Training.

The expected outcomes for this phase of training are as follows:

- Further experience in the management of the common surgical problems of childhood
- A practitioner with integrity, respect and compassion
- Increasing exposure to the more specialised areas of paediatric surgery to include clinical presentation, operative and non-operative management of cases within the different areas.
- Competence in further range of operations common to paediatric practice

The operative skills outlined here are those relevant to this stage of surgical training. Many are related to the conditions outlined in the specialty modules.

Again the curriculum is there to act as a guide to a minimum level of competence to be achieved by the end of ST4. The operations detailed here are those it is reasonable to expect the trainee to be able to perform either independently or with consultant assistance available but not necessarily at the operating table.

Although this list is not exhaustive it gives an indication of those procedures that it is reasonable to expect a trainee by the end of ST4 to have been exposed to and in the case of the marked procedures (*) be deemed competent to perform.

Elective Procedures

- Gastrostomy – open / PEG*
- Fundoplication
- Splenectomy / cholecystectomy
- Upper GI Endoscopy (flexible)
- Exomphalos minor
- Anoplasty for low anorectal malformation
- Intestinal resection and anastomosis (non-neonatal)
- Rectal Biopsy for Hirschsprungs (suction/open)*
- Inguinal herniae – infant and neonatal (not extreme prematurity)
- Colostomy closure*
- C.V. line insertion*
- Open biopsy of tumours
- Muscle biopsy*
- Cystoscopy*
- Repair distal hypospadias
- Simple Nephrectomy (dysplastic kidney)
- Ureteric reimplant / submucosal injection
- Closure of vesicostomy or ureterostomy
- Laparoscopic approach for diagnosis*

Emergency Procedures

- Gastroschisis closure (primary or silo)
- Colostomy formation – anorectal malformations / Hirschsprungs disease*
- Correction of malrotation*
- Meconium ileus enterotomy / or stoma formation
- Operative reduction / resection of intussusception*
- Urinary diversion (ureterostomy/vesicostomy formation)
- Removal of oesophageal foreign body

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

Intermediate Stage Topics

| Topic | Groin conditions |
|-----------------|---|
| Category | General Surgery of Childhood |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with 'groin pathology'</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention if required</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> |
| Knowledge | <p>INGUINAL HERNIA:</p> <p>3 Developmental anatomy 2 Natural history 3 Indications and outcomes of surgery</p> <p>HYDROCELE:</p> <p>3 Developmental anatomy 2 Natural history 3 Place of conservative management 3 Indications and outcomes of surgery</p> <p>UNDESCENDED TESTIS:</p> <p>3 Developmental anatomy 2 Natural history of undescended testis and retractile testis 2 Place of conservative management 2 Indications and outcomes of surgery</p> <p>PENILE CONDITIONS:</p> <p>3 Developmental anatomy 2 Natural history 3 Place of conservative management 3 Indications and outcomes of surgery</p> <p>ACUTE SCROTUM:</p> <p>3 Natural history 2 Place of conservative management 3 Indications and outcomes of surgery</p> |
| Clinical Skills | <p>INGUINAL HERNIA:</p> <p>3 Ability to assess child and reach appropriate diagnosis 3 Ability to form a treatment plan 3 Ability to communicate with all relevant groups</p> <p>HYDROCELE:</p> <p>3 Ability to assess child and reach appropriate diagnosis 3 Ability to form a treatment plan 3 Ability to communicate with all relevant groups</p> <p>UNDESCENDED TESTIS:</p> <p>3 Ability to assess child and reach appropriate diagnosis 3 Ability to differentiate true undescended testis from retractile variant 3 Ability to form a treatment plan</p> |

| | |
|--|---|
| | <p>3 Ability to communicate with all relevant groups</p> <p>PENILE CONDITIONS: 3 Ability to assess child and reach appropriate diagnosis 3 Ability to form a treatment plan 3 Ability to communicate with all relevant groups</p> <p>ACUTE SCROTUM: 3 Ability to assess child and reach appropriate diagnosis 3 Ability to form a treatment plan 3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>Hernia (ST3): 2 Inguinal herniotomy (non-neonatal) 1 Inguinal hernia (neonatal)</p> <p>Hydrocele (ST3): 2 Surgery for hydrocele</p> <p>Penile Conditions (ST3): 2 Prepuceplasty 2 Circumcision</p> <p>Undescended testis (ST3): 2 Surgery for undescended testis</p> <p>Acute scrotum (ST3): 2 Surgery for acute scrotum</p> <p>Hernia (ST4): 3 Inguinal herniotomy (non-neonatal) 2 Inguinal hernia (neonatal)</p> <p>Hydrocele (ST4): 3 Surgery for hydrocele</p> <p>Penile Conditions (ST4): 3 Prepuceplasty 3 Circumcision</p> <p>Undescended testis (ST4): 2 Surgery for undescended testis</p> <p>Acute scrotum (ST4): 3 Surgery for acute scrotum</p> |

| | |
|----------------------|---|
| Topic | Abdominal wall pathologies |
| Category | General Surgery of Childhood |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with abnormalities of the abdominal wall</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention if required</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> |
| Knowledge | <p>UMBILICAL HERNIA: 3 Developmental anatomy</p> |

| | |
|--|--|
| | <p>3 Natural history 2 Place of conservative management 2 Indications and outcomes of surgery</p> <p>SUPRA-UMBILICAL HERNIA: 3 developmental anatomy 2 Natural history to include contrast with umbilical hernia 2 Indications and outcomes of surgery</p> <p>EPIGASTRIC HERNIA: 3 Developmental anatomy 2 Natural history 2 Indications and outcomes of surgery</p> |
| Clinical Skills | <p>UMBILICAL HERNIA: 3 Ability to assess child and reach appropriate diagnosis 2 Ability to form a treatment plan 3 Ability to communicate with all relevant groups</p> <p>SUPRA-UMBILICAL HERNIA: 3 Ability to assess child and reach appropriate diagnosis 2 Ability to form a treatment plan 3 Ability to communicate with all relevant groups</p> <p>EPIGASTRIC HERNIA: 3 Ability to assess child and reach appropriate diagnosis 2 Ability to form a treatment plan 3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>Umbilical hernia (ST3): 2 Repair of umbilical hernia</p> <p>Epigastric hernia (ST3): 2 Repair of epigastric hernia</p> <p>Umbilical hernia (ST4): 3 Repair of umbilical hernia</p> <p>Epigastric hernia (ST4): 3 Repair of epigastric hernia</p> |

#

| | |
|------------------------|--|
| Topic | Head and neck swellings |
| Category | General surgery of childhood |
| Sub-category: | Management of benign surgical conditions |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with a head/neck swelling as the primary presenting symptom</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention if required</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> |
| Knowledge | <p>3 Patterns of symptoms and relation to likely pathology, relevant anatomy and age of child</p> <p>3 Relevance of embryonic development of head and neck structures</p> <p>3 Differential diagnosis</p> <p>3 Place and value of investigations</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>3 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |

| | |
|--|---|
| Technical Skills and Procedures | <p>ST3:</p> <ul style="list-style-type: none"> 2 Excision skin lesion 2 Excision/biopsy of lymph nodes 2 Surgery for thyroglossal cyst 2 Surgery for branchial cysts and branchial remnants <p>ST4:</p> <ul style="list-style-type: none"> 3 Excision skin lesion 3 Excision/biopsy of lymph nodes 2 Surgery for thyroglossal cyst 2 Surgery for branchial cysts and branchial remnants |
|--|---|

| | |
|--|---|
| Topic | Access |
| Category | General Surgery of Childhood |
| Sub-category: | None |
| Objective | None |
| Knowledge | None |
| Clinical Skills | None |
| Technical Skills and Procedures | <p>Vascular access (ST3):</p> <ul style="list-style-type: none"> 1 Central venous lines and ports (incl percutaneous) <p>Dialysis (ST3):</p> <ul style="list-style-type: none"> 1 PD catheter insertion/removal <p>Vascular access (ST4):</p> <ul style="list-style-type: none"> 2 Central venous lines and ports (incl percutaneous) <p>Dialysis (ST4):</p> <ul style="list-style-type: none"> 2 PD catheter insertion/removal |

| | |
|------------------------|---|
| Topic | Pyloric stenosis |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <p><i>To be able to assess an infant with vomiting</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to make a diagnosis of pyloric stenosis</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention if required</i></p> <p><i>To be able to communicate the above information at the required level to parents, other team members/referral source</i></p> |
| Knowledge | <ul style="list-style-type: none"> 3 Patterns of symptoms and relation to likely pathology 4 Significance of bile stained vomiting 3 Differential diagnosis 4 Place and value of investigations 3 understanding of the biochemical changes associated with the condition |
| Clinical Skills | <ul style="list-style-type: none"> 4 Ability to assess ill child including an assessment of severity of dehydration 4 Ability to safely correct the dehydration and biochemical abnormalities 4 Ability to communicate with ill child (see Section 1) 3 Ability to form a viable investigation and treatment plan |

| | |
|--|--|
| | 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 2 Pyloromyotomy ST4: 3 Pyloromyotomy |

| | |
|--|---|
| Topic | Gastro-oesophageal reflux |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Pathophysiology 3 Investigation and management 2 Indications for operative intervention |
| Clinical Skills | 3 Ability to synthesise history and investigations into appropriate management plan 3 Ability to communicate information to parents/child |
| Technical Skills and Procedures | ST3: 2 OGD with biopsy 1 Oesophageal dilatation 1 Gastrostomy - open 1 PEG (insertion/removal) 1 Fundoplication (open/laparoscopic) ST4: 2 OGD with biopsy 2 Oesophageal dilatation 2 Gastrostomy - open 2 PEG (insertion/removal) 2 Fundoplication (open/laparoscopic) |

| | |
|----------------------|---|
| Topic | Abdominal pain |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 3 Patterns of symptoms and relation to likely pathology and age of child 3 Differential diagnosis |

| | |
|--|--|
| | 3 Place and value of investigations 3 Place of operative intervention, and associated outcomes |
| Clinical Skills | 3 Ability to assess ill child 3 Ability to communicate with ill child (see Section 1) 3 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 3 Appendicectomy (open and laparoscopic) 2 Operative reduction of intussusception ST4: 3 Appendicectomy (open and laparoscopic) 2 Operative reduction of intussusception |

| | |
|--|---|
| Topic | Constipation |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Patterns of symptoms and relation to likely pathology and age of child 2 Differential diagnosis to include medical anomalies and socio-psychological aspects of symptom 3 Place and value of investigations |
| Clinical Skills | 3 Ability to assess child 3 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups. 2 To include community aspects of further management |
| Technical Skills and Procedures | ST3: 2 Rectal Biopsy 3 Manual evacuation 3 EUA rectum 3 Anal stretch ST4: 3 Rectal Biopsy 3 Manual evacuation 3 EUA rectum 3 Anal stretch |

| | |
|----------------------|---|
| Topic | Gastro-intestinal bleeding |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i> |

| | |
|--|--|
| | <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Patterns of symptoms and relation to likely pathology and age of child 2 Differential diagnosis 2 Place and value of investigations 2 Place of operative intervention, and associated outcomes |
| Clinical Skills | 3 Ability to assess ill child 3 Ability to communicate with ill child (see Section 1) 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 2 OGD 1 Colonoscopy 2 Sigmoidoscopy 1 Small bowel resection/anastomosis (Meckels) ST4: 3 OGD 1 Colonoscopy 3 Sigmoidoscopy 2 Small bowel resection/anastomosis (Meckels) |

| | |
|--|---|
| Topic | Intestinal obstruction |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Patterns of symptoms and relation to likely pathology and age of child 2 Differential diagnosis 2 Place and value of investigations 2 Place of operative intervention, and associated outcomes |
| Clinical Skills | 3 Ability to assess ill child 3 Ability to communicate with ill child (see Section 1) 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 2 Laparotomy 1 Adhesiolysis 1 Small bowel resection/anastomosis 2 OGD ST4: 2 Laparotomy 2 Adhesiolysis 2 Small bowel resection/anastomosis 2 OGD |

| | |
|--|--|
| Topic | Inflammatory bowel disease |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Patterns of symptoms and relation to likely pathology and age of child</p> <p>2 Differential diagnosis</p> <p>3 Place and value of investigations</p> <p>2 Place of operative intervention, and associated outcomes</p> |
| Clinical Skills | <p>3 Ability to assess ill child</p> <p>3 Ability to communicate with ill child (see Section 1)</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3:</p> <p>1 Colonoscopy</p> <p>2 Sigmoidoscopy</p> <p>1 Small bowel resection/anastomosis</p> <p>1 Right hemicolectomy</p> <p>1 Left hemicolectomy</p> <p>1 Total colectomy</p> <p>ST4:</p> <p>1 Colonoscopy</p> <p>3 Sigmoidoscopy</p> <p>1 Small bowel resection/anastomosis</p> <p>2 Right hemicolectomy</p> <p>1 Left hemicolectomy</p> <p>1 Total colectomy</p> |

| | |
|------------------------|--|
| Topic | Short bowel syndrome |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Patterns of symptoms and relation to likely pathology and age of child</p> <p>2 Differential diagnosis</p> <p>2 Place and value of investigations</p> <p>2 Place of operative intervention, and associated outcomes</p> |
| Clinical Skills | <p>3 Ability to assess ill child</p> <p>3 Ability to communicate with ill child (see Section 1)</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |

| | |
|--|------------|
| Technical Skills and Procedures | No content |
|--|------------|

| | |
|--|--|
| Topic | Liver disease |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Patterns of symptoms and relation to likely pathology and age of child</p> <p>2 Differential diagnosis</p> <p>2 Place and value of investigations</p> <p>2 Place of operative intervention, and associated outcomes</p> |
| Clinical Skills | <p>3 Ability to assess ill child</p> <p>3 Ability to communicate with ill child (see Section 1)</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3: 1 Cholecystectomy (open/laparoscopic)</p> <p>ST4: 1 Cholecystectomy (open/laparoscopic)</p> |

| | |
|--|---|
| Topic | Congenital diaphragmatic hernia |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i></p> <p><i>To be able to construct an appropriate management plan for these children</i></p> <p><i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Mode of presentation both pre- and post natal</p> <p>2 Patho-physiology of the condition and anatomical variants</p> <p>2 Associated anomalies</p> <p>2 Outcome data on the condition</p> <p>2 Different management strategies</p> <p>2 Role of pre-natal counselling</p> |
| Clinical Skills | <p>2 Ability to assess child</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3: 1 Operation for diaphragmatic hernia (neonate)</p> <p>ST4: 2 Operation for diaphragmatic hernia (neonate)</p> |

| | |
|--|---|
| Topic | Intestinal atresias |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i></p> <p><i>To be able to construct an appropriate management plan for these children</i></p> <p><i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <ul style="list-style-type: none"> 2 Mode of presentation both pre- and post natal 2 Anatomical variants 2 Associated anomalies 2 Outcome data on the condition 2 Different management strategies 2 Role of pre-natal counselling |
| Clinical Skills | <ul style="list-style-type: none"> 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | <p>ST3:</p> <ul style="list-style-type: none"> 1 Duodeno- duodenostomy 1 Intestinal resection/anastomosis 1 Stoma formation <p>ST4:</p> <ul style="list-style-type: none"> 1 Duodeno- duodenostomy 2 Intestinal resection/anastomosis 2 Stoma formation |

| | |
|--|--|
| Topic | Meconium ileus |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i></p> <p><i>To be able to construct an appropriate management plan for these children including the appropriate use of radiological techniques in diagnosis and management</i></p> <p><i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <ul style="list-style-type: none"> 2 Mode of presentation both pre- and post natal 2 Patho-physiology of the condition and anatomical variants 2 Associated anomalies 2 Outcome data on the condition 2 Differing management strategies 2 Role of pre-natal + genetic counselling |
| Clinical Skills | <ul style="list-style-type: none"> 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | <p>ST3:</p> <ul style="list-style-type: none"> 1 Operation for meconium ileus <p>ST4:</p> <ul style="list-style-type: none"> 1 Operation for meconium ileus |

| | |
|--------------|--------------------|
| Topic | Malrotation |
|--------------|--------------------|

| | |
|--|---|
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i></p> <p><i>To be able to construct an appropriate management plan for these children</i></p> <p><i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Mode of presentation</p> <p>2 Patho-physiology of the condition and anatomical variants</p> <p>2 Associated anomalies</p> <p>2 Outcome data on the condition</p> <p>2 Differing management strategies</p> |
| Clinical Skills | <p>3 Ability to assess child</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3:</p> <p>1 Correction of malrotation</p> <p>ST4:</p> <p>2 Correction of malrotation</p> |

| | |
|--|---|
| Topic | Hirschsprungs disease |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i></p> <p><i>To be able to construct an appropriate management plan for these children</i></p> <p><i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Mode of presentation both pre- and post natal</p> <p>2 Patho-physiology of the condition and anatomical variants</p> <p>2 Associated anomalies</p> <p>2 Outcome data on the condition</p> <p>2 Differing management strategies</p> <p>2 Role of genetic counselling</p> |
| Clinical Skills | <p>3 Ability to assess child</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3:</p> <p>1 Rectal biopsy</p> <p>2 Rectal washout</p> <p>1 Trans-anal pull through +/- laparoscopic assistance</p> <p>1 Duhamel procedure</p> <p>ST4:</p> <p>2 Rectal biopsy</p> <p>2 Rectal washout</p> <p>1 Trans-anal pull through +/- laparoscopic assistance</p> <p>1 Duhamel procedure</p> |

| | |
|--|---|
| Topic | Anorectal malformations |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i></p> <p><i>To be able to construct an appropriate management plan for these children</i></p> <p><i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Mode of presentation both pre- and post natal</p> <p>2 Patho-physiology of the condition and anatomical variants</p> <p>2 Associated anomalies</p> <p>2 Outcome data on the condition</p> <p>2 Differing management strategies</p> <p>2 Role of pre-natal counselling</p> |
| Clinical Skills | <p>3 Ability to assess child</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3:</p> <p>1 Anoplasty</p> <p>1 Sigmoid colostomy</p> <p>1 PSARP</p> <p>ST4:</p> <p>2 Anoplasty</p> <p>2 Sigmoid colostomy</p> <p>1 PSARP</p> |

| | |
|--|---|
| Topic | Oesophageal atresia and tracheo-oesophageal fistula |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i></p> <p><i>To be able to construct an appropriate management plan for these children</i></p> <p><i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Mode of presentation both pre- and post natal</p> <p>2 Patho-physiology of the condition and anatomical variants</p> <p>2 Associated anomalies</p> <p>2 Outcome data on the condition</p> <p>2 Differing management strategies</p> <p>2 Role of pre-natal counselling</p> |
| Clinical Skills | <p>3 Ability to assess child</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3:</p> <p>1 Operation for oesophageal atresia/TOF</p> <p>1 Oesophageal dilatation (neonatal)</p> <p>ST4:</p> <p>1 Operation for oesophageal atresia/TOF</p> <p>1 Oesophageal dilatation (neonatal)</p> |

| | |
|--|--|
| Topic | Necrotising enterocolitis |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period To be able to construct an appropriate management plan for these children To understand the place of operative management in the neonatal period and be able to carry this out in selected cases To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Mode of presentation 2 Patho-physiology of the condition 2 Associated anomalies 2 Outcome data on the condition 2 Differing management strategies |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 1 Laparotomy 1 Intestinal resection/anastomosis ST4: 2 Laparotomy 1 Intestinal resection/anastomosis |

| | |
|--|--|
| Topic | Neonatal abdominal wall defects |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period To be able to construct an appropriate management plan for these children To understand the place of operative management in the neonatal period and be able to carry this out in selected cases To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Mode of presentation both pre- and post natal 2 Patho-physiology of the condition and anatomical variants 2 Associated anomalies 2 Outcome data on the condition 2 Differing management strategies 2 Role of pre-natal counselling |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 1 Repair of gastroschisis (operative or the application of preformed silos) 1 Repair of exomphalos ST4: 2 Repair of gastroschisis (operative or the application of preformed silos) 1 Repair of exomphalos |

| | |
|--|--|
| Topic | Disorders of Sex Development (DSD) |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i> <i>To be able to construct an appropriate management plan for these children</i> <i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Mode of presentation both pre- and post natal 2 Patho-physiology of the condition and anatomical variants 2 Associated anomalies 2 Outcome data on the condition 2 Differing management strategies 2 Role of genetic counselling |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | No content |

| | |
|--|--|
| Topic | Antenatal management |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i> <i>To be able to construct an appropriate management plan for these children</i> <i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Likely modes of presentation of different conditions 2 Place and value of investigations 2 Types of and indications for antenatal intervention 2 Role of ante-natal counselling |
| Clinical Skills | 3 Ability to counsel and inform parents 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | No content |

| | |
|--|---------------------------|
| Topic | Generic procedures |
| Category | Oncology |
| Sub-category: | None |
| Objective | None |
| Knowledge | None |
| Clinical Skills | None |
| Technical Skills and Procedures | ST3: 1 Tumour biopsy |

| | |
|--|-------------------------|
| | ST4: 1 Tumour biopsy |
|--|-------------------------|

| | |
|--|---|
| Topic | Wilms tumour |
| Category | Oncology |
| Sub-category: | None |
| Objective | <i>To understand the presentation and management of childhood tumours</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Mode of clinical presentation 2 Differential diagnosis 2 Relevant basic science knowledge of oncogenesis 2 Outcome data of treatment modalities 2 Role of surgery |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 1 Nephro-ureterectomy ST4: 1 Nephro-ureterectomy |

| | |
|--|---|
| Topic | Neuroblastoma |
| Category | Oncology |
| Sub-category: | None |
| Objective | <i>To understand the presentation and management of childhood tumours</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Mode of clinical presentation 2 Differential diagnosis 2 Relevant basic science knowledge of oncogenesis 2 Outcome data of treatment modalities 2 Role of surgery |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 1 Surgery for neuroblastoma ST4: 1 Surgery for neuroblastoma |

| | |
|-----------------|-----------------------|
| Topic | Hepatoblastoma |
| Category | Oncology |

| | |
|--|---|
| Sub-category: | None |
| Objective | <i>To understand the presentation and management of childhood tumours</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Mode of clinical presentation 2 Differential diagnosis 2 Relevant basic science knowledge of oncogenesis 2 Outcome data of treatment modalities 2 Role of surgery |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 1 Only specialist centre |

| | |
|--|---|
| Topic | Soft tissue tumours |
| Category | Oncology |
| Sub-category: | None |
| Objective | <i>To understand the presentation and management of childhood tumours</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Mode of clinical presentation 2 Differential diagnosis 2 Relevant basic science knowledge of oncogenesis 2 Outcome data of treatment modalities 2 Role of surgery |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 1 Local excision soft tissue tumour ST4: 1 Local excision soft tissue tumour |

| | |
|----------------------|---|
| Topic | Haematological malignancies |
| Category | Oncology |
| Sub-category: | None |
| Objective | <i>To understand the presentation and management of childhood tumours</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Mode of clinical presentation 2 Differential diagnosis 2 Relevant basic science knowledge of oncogenesis 2 Management strategies and basic outcome data of treatment modalities |

| | |
|--|--|
| Clinical Skills | 3 Ability to assess child 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 2 Cervical Lymph node biopsy ST4: 2 Cervical Lymph node biopsy |

| | |
|--|---|
| Topic | Osteosarcoma |
| Category | Oncology |
| Sub-category: | None |
| Objective | <i>To understand the presentation and management of childhood tumours</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Mode of clinical presentation 2 Differential diagnosis 2 Relevant basic science knowledge of oncogenesis 2 Management strategy and basic outcome data of treatment modalities 2 Role of surgery |
| Clinical Skills | 3 Ability to assess child 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | No content |

| | |
|--|---|
| Topic | Benign tumours |
| Category | Oncology |
| Sub-category: | None |
| Objective | <i>To understand the presentation and management of childhood tumours</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Mode of clinical presentation 2 Differential diagnosis 2 Relevant basic science knowledge of oncogenesis 2 Outcome data of treatment modalities 2 Role of surgery |
| Clinical Skills | 3 Ability to assess child 3 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 1 Oophorectomy 1 Oophero-salpingectomy ST4: 2 Oophorectomy 2 Oophero-salpingectomy |

| | |
|-----------------|----------------------|
| Topic | Adrenal gland |
| Category | Endocrine conditions |

| | |
|--|--|
| Sub-category: | None |
| Objective | None |
| Knowledge | None |
| Clinical Skills | None |
| Technical Skills and Procedures | ST3: 1 Adrenalectomy ST4: 1 Adrenalectomy |

| | |
|--|---|
| Topic | Thyroid gland |
| Category | Endocrine conditions |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of endocrine conditions in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to identify the need for surgery and influence of endocrine conditions on surgery</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Likely modes of presentation 2 Differential diagnosis 2 Place and value of investigations 2 Knowledge of appropriate referral pathways |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 1 Thyroidectomy ST4: 1 Thyroidectomy |

| | |
|------------------------|---|
| Topic | Parathyroid disease |
| Category | Endocrine conditions |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of endocrine conditions in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to identify the need for surgery and influence of endocrine conditions on surgery</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Likely modes of presentation 2 Differential diagnosis 2 Place and value of investigations 2 Knowledge of appropriate referral pathways |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |

| | |
|--|------------|
| Technical Skills and Procedures | No content |
|--|------------|

| | |
|--|--|
| Topic | Diabetes |
| Category | Endocrine conditions |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of endocrine conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to identify the need for surgery and influence of endocrine conditions on surgery</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Likely modes of presentation</p> <p>2 Differential diagnosis</p> <p>2 Place and value of investigations</p> <p>2 Knowledge of appropriate referral pathways</p> |
| Clinical Skills | <p>2 Ability to assess child</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3: 2 OGD</p> <p>ST4: 2 OGD</p> |

| | |
|--|--|
| Topic | Disorders of growth |
| Category | Endocrine conditions |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of endocrine conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to identify the need for surgery and influence of endocrine conditions on surgery</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Likely modes of presentation</p> <p>2 Differential diagnosis</p> <p>2 Place and value of investigations</p> <p>2 Knowledge of appropriate referral pathways</p> |
| Clinical Skills | <p>2 Ability to assess child</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3: 2 OGD</p> <p>ST4: 2 OGD</p> |

| | |
|--|--|
| Topic | Disorders of sex development |
| Category | Endocrine conditions |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of endocrine conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to identify the need for surgery and influence of endocrine conditions on surgery</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Likely modes of presentation</p> <p>2 Differential diagnosis</p> <p>2 Place and value of investigations</p> <p>2 Knowledge of appropriate referral pathways</p> |
| Clinical Skills | <p>2 Ability to assess child</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3:</p> <p>1 Subcutaneous mastectomy</p> <p>ST4:</p> <p>1 Subcutaneous mastectomy</p> |

| | |
|--|--|
| Topic | Chest wall anomalies |
| Category | Thoracic Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of thoracic anomalies in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To identify the place of surgery</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Likely modes of presentation</p> <p>2 Differential diagnosis</p> <p>2 Place and value of investigations</p> <p>2 Knowledge of appropriate referral pathways</p> <p>2 Outcomes of surgery</p> |
| Clinical Skills | <p>3 Ability to assess child</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3:</p> <p>1 Repair Pectus excavatum</p> <p>1 Repair Pectus carinatum</p> <p>ST4:</p> <p>1 Repair Pectus excavatum</p> <p>1 Repair Pectus carinatum</p> |

| | |
|--------------|---|
| Topic | Congenital and acquired lung abnormalities |
|--------------|---|

| | |
|--|--|
| Category | Thoracic Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of thoracic anomalies in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To identify the place of surgery</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>2 Likely modes of presentation</p> <p>2 Differential diagnosis</p> <p>2 Place and value of investigations</p> <p>2 Knowledge of developmental embryology and pertinent anatomy</p> <p>2 Knowledge of appropriate referral pathways</p> <p>2 Outcomes of surgery</p> |
| Clinical Skills | <p>3 Ability to assess child</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3:</p> <p>1 Thoracotomy</p> <p>1 Open biopsy of lung</p> <p>1 Pulmonary lobectomy</p> <p>1 Partial pulmonary lobectomy</p> <p>1 Excision of extra lobar sequestration</p> <p>2 Aspiration of pleural cavity</p> <p>2 Insertion of open chest drain</p> <p>2 Insertion of percutaneous chest drain</p> <p>1 Open pleural debridement</p> <p>1 Thorascopic pleural debridement</p> <p>1 Rigid bronchoscopy</p> <p>ST4:</p> <p>2 Thoracotomy</p> <p>1 Open biopsy of lung</p> <p>1 Pulmonary lobectomy</p> <p>1 Partial pulmonary lobectomy</p> <p>1 Excision of extra lobar sequestration</p> <p>3 Aspiration of pleural cavity</p> <p>3 Insertion of open chest drain</p> <p>3 Insertion of percutaneous chest drain</p> <p>2 Open pleural debridement</p> <p>2 Open/thorascopic pleural debridement</p> <p>1 Rigid bronchoscopy</p> |

| | |
|----------------------|--|
| Topic | Tracheal anomalies |
| Category | Thoracic Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of thoracic anomalies in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To identify the place of surgery</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> |

| | |
|--|---|
| | <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | <ul style="list-style-type: none"> 2 Likely modes of presentation 2 Differential diagnosis 2 Place and value of investigations 2 Knowledge of developmental embryology and pertinent anatomy 2 Knowledge of appropriate referral pathways 2 Outcomes of surgery |
| Clinical Skills | <ul style="list-style-type: none"> 2 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | <p>ST3:</p> <ul style="list-style-type: none"> 1 Fibreoptic bronchoscopy 1 Tracheostomy 1 Rigid bronchoscopy 1 Fibreoptic bronchoscopy <p>ST4:</p> <ul style="list-style-type: none"> 1 Fibreoptic bronchoscopy 1 Tracheostomy 1 Rigid bronchoscopy 1 Fibreoptic bronchoscopy |

| | |
|--|--|
| Topic | Inhaled foreign body |
| Category | Thoracic Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of thoracic anomalies in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To identify the place of surgery</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <ul style="list-style-type: none"> 3 Likely modes of presentation 2 Differential diagnosis 3 Place and value of investigations 2 Knowledge of developmental embryology and pertinent anatomy 2 Knowledge of appropriate referral pathways 2 Outcomes of surgery |
| Clinical Skills | <ul style="list-style-type: none"> 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | <p>ST3:</p> <ul style="list-style-type: none"> 1 Rigid removal of FB from bronchus <p>ST4:</p> <ul style="list-style-type: none"> 1 Rigid removal of FB from bronchus |

| | |
|----------------------|---|
| Topic | Urinary tract infection |
| Category | Urology |
| Sub-category: | None |
| Objective | <i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i> |

| | |
|--|--|
| | <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>3 Patterns of symptoms and relation to likely pathology and age of child</p> <p>3 Relevance of different symptom patterns</p> <p>3 Differential diagnosis</p> <p>3 Place and value of investigations</p> |
| Clinical Skills | <p>3 Ability to assess child</p> <p>2 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | None |

| | |
|--|---|
| Topic | Haematuria |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>3 Patterns of symptoms and relation to likely pathology and age of child</p> <p>3 Differential diagnosis</p> <p>3 Place and value of investigations</p> |
| Clinical Skills | <p>3 Ability to assess child</p> <p>3 Ability to form a viable investigation and treatment plan</p> <p>3 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>ST3:</p> <p>2 Cystourethroscopy</p> <p>ST4:</p> <p>3 Cystourethroscopy</p> |

| | |
|--|--|
| Topic | Urethral meatus |
| Category | Urology |
| Sub-category: | None |
| Objective | None |
| Knowledge | None |
| Clinical Skills | None |
| Technical Skills and Procedures | <p>ST3:</p> <p>1 Meatotomy</p> <p>1 Meatoplasty</p> <p>1 Urethral dilatation</p> |

| | |
|--|---|
| | ST4: 2 Meatotomy 2 Meatoplasty 2 Urethral dilatation |
|--|---|

| | |
|--|---|
| Topic | Hypospadias |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | 2 Likely modes of presentation 2 Different anatomical variants 2 Place and value of investigations/ operative intervention |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 1 Repair distal hypospadias 1 Repair proximal hypospadias 1 Repair urethral fistula ST4: 1 Repair distal hypospadias 1 Repair proximal hypospadias 1 Repair urethral fistula |

| | |
|----------------------|---|
| Topic | Upper tract obstruction (to include pelvi-ureteric junction obstruction and vesico-ureteric junction obstruction) |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | 2 Likely modes of presentation 2 Place and value of investigations/ operative intervention 2 Differential diagnosis |

| | |
|--|--|
| Clinical Skills | <ul style="list-style-type: none"> 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | <p>ST3:</p> <ul style="list-style-type: none"> 1 Pyeloplasty 1 Nephrectomy (open/laparoscopic) 1 Insertion of percutaneous nephrostomy 1 Insertion of open nephrostomy 1 Insertion of JJ stent 1 Ureteric reimplantation <p>ST4:</p> <ul style="list-style-type: none"> 1 Pyeloplasty 2 Nephrectomy (open/laparoscopic) <ul style="list-style-type: none"> 1 Insertion of percutaneous nephrostomy 1 Insertion of open nephrostomy 1 Insertion of JJ stent 1 Ureteric reimplantation |

| | |
|--|---|
| Topic | Posterior urethral valves |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <ul style="list-style-type: none"> 2 Likely modes of presentation 2 Place and value of investigations/ operative intervention 2 Differential diagnosis |
| Clinical Skills | <ul style="list-style-type: none"> 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | <p>ST3:</p> <ul style="list-style-type: none"> 1 Destruction of PUV 1 Formation/closure of vesicostomy <p>ST4:</p> <ul style="list-style-type: none"> 1 Destruction of PUV 1 Formation/closure of vesicostomy |

| | |
|----------------------|---|
| Topic | Urinary tract calculus disease |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> |

| | |
|--|--|
| | <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Likely modes of presentation 2 Aetiological and biochemical factors 2 Place and value of investigations/ operative and non-operative intervention 2 Differential diagnosis |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 1 Interventional management of urolithiasis ST4: 1 Interventional management of urolithiasis |

| | |
|--|--|
| Topic | Bladder dysfunction (incl. neurogenic bladder) |
| Category | Urology |
| Sub-category: | None |
| Objective | <i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Likely modes of presentation 2 Differential diagnosis 2 Place and value of investigations 2 Knowledge of appropriate referral pathways |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 1 Urodynamics 2 Cysto-urethroscopy 1 Vesicostomy 1 Closure of vesicostomy 1 Suprapubic catheter 1 Endoscopic cauterisation of lesion of bladder 1 Endoscopic management of clot from bladder 1 Ileal bladder reconstruction 1 Colonic bladder reconstruction 1 Ureteric diversion 1 Ureteric un-diversion 1 Mitrofanoff procedure ST4: 2 Urodynamics 3 Cysto-urethroscopy |

| | |
|--|---|
| | <ul style="list-style-type: none"> 1 Vesicostomy 1 Closure of vesicostomy 2 Suprapubic catheter 1 Endoscopic cauterisation of lesion of bladder 1 Endoscopic management of clot from bladder 1 Ileal bladder reconstruction 1 Colonic bladder reconstruction 1 Ureteric diversion 1 Ureteric un-diversion 1 Mitrofanoff procedure |
|--|---|

| | |
|--|---|
| Topic | Renal failure |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <ul style="list-style-type: none"> 3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of referral criteria to renal medical colleagues |
| Clinical Skills | <ul style="list-style-type: none"> 3 Ability to assess child 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | <p>ST3:</p> <ul style="list-style-type: none"> 1 PD catheter insertion/removal 1 Haemodialysis catheter insertion <p>ST4:</p> <ul style="list-style-type: none"> 2 PD catheter insertion/removal 2 Haemodialysis catheter insertion |

| | |
|----------------------|---|
| Topic | Bladder exstrophy (including epispadias) |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <ul style="list-style-type: none"> 2 Likely modes of presentation 2 Differential diagnosis 2 Place and value of investigations |

| | |
|--|--|
| Clinical Skills | 3 Ability to assess child 2 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | None |

| | |
|--|--|
| Topic | Duplication of urinary tract |
| Category | Urology |
| Sub-category: | None |
| Objective | <i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 2 Likely modes of presentation 2 Embryological derivation and anatomical variants 2 Place and value of investigations/ operative intervention 2 Differential diagnosis |
| Clinical Skills | 3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST3: 1 Hemi-nephrectomy (open/laparoscopic) 1 Excision of ureterocoele 1 Endoscopic incision of ureterocoele ST4: 1 Hemi-nephrectomy (open/laparoscopic) 1 Excision of ureterocoele 1 Endoscopic incision of ureterocoele |

| | |
|--|--|
| Topic | Vesico-ureteric reflux |
| Category | Urology |
| Sub-category: | None |
| Objective | None |
| Knowledge | None |
| Clinical Skills | None |
| Technical Skills and Procedures | ST3: 1 Ureteric reimplantation 2 Cysto-urethroscopy 1 STING/deflux ST4: 1 Ureteric reimplantation 3 Cysto-urethroscopy |

| | |
|--|----------------|
| | 1 STING/deflux |
|--|----------------|

| | |
|--|--|
| Topic | Orthopaedic surgery |
| Category | Surgical Disciplines |
| Sub-category: | None |
| Objective | <i>To understand the basic principles involved in other Paediatric Surgical Specialties To understand how these disciplines interact with General Paediatric Surgery and Paediatric Urology To be able to refer to other specialties appropriately</i> |
| Knowledge | 2 To understand the basic principles of major conditions in the specialty 2 To understand the referral mechanisms to the discipline 2 To be aware of the influence of conditions on child health |
| Clinical Skills | 2 To recognise the associated anomalies when dealing with children 2 To construct an appropriate investigation and referral plan |
| Technical Skills and Procedures | No content |

| | |
|--|--|
| Topic | Paediatric cardiac surgery |
| Category | Surgical Disciplines |
| Sub-category: | None |
| Objective | <i>To understand the basic principles involved in other Paediatric Surgical Specialties To understand how these disciplines interact with General Paediatric Surgery and Paediatric Urology To be able to refer to other specialties appropriately</i> |
| Knowledge | 2 To understand the basic principles of major conditions in the specialty 2 To understand the referral mechanisms to the discipline 2 To be aware of the influence of conditions on child health |
| Clinical Skills | 2 To recognise the associated anomalies when dealing with children 2 To construct an appropriate investigation and referral plan |
| Technical Skills and Procedures | No content |

| | |
|------------------------|---|
| Topic | Paediatric neurosurgery |
| Category | Surgical Disciplines |
| Sub-category: | None |
| Objective | <i>To understand the basic principles involved in other Paediatric Surgical Specialties To understand how these disciplines interact with General Paediatric Surgery and Paediatric Urology To be able to refer to other specialties appropriately To be able to recognize the emergency presentation of a ventriculo-peritoneal (VP) shunt malfunction or complication</i> |
| Knowledge | 2 To understand the basic principles of major conditions in the specialty 2 To understand the referral mechanisms to the discipline 2 To be aware of the influence of conditions on child health 2 To be aware of possible presentations of VP shunt malfunction |
| Clinical Skills | 2 To recognise the associated anomalies when dealing with children |

| | |
|--|--|
| | 2 To construct an appropriate investigation and referral plan 1 To be able to achieve emergency access to a malfunctioning VP shunt or ventricles |
| Technical Skills and Procedures | No content |

| | |
|--|---|
| Topic | Paediatric plastic surgery |
| Category | Surgical Disciplines |
| Sub-category: | None |
| Objective | <i>To understand the basic principles involved in other Paediatric Surgical Specialties To understand how these disciplines interact with General Paediatric Surgery and Paediatric Urology To understand the initial management of thermal injury in children To be able to refer to other specialties appropriately</i> |
| Knowledge | 2 To understand the basic principles of major conditions in the specialty 2 To understand the referral mechanisms to the discipline 2 To be aware of the influence of conditions on child health 2 To be aware of the various components of the initial management of thermal injury in children |
| Clinical Skills | 2 To recognise the associated anomalies when dealing with children 2 To construct an appropriate investigation and referral plan 2 To be able to initiate the initial assessment and management of a thermally injured child |
| Technical Skills and Procedures | No content |

| | |
|--|--|
| Topic | Paediatric ophthalmology |
| Category | Surgical Disciplines |
| Sub-category: | None |
| Objective | <i>To understand the basic principles involved in other Paediatric Surgical Specialties To understand how these disciplines interact with General Paediatric Surgery and Paediatric Urology To be able to refer to other specialties appropriately</i> |
| Knowledge | 2 To understand the basic principles of major conditions in the specialty 2 To understand the referral mechanisms to the discipline 2 To be aware of the influence of conditions on child health |
| Clinical Skills | 2 To recognise the associated anomalies when dealing with children 2 To construct an appropriate investigation and referral plan |
| Technical Skills and Procedures | No content |

| | |
|----------------------|--|
| Topic | Paediatric E.N.T. Surgery |
| Category | Surgical Disciplines |
| Sub-category: | None |
| Objective | <i>To understand the basic principles involved in other Paediatric Surgical Specialties To understand how these disciplines interact with General Paediatric Surgery and Paediatric Urology To be able to refer to other specialties appropriately</i> |

| | |
|--|--|
| Knowledge | 2 To understand the basic principles of major conditions in the specialty 2 To understand the referral mechanisms to the discipline 2 To be aware of the influence of conditions on child health |
| Clinical Skills | 2 To recognise the associated anomalies when dealing with children 2 To construct an appropriate investigation and referral plan |
| Technical Skills and Procedures | No content |

| | |
|--|---|
| Topic | Transplantation |
| Category | Surgical Disciplines |
| Sub-category: | None |
| Objective | <i>To understand the principles of diagnosis and management in a number of conditions as they present to the General Paediatric Surgeon</i> |
| Knowledge | 2 To understand the basic principles of transplantation both surgical and medical 2 To understand the referral mechanisms to the discipline 2 To understand the ethical principles involved |
| Clinical Skills | 2 To construct an appropriate investigation and referral plan |
| Technical Skills and Procedures | No content |

| | |
|--|---|
| Topic | Spina bifida |
| Category | Surgical Disciplines |
| Sub-category: | None |
| Objective | <i>To understand the principles of diagnosis and management in a number of conditions as they present to the General Paediatric Surgeon</i> |
| Knowledge | 2 To understand the basic principles of management 2 To understand the local networks for managing the condition 2 To be aware of the influence of conditions on child health |
| Clinical Skills | 2 To recognise the associated anomalies when dealing with children 2 To construct an appropriate investigation and referral plan |
| Technical Skills and Procedures | No content |

| | |
|--|---|
| Topic | Vascular anomalies |
| Category | Surgical Disciplines |
| Sub-category: | None |
| Objective | <i>To understand the principles of diagnosis and management in a number of conditions as they present to the General Paediatric Surgeon</i> |
| Knowledge | 2 To understand the pathophysiology of the condition 2 To know the differential diagnosis 2 To understand the indications and outcomes of therapy |
| Clinical Skills | 2 To recognise associated anomalies 2 To construct an appropriate investigation and referral plan including identifying the need for surgery |
| Technical Skills and Procedures | No content |

| | |
|--|---|
| Topic | Child abuse |
| Category | Surgical Disciplines |
| Sub-category: | None |
| Objective | <i>To understand the principles of diagnosis and management in a number of conditions as they present to the General Paediatric Surgeon</i> |
| Knowledge | 2 To understand the basic principles of diagnosis and management 2 To understand the referral mechanisms within local setting 2 To be aware of legal responsibilities |
| Clinical Skills | 2 To recognise the possibility of the condition 2 To construct an appropriate investigation and referral plan |
| Technical Skills and Procedures | No content |

| | |
|--|---|
| Topic | Pre-operative care |
| Category | Operative skills |
| Sub-category: | None |
| Objective | <i>To ensure the trainee has reached a level of competence in a range of basic operative procedures.</i> |
| Knowledge | 3 Indications for surgery 3 Required preparation for surgery to include necessary pre-operative investigations 3 Outcomes and complications of surgery 3 Knowledge of the admission process |
| Clinical Skills | 3 Synthesis of history and examination into operative management plan 3 Ability to explain procedure and outcomes to patient and parents at an appropriate level 3 To be able to take informed consent 3 To construct an appropriate theatre list 3 To follow the admission procedure |
| Technical Skills and Procedures | No content |

| | |
|------------------------|--|
| Topic | Intra-operative care |
| Category | Operative skills |
| Sub-category: | None |
| Objective | <i>To ensure the trainee has reached a level of competence in a range of basic operative (including laparoscopic/thoracoscopic) procedures.</i> |
| Knowledge | 3 Anatomy to be encountered during procedure 3 Steps involved in operative procedure 3 Knowledge of alternative procedures in case of encountering difficulties 3 Potential complications of procedure |
| Clinical Skills | 3 Necessary hand-eye dexterity to complete procedure 3 Appropriate use of assistance 3 Communication with other members of theatre team 3 Function and safe use of laparoscopic/thoracoscopic equipment 3 Hazards of diathermy in minimal access surgery 2 Use of the endoloop 1 Intracorporeal or extracorporeal knot tying |

| | |
|--|------------|
| Technical Skills and Procedures | No content |
|--|------------|

| | |
|--|--|
| Topic | Post-operative care |
| Category | Operative skills |
| Sub-category: | None |
| Objective | <i>To ensure the trainee has reached a level of competence in a range of basic operative procedures.</i> |
| Knowledge | <ul style="list-style-type: none"> 3 Outcomes of procedure 3 Likely post-operative progress from disease process and intervention 3 Physiological and pathological changes in condition as a result of intervention |
| Clinical Skills | <ul style="list-style-type: none"> 3 Assessment of patient and physiological parameters 3 Appropriate intervention to deal with changing parameters 3 Communication skills for dealing with team members, patients and parents 3 Ability to prioritise interventions |
| Technical Skills and Procedures | No content |

Final Stage Overview

The aim of the final stage is enable the trainee to further develop the skills knowledge and attitude required to complete training and move to practise as a Consultant Paediatric Surgeon in the U.K health system.

This final phase of training is when trainees continue to build on the competences achieved in the first phases of the programme, gaining both competences not achieved at earlier stages and further exposure to the more specialised areas of practice. The goals as outlined in previous stages remain pertinent, as it is expected that the trainees will continue to build on their experience and move beyond competent practice to the level of an advanced practitioner, in many of the areas.

The planning of these final attachments is important as it provides an opportunity to remedy areas of training deficiency from earlier in the programme, or the development of a special interest.

The curriculum goals are again presented in a modular fashion for ease of reference and recording of achievement rather than as a suggested teaching package. There will obviously be areas of duplicate coverage and again this curriculum should be viewed as a framework to aid understanding rather than as a proscriptive document. Though the information on the individual conditions is largely unchanged from the intermediate stage, the objectives of these 'modules' have been altered to reflect the expectation that the trainees will be exhibiting a more advanced level of performance.

The different sections will contain a mixture of information on relevant conditions, symptom patterns and associated surgical operations. Overall these goals outlined are simply guides to progress and should be used by trainees, trainers and Programme Directors to help plan rotational placements to ensure a full breadth of training.

The following modules are included:

- Gastrointestinal
- Neonatology
- General Urology
- Thoracic
- Oncology
- Endocrine
- Surgical Disciplines
- Research and Audit

By the end of the final stage of training trainees including those who are following an academic pathway will have:

- Achieved the level of an advanced practitioner in the management of the common surgical problems of childhood
- Acquired the skills to practice with integrity, respect and compassion
- Gained sufficient theoretical knowledge and practical experience to be able to enter for the examination in paediatric surgery as set by the Intercollegiate Board in Paediatric Surgery.
- Developed skills and experience in areas of more specialised practice – with a view to developing a sub-specialty interest if appropriate.
- Achieved the level of advanced practitioner in operations common to Paediatric practice, and be developing competence in procedures appropriate to sub-specialty training.

The list detailed here will not be achieved by all trainees, as many will be looking to specialise in a particular area. Individual circumstance will dictate the experience each trainee will gain. As a guide the trainee will by the end of this phase be expected to both initiate and lead in the operative management. In addition they will be expected to demonstrate the self-awareness of the need for support and advice of senior colleagues.

Elective Procedures

Neonatal

- Repair of Oesophageal atresia (+/- fistula)

- Colonic interposition/ gastric pull up
- Repair of recurrent fistula
- Aortopexy
- Congenital Diaphragmatic hernia repair
- Repair of eventration of diaphragm
- Duodeno-duodenostomy
- Management of congenital atresias of intestine
- Management of duplications
- Management of necrotising enterocolitis
- Neonatal pull-through for Hirschsprungs disease

General Abdominal

- Achalasia management
- Fundoplication
- Gastric disconnection
- Feeding jejunostomy
- ACE procedure
- Bowel lengthening procedure
- Posterior sagittal anorectoplasty
- Pull through for Hirschsprungs disease
- Management of Crohns disease of small and large intestine
- Colonic resection for Ulcerative colitis and ileoanal pouch formation
- Colonoscopy

Thoracic

- Management of empyema
- Resection of lung lesions
- Management of chest wall deformity
- Management of airway anomalies

Endocrine

- Resection of salivary gland lesions
- Thyroid/parathyroid surgery
- Management of hyperinsulinism

Oncology

- Hepatoblastoma
- Wilms tumour
- Adrenal tumours – benign/malignant
- Soft tissue tumours
- Sacrococcygeal tumour

Hepatobiliary

- Biliary atresia
- Choledochal cyst

Urology

- Pyeloplasty
- Partial Nephrectomy
- Management of renal calculi
- Management of posterior urethral valves
- Bladder extrophy closure
- Bladder augmentation / artificial sphincter insertion

- Epispadias repair
- Proximal hypospadias repair

Paediatric Urology Special Interest Overview

Paediatric urology is delivered in a number of different units across United Kingdom, either by surgeons whose entire workload consists of Paediatric Urology, or by those who undertake Paediatric Urology as the major focus of their job plans. The service is often focused in tertiary paediatric units, though a number of specific conditions are treated in supra-regional units

The majority of trainees entering this phase of training will have completed either the essential part of a paediatric surgical programme (ST1-6), or an adult urology programme. Selection criteria will be published as part of the selection process for the specialty

The final part of training to become a full-time paediatric urologist is likely to take place in those designated units that had specified training posts under the Calman system, or are deemed by PMETB to provide sufficient clinical exposure and a rounded educational experience to enable trainees to complete the required training.

Aim

The aim of this aspect of training is to deliver the knowledge skills and experience required by trainees who wish to focus their future practice either solely in the field of paediatric urology, or with paediatric urology as their major special interest.

Outcomes

At completion of this section of the programme the trainee will:

- Be able to manage the index conditions encountered in paediatric urological practice in the United Kingdom
- Be able to formulate appropriate investigation and management strategies for children under his/her care
- Be able to undertake the operative management of the index conditions to the required level
- Be able to communicate these plans effectively to patients, parent, relevant colleagues
- Be able to interact appropriately with other members of the team
- Practise with integrity respect and compassion

Specific Technical Skills

The following list of procedures includes those that it is anticipated that a trainee completing the 2 year module in paediatric urology would be competent to perform to level 4. This list follows from those procedures identified at earlier stages

- Pyeloplasty
- Partial Nephrectomy
- Management of renal calculi
- Operative ablation of valves
- Complex hypospadias repair
- Nephrectomy
- Reimplantation of ureters
- Operative management of impalpable testis
- Operative relief of urinary obstruction (e.g. stent insertion)

The following list is one of which every trainee must have exposure to, though depending on previous exposure and future career path, may not be required to be competent in the performance of individual procedures. (Skill Level 3 or 4)

- Closure of bladder exstrophy (specialist centre)
- Bladder augmentation

- Urethral sphincter insertion
- Epispadias repair (specialist centre)
- Gender re-assignment surgery

Review of Module

The responsibility for the review of the outcomes of this module rests with the SAC in Paediatric Surgery with advice from the British Association of Paediatric Urology (BAPU). Click on [Workplace Based Assessments](#) to view the assessment forms including DOPS and PBAs

Final Stage Topics for all Trainees

| Topic | Groin conditions |
|-----------------|---|
| Category | General Surgery of Childhood |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with 'groin pathology'</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention if required</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> |
| Knowledge | <p>INGUINAL HERNIA:</p> <p>4 Developmental anatomy 4 Natural history 4 Indications and outcomes of surgery</p> <p>HYDROCELE:</p> <p>4 Developmental anatomy 4 Natural history 4 Place of conservative management 4 Indications and outcomes of surgery</p> <p>UNDESCENDED TESTIS:</p> <p>4 Developmental anatomy 4 Natural history of undescended testis and retractile testis 4 Place of conservative management 4 Indications and outcomes of surgery</p> <p>PENILE CONDITIONS:</p> <p>4 Developmental anatomy 4 Natural history 4 Place of conservative management 4 Indications and outcomes of surgery</p> <p>ACUTE SCROTUM:</p> <p>4 Natural history 4 Place of conservative management 4 Indications and outcomes of surgery</p> |
| Clinical Skills | <p>INGUINAL HERNIA:</p> <p>4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups</p> <p>HYDROCELE:</p> <p>4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups</p> <p>UNDESCENDED TESTIS:</p> <p>4 Ability to assess child and reach appropriate diagnosis</p> |

| | |
|---|---|
| | <p>4 Ability to differentiate true undescended testis from retractile variant 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups</p> <p>PENILE CONDITIONS: 4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups</p> <p>ACUTE SCROTUM: 4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups</p> |
| <p>Technical Skills and Procedures</p> | <p>Hernia (ST5): 3 Inguinal herniotomy (non-neonatal) 3 Inguinal hernia (neonatal)</p> <p>Hydrocele (ST5): 3 Surgery for hydrocele</p> <p>Penile Conditions (ST5): 3 Prepuceplasty 4 Circumcision</p> <p>Undescended testis (ST5): 3 Surgery for undescended testis</p> <p>Acute scrotum (ST5): 4 Surgery for acute scrotum</p> <p>Hernia (ST6): 4 Inguinal herniotomy (non-neonatal) 3 Inguinal hernia (neonatal)</p> <p>Hydrocele (ST6): 4 Surgery for hydrocele</p> <p>Penile Conditions (ST6): 4 Prepuceplasty 4 Circumcision</p> <p>Undescended testis (ST6): 4 Surgery for undescended testis</p> <p>Acute scrotum (ST6): 4 Surgery for acute scrotum</p> |

| | |
|----------------------|---|
| Topic | Abdominal wall pathologies |
| Category | General Surgery of Childhood |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with abnormalities of the abdominal wall</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention if required</i></p> |

| | |
|--|--|
| | <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> |
| Knowledge | <p>UMBILICAL HERNIA:</p> <ul style="list-style-type: none"> 4 Developmental anatomy 4 Natural history 4 Place of conservative management 4 Indications and outcomes of surgery <p>SUPRA-UMBILICAL HERNIA:</p> <ul style="list-style-type: none"> 4 developmental anatomy 4 Natural history to include contrast with umbilical hernia 4 Indications and outcomes of surgery <p>EPIGASTRIC HERNIA:</p> <ul style="list-style-type: none"> 4 Developmental anatomy 4 Natural history 4 Indications and outcomes of surgery |
| Clinical Skills | <p>UMBILICAL HERNIA:</p> <ul style="list-style-type: none"> 4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups <p>SUPRA-UMBILICAL HERNIA:</p> <ul style="list-style-type: none"> 4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups <p>EPIGASTRIC HERNIA:</p> <ul style="list-style-type: none"> 4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | <p>Umbilical hernia (ST5):</p> <ul style="list-style-type: none"> 4 Repair of umbilical hernia <p>Epigastric hernia (ST5):</p> <ul style="list-style-type: none"> 4 Repair of epigastric hernia <p>Umbilical hernia (ST6):</p> <ul style="list-style-type: none"> 4 Repair of umbilical hernia <p>Epigastric hernia (ST6):</p> <ul style="list-style-type: none"> 4 Repair of epigastric hernia |

| | |
|----------------------|---|
| Topic | Head and neck swellings |
| Category | General surgery of childhood |
| Sub-category: | Management of benign surgical conditions |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with a head/neck swelling as the primary presenting symptom</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention if required</i></p> <p><i>To be able to communicate the above information at the required level to patients/</i></p> |

| | |
|--|--|
| | <i>parents/ other team members/ referral source</i> |
| Knowledge | 4 Patterns of symptoms and relation to likely pathology, relevant anatomy and age of child 4 Relevance of embryonic development of head and neck structures 4 Differential diagnosis 4 Place and value of investigations |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | ST5 and 6: 4 Excision skin lesion 4 Excision/biopsy of lymph nodes 3 Surgery for thyroglossal cyst 3 Surgery for branchial cysts and branchial remnants ST7 and 8: 4 Excision skin lesion 4 Excision/biopsy of lymph nodes 4 Surgery for thyroglossal cyst 4 Surgery for branchial cysts and branchial remnants |

| | |
|--|--|
| Topic | Access |
| Category | General Surgery of Childhood |
| Sub-category: | None |
| Objective | None |
| Knowledge | None |
| Clinical Skills | None |
| Technical Skills and Procedures | Vascular access (ST5 and 6): 3 Central venous lines and ports (including percutaneous) Dialysis (ST5): 3 PD catheter insertion/removal Vascular access (ST7 and 8): 4 Central venous lines and ports (including percutaneous) Dialysis (ST6): 3 PD catheter insertion/removal |

| | |
|----------------------|--|
| Topic | Pyloric stenosis |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <i>To be able to assess an infant with vomiting To be able to formulate a differential diagnosis and an investigation and management plan To be able to make a diagnosis of pyloric stenosis To be able to treat the child appropriately up to and including operative intervention if required To be able to communicate the above information at the required level to parents, other team members/referral source</i> |

| | |
|--|--|
| | |
| Knowledge | <ul style="list-style-type: none"> 4 Patterns of symptoms and relation to likely pathology 4 Significance of bile stained vomiting 4 Differential diagnosis 4 Place and value of investigations 4 Understanding of the biochemical changes associated with the condition |
| Clinical Skills | <ul style="list-style-type: none"> 4 Ability to assess ill child including an assessment of severity of dehydration 4 Ability to safely correct the dehydration and biochemical abnormalities 4 Ability to communicate with ill child (see Section 1) 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | <ul style="list-style-type: none"> 3 Pyloromyotomy - ST5 4 Pyloromyotomy - ST6, ST7, ST8 |

| | |
|--|--|
| Topic | Gastro-oesophageal reflux |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <ul style="list-style-type: none"> 4 Pathophysiology 4 Investigation and management 4 Indications for operative intervention |
| Clinical Skills | <ul style="list-style-type: none"> 4 Ability to synthesise history and investigations into appropriate management plan 4 Ability to communicate information to parents/child |
| Technical Skills and Procedures | <ul style="list-style-type: none"> 4 OGD - ST5, ST6, ST7, ST8 3 Oesophageal dilatation (ST5 & ST6) 4 Oesophageal dilatation (ST7 & ST8) 3 Gastrostomy -open (ST5 & ST6) 4 Gastrostomy -open (ST7 & ST8) 3 PEG (insertion/removal) - ST5 4 PEG (insertion /removal) - ST6, ST7, ST8 3 Open or laparoscopic fundoplication (ST5, ST6, ST7) 4 Open and laparoscopic fundoplication (ST8) 1 Feeding jejunostomy (ST5) 2 Feeding jejunostomy (ST6) 3 Feeding jejunostomy (ST7) 4 Feeding jejunostomy (ST8) 1 Oesophago gastric disconnection (ST5 & ST6) 2 Oesophago gastric disconnection (ST7 & ST8) |

| | |
|--|--|
| Topic | Abdominal pain |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Patterns of symptoms and relation to likely pathology and age of child</p> <p>4 Differential diagnosis</p> <p>4 Place and value of investigations</p> <p>4 Place of operative intervention, and associated outcomes</p> |
| Clinical Skills | <p>4 Ability to assess ill child</p> <p>4 Ability to communicate with ill child (see Section 1)</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>3 Open and Laparoscopic appendicectomy (ST5)</p> <p>4 Open and Laparoscopic appendicectomy (ST6, ST7, ST8)</p> <p>3 Operative reduction of intussusception (ST5 & ST6)</p> <p>4 Operative reduction of intussusception (ST7 & ST8)</p> |

| | |
|--|--|
| Topic | Constipation |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Patterns of symptoms and relation to likely pathology and age of child</p> <p>3 Differential diagnosis to include medical anomalies and socio-psychological aspects of symptom</p> <p>4 Place and value of investigations</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups.</p> <p>3 To include community aspects of further management</p> |
| Technical Skills and Procedures | <p>4 Rectal Biopsy</p> <p>4 Manual evacuation</p> <p>4 EUA rectum</p> <p>4 Anal stretch</p> <p>1 ACE procedure (ST5)</p> <p>2 ACE procedure (ST6)</p> <p>3 ACE procedure (ST7 & ST8)</p> |

| | |
|--|--|
| Topic | Gastro-intestinal bleeding |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>3 Patterns of symptoms and relation to likely pathology and age of child</p> <p>3 Differential diagnosis</p> <p>4 Place and value of investigations</p> <p>3 Place of operative intervention, and associated outcomes</p> |
| Clinical Skills | <p>4 Ability to assess ill child</p> <p>4 Ability to communicate with ill child (see Section 1)</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>4 OGD</p> <p>2 Colonoscopy (ST5, ST6, ST7, ST8)</p> <p>3 Sigmoidoscopy (ST5,)</p> <p>4 Sigmoidoscopy (ST6, ST7, ST8)</p> <p>3 Small bowel resection/anastomosis – open and laparoscopically assisted (Meckels) - ST5 & ST6</p> <p>4 Small bowel resection/anastomosis – open and laparoscopically assisted (Meckels) - ST7 & ST8</p> |

| | |
|-------------------------|--|
| Topic | Intestinal obstruction |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Patterns of symptoms and relation to likely pathology and age of child</p> <p>4 Differential diagnosis</p> <p>4 Place and value of investigations</p> <p>4 Place of operative intervention, and associated outcomes</p> |
| Clinical Skills | <p>4 Ability to assess ill child</p> <p>4 Ability to communicate with ill child (see Section 1)</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills | 3 Laparotomy (ST5 & ST6) |

| | |
|-----------------------|---|
| and Procedures | <p>4 Laparotomy (ST7 & ST8)</p> <p>3 Adhesiolysis (ST5 & ST6) 4 Adhesiolysis (ST7 & ST8)</p> <p>3 Small bowel resection/anastomosis (ST5 & ST6) 4 Small bowel resection/anastomosis (ST7 & ST8)</p> |
|-----------------------|---|

| | |
|--|--|
| Topic | Inflammatory bowel disease |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>3 Patterns of symptoms and relation to likely pathology and age of child</p> <p>3 Differential diagnosis</p> <p>3 Place and value of investigations</p> <p>3 Place of operative intervention, and associated outcomes</p> |
| Clinical Skills | <p>4 Ability to assess ill child</p> <p>4 Ability to communicate with ill child (see Section 1)</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>4 OGD</p> <p>2 Colonoscopy (ST5, ST6, ST7, ST8)</p> <p>3 Sigmoidoscopy (ST5 & ST6) 4 Sigmoidoscopy (ST7 & ST8)</p> <p>3 Small bowel resection/anastomosis (ST5 & ST6) 4 Small bowel resection/anastomosis (ST7 & ST8)</p> <p>2 Right hemicolectomy (ST5) 3 Right hemicolectomy (ST6, ST7) 4 Right hemicolectomy (ST8)</p> <p>2 Left hemicolectomy (ST5) 3 Left hemicolectomy (ST6, ST7) 4 Left hemicolectomy (ST8)</p> <p>2 Total colectomy (ST5) 3 Total colectomy (ST6, ST7) 4 Total colectomy (ST8)</p> <p>1 Pouch formation (ST5 & ST6) 2 Pouch formation (ST7 & ST8)</p> |

| | |
|--------------|-----------------------------|
| Topic | Short bowel syndrome |
|--------------|-----------------------------|

| | |
|--|--|
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>3 Patterns of symptoms and relation to likely pathology and age of child</p> <p>3 Differential diagnosis</p> <p>3 Place and value of investigations</p> <p>3 Place of operative intervention, and associated outcomes</p> |
| Clinical Skills | <p>4 Ability to assess ill child</p> <p>4 Ability to communicate with ill child (see Section 1)</p> <p>3 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>1 Bowel lengthening procedures (ST5 & 6 specialist centre)</p> <p>2 Bowel lengthening procedures (ST7 & 8 specialist centre)</p> |

| | |
|--|--|
| Topic | Liver/biliary disease |
| Category | Gastrointestinal |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>3 Patterns of symptoms and relation to likely pathology and age of child</p> <p>3 Differential diagnosis</p> <p>3 Place and value of investigations</p> <p>3 Place of operative intervention, and associated outcomes</p> |
| Clinical Skills | <p>4 Ability to assess ill child</p> <p>4 Ability to communicate with ill child (see Section 1)</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>2 Cholecystectomy</p> <p>1 Choledochal cyst (ST5 & ST6)</p> <p>2 Choledochal cyst (ST7)</p> <p>3 Choledochal cyst (ST8)</p> <p>1 Kasai procedure - ST5 & ST6 (specialist centre)</p> <p>2 Kasai procedure - ST7 (specialist centre)</p> <p>3 Kasai procedure - ST8 (specialist centre)</p> |

| | |
|--------------|--------------------------------|
| Topic | Urinary tract infection |
|--------------|--------------------------------|

| | |
|--|---|
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Patterns of symptoms and relation to likely pathology and age of child</p> <p>4 Relevance of different symptom patterns</p> <p>4 Differential diagnosis</p> <p>4 Place and value of investigations</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | None |

| | |
|--|---|
| Topic | Haematuria |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Patterns of symptoms and relation to likely pathology and age of child</p> <p>4 Differential diagnosis</p> <p>4 Place and value of investigations</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>3 Cysto-urethroscopy (ST5 & ST6)</p> <p>4 Cysto-urethroscopy (ST7 & ST8)</p> |

| | |
|----------------------|--|
| Topic | Hypospadias |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> |

| | |
|--|--|
| | <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>3 Likely modes of presentation</p> <p>3 Different anatomical variants</p> <p>4 Place and value of investigations/ operative intervention</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>2 Repair distal hypospadias (ST5 & ST6)</p> <p>3 Repair distal hypospadias (ST7)</p> <p>4 Repair distal hypospadias (ST8)</p> <p>1 Repair proximal hypospadias (ST5 & ST6)</p> <p>2 Repair proximal hypospadias (ST7)</p> <p>3 Repair proximal hypospadias (ST8)</p> <p>1 Repair urethral fistula (ST5 & ST6)</p> <p>2 Repair urethral fistula (ST7)</p> <p>3 Repair urethral fistula (ST8)</p> |

| | |
|--|---|
| Topic | Upper tract obstruction (to include Pelvi-ureteric junction obstruction and Vesico-ureteric junction obstruction) |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Likely modes of presentation</p> <p>4 Place and value of investigations/ operative intervention</p> <p>4 Differential diagnosis</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>2 Pyeloplasty (ST5 & ST6)</p> <p>3 Pyeloplasty (ST7)</p> <p>4 Pyeloplasty (ST8)</p> <p>2 Nephrectomy (ST5)</p> <p>3 Nephrectomy (ST6 & ST7)</p> <p>4 Nephrectomy (ST8)</p> <p>2 Heminephrectomy (ST5)</p> <p>3 Heminephrectomy (ST6 & ST7)</p> |

| | |
|--|---|
| | <p>4 Heminephrectomy (ST8)</p> <p>2 Insertion of percutaneous nephrostomy – with ultrasound guidance (ST5 – ST8)</p> <p>2 Insertion of open nephrostomy (ST5 & ST6)</p> <p>3 Insertion of open nephrostomy (ST7)</p> <p>4 Insertion of open nephrostomy (ST8)</p> <p>2 Insertion of JJ stent (ST5 & ST6)</p> <p>3 Insertion of JJ stent (ST7)</p> <p>4 Insertion of JJ stent (ST8)</p> <p>1 Ureteric reimplantation (ST5 & ST6)</p> <p>2 Ureteric reimplantation (ST7)</p> <p>3 Ureteric reimplantation (ST8)</p> |
|--|---|

| | |
|--|---|
| Topic | Posterior urethral valves |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Likely modes of presentation</p> <p>4 Place and value of investigations/ operative intervention</p> <p>4 Differential diagnosis</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>1 Destruction of PUV (ST5 & ST6)</p> <p>2 Destruction of PUV (ST7)</p> <p>3 Destruction of PUV (ST8)</p> <p>2 Formation/closure of vesicostomy (ST5)</p> <p>3 Formation/closure of vesicostomy (ST6 & ST7)</p> <p>4 Formation/closure of vesicostomy (ST8)</p> |

| | |
|----------------------|---|
| Topic | Urinary tract calculus disease |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> |

| | |
|--|---|
| | <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 4 Likely modes of presentation 3 Aetiological and biochemical factors 3 Place and value of investigations/ operative and non-operative intervention 3 Differential diagnosis |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 2 Interventional management of urolithiasis (ST5 & ST6) 3 Interventional management of urolithiasis (ST7 & ST8) |

| | |
|--|--|
| Topic | Bladder dysfunction (incl. neuropathic bladder) |
| Category | Urology |
| Sub-category: | None |
| Objective | <i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 3 Likely modes of presentation (ST5 & ST6) 3 Differential diagnosis (ST5 & ST6) 3 Place and value of investigations (ST5 & ST6) 3 Knowledge of appropriate referral pathways (ST5 & ST6) 4 Likely modes of presentation (ST7 & ST8) 4 Differential diagnosis (ST7 & ST8) 4 Place and value of investigations (ST7 & ST8) 4 Knowledge of appropriate referral pathways (ST7 & ST8) |
| Clinical Skills | 3 Ability to assess child (ST5 & ST6) 3 Ability to form a viable investigation and treatment plan (ST5 & ST6) 3 Ability to communicate with all relevant groups (ST5 & ST6) 4 Ability to assess child (ST7 & ST8) 4 Ability to form a viable investigation and treatment plan (ST7 & ST8) 4 Ability to communicate with all relevant groups (ST7 & ST8) |
| Technical Skills and Procedures | 2 Cysto-urethroscopy (ST5) 3 Cysto-urethroscopy (ST6) 4 Cysto-urethroscopy (ST7 & ST8) 2 Vesicostomy (ST5 & ST6) 3 Vesicostomy (ST7) 4 Vesicostomy (ST8) 2 Closure of vesicostomy (ST5) 3 Closure of vesicostomy (ST6) 4 Closure of vesicostomy (ST7 & ST8) 3 Suprapubic catheter (ST5 & ST6) 4 Suprapubic catheter (ST7 & ST8) |

| | |
|--|---|
| | <p>1 Endoscopic cauterisation of lesion of bladder (ST5 & ST6) 2 Endoscopic cauterisation of lesion of bladder (ST7) 3 Endoscopic cauterisation of lesion of bladder (ST8)</p> <p>2 Endoscopic management of clot from bladder (ST5 & ST6) 3 Endoscopic management of clot from bladder (ST7) 4 Endoscopic management of clot from bladder (ST8)</p> <p>1 Ileal bladder reconstruction (ST5 & ST6) 2 Ileal bladder reconstruction (ST7) 3 Ileal bladder reconstruction (ST8)</p> <p>1 Colonic bladder reconstruction (ST5 & ST6) 2 Colonic bladder reconstruction (ST7) 3 Colonic bladder reconstruction (ST8)</p> <p>1 Ureteric diversion (ST5 & ST6) 2 Ureteric diversion (ST7) 3 Ureteric diversion (ST8)</p> <p>2 Mitrofanoff procedure (ST5 & ST6) 3 Mitrofanoff procedure (ST7) 4 Mitrofanoff procedure (ST8)</p> |
|--|---|

| | |
|--|---|
| Topic | Renal failure |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>3 Likely modes of presentation</p> <p>3 Differential diagnosis</p> <p>3 Place and value of investigations</p> <p>3 Knowledge of referral criteria to renal medical colleagues</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>1 Ureteric un-diversion (ST5 & ST6) 2 Ureteric un-diversion (ST7) 3 Ureteric un-diversion (ST8)</p> <p>2 Haemodialysis catheter insertion (ST5) 3 Haemodialysis catheter insertion (ST6) 4 Haemodialysis catheter insertion (ST7 & ST8)</p> <p>3 PD catheter insertion/removal (ST5 & ST6) 4 PD catheter insertion/removal (ST7 & ST8)</p> |

| | |
|-----------------|--|
| Topic | Bladder exstrophy (to include outlet anomalies e.g. epispadias) |
| Category | Urology |

| | |
|--|---|
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>3 Likely modes of presentation</p> <p>3 Differential diagnosis</p> <p>3 Place and value of investigations</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>1 Closure of bladder neck (ST5 & ST6)</p> <p>2 Closure of bladder neck (ST7)</p> <p>3 Closure of bladder neck (ST8)</p> <p>1 Repair of bladder exstrophy (ST5 & ST6)</p> <p>2 Repair of bladder exstrophy (ST7) (specialist centre)</p> <p>3 Repair of bladder exstrophy (ST8) (specialist centre)</p> <p>1 Repair of epispadias (ST5 & ST6)</p> <p>2 Repair of epispadias (ST7) (specialist centre)</p> <p>3 Repair of epispadias (ST8) (specialist centre)</p> |

| | |
|--|---|
| Topic | Duplication of urinary tract |
| Category | Urology |
| Sub-category: | None |
| Objective | <p><i>To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to treat the child appropriately up to and including operative intervention in selected cases</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>3 Likely modes of presentation</p> <p>3 Embryological derivation and anatomical variants</p> <p>3 Place and value of investigations/ operative intervention</p> <p>3 Differential diagnosis</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>1 Open +/- laparoscopic hemi-nephrectomy (ST5)</p> <p>2 Open +/- laparoscopic hemi-nephrectomy (ST6)</p> <p>3 Open +/- laparoscopic hemi-nephrectomy (ST7)</p> <p>4 Open +/- laparoscopic hemi-nephrectomy (ST8)</p> <p>1 Excision of ureterocele - ST5, ST6</p> |

| | |
|--|---|
| | 2 Excision of ureterocele - ST7 3 Excision of ureterocele - ST8 1 Endoscopic incision of ureterocele ST5 2 Endoscopic incision of ureterocele ST6, ST7 3 Endoscopic incision of ureterocele ST8 |
|--|---|

| | |
|--|--|
| Topic | Urethral meatus |
| Category | Urology |
| Sub-category: | None |
| Objective | None |
| Knowledge | None |
| Clinical Skills | None |
| Technical Skills and Procedures | 2 Meatotomy - ST5 3 Meatotomy - ST6 4 Meatotomy - ST7, ST8 2 Meatoplasty -ST5 3 Meatoplasty -ST6 4 Meatoplasty -ST7, ST8 2 Urethral dilatation -ST5 3 Urethral dilatation -ST6 4 Urethral dilatation -ST7, ST8 |

| | |
|--|--|
| Topic | Epispadias |
| Category | Urology |
| Sub-category: | None |
| Objective | None |
| Knowledge | None |
| Clinical Skills | None |
| Technical Skills and Procedures | 2 Repair of epispadias - ST7 (specialist centre) 3 Repair of epispadias - ST8 (specialist centre) |

| | |
|--|--|
| Topic | Vesico-ureteric reflux |
| Category | Urology |
| Sub-category: | None |
| Objective | None |
| Knowledge | None |
| Clinical Skills | None |
| Technical Skills and Procedures | 3 Cysto-urethroscopy (ST5 & ST6) 4 Cysto-urethroscopy (ST7 & ST8) 2 STING/deflux (ST5 & ST6) 3 STING/deflux (ST7) 4 STING/deflux (ST8) 1 Ureteric reimplantation ST5, ST6 2 Ureteric reimplantation ST7 3 Ureteric reimplantation ST8 |

| | |
|--|---|
| Topic | Small bowel duplications |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i></p> <p><i>To be able to construct an appropriate management plan for these children</i></p> <p><i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Mode of presentation both pre- and post natal</p> <p>4 Patho-physiology of the condition and anatomical variants</p> <p>4 Associated anomalies</p> <p>4 Outcome data on the condition</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>2 Intestinal resection/anastomosis - ST5, ST6</p> <p>3 Intestinal resection/anastomosis - ST7</p> <p>4 Intestinal resection/anastomosis - ST8</p> |

| | |
|--|---|
| Topic | Sacro coccygeal teratoma |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i></p> <p><i>To be able to construct an appropriate management plan for these children</i></p> <p><i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Mode of presentation both pre- and post natal</p> <p>4 Patho-physiology of the condition and anatomical variants</p> <p>4 Associated anomalies</p> <p>4 Outcome data on the condition</p> <p>4 Differing management strategies</p> <p>4 Role of prenatal counselling</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>1 Excision of sacro coccygeal teratoma ST5, ST6</p> <p>2 Excision of sacro coccygeal teratoma ST7</p> <p>3 Excision of sacro coccygeal teratoma ST8</p> |

| | |
|----------------------|--|
| Topic | Congenital diaphragmatic hernia |
| Category | Neonatal Surgery |
| Sub-category: | None |

| | |
|--|--|
| Objective | <i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i> <i>To be able to construct an appropriate management plan for these children</i> <i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 4 Mode of presentation both pre- and post natal 4 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies 4 Role of pre-natal counselling |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 2 Operation for diaphragmatic hernia (neonate) incl. eventration (ST5) 3 Operation for diaphragmatic hernia (neonate) incl. eventration (ST6 & ST7) 4 Operation for diaphragmatic hernia (neonate) incl. eventration (ST8) |

| | |
|--|--|
| Topic | Intestinal Atresias |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i> <i>To be able to construct an appropriate management plan for these children</i> <i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 4 Mode of presentation both pre- and post natal 4 Anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies 4 Role of pre-natal counselling |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 2 Duodeno- duodenostomy (ST5) 3 Duodeno- duodenostomy (ST6 & ST7) 4 Duodeno- duodenostomy (ST8) 2 Intestinal resection/anastomosis (ST5) 3 Intestinal resection/anastomosis (ST6 & ST7) 4 Intestinal resection/anastomosis (ST8) 2 Stoma formation (ST5) 3 Stoma formation (ST6 & ST7) 4 Stoma formation (ST8) |

| | |
|----------------------|--|
| Topic | Meconium Ileus |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <i>To understand the diagnosis and management of children presenting with congenital</i> |

| | |
|--|---|
| | <p><i>abnormalities in the neonatal period</i></p> <p><i>To be able to construct an appropriate management plan for these children</i></p> <p><i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Mode of presentation both pre- and post natal</p> <p>4 Patho-physiology of the condition and anatomical variants</p> <p>4 Associated anomalies</p> <p>4 Outcome data on the condition</p> <p>4 Differing management strategies</p> <p>4 Role of pre-natal + genetic counselling</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>2 Operation for meconium ileus (ST5)</p> <p>3 Operation for meconium ileus (ST6, ST7, ST8)</p> |

| | |
|--|---|
| Topic | Malrotation |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i></p> <p><i>To be able to construct an appropriate management plan for these children</i></p> <p><i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Mode of presentation</p> <p>4 Patho-physiology of the condition and anatomical variants</p> <p>4 Associated anomalies</p> <p>4 Outcome data on the condition</p> <p>4 Differing management strategies</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>2 Correction of malrotation (ST5)</p> <p>3 Correction of malrotation (ST6, ST7)</p> <p>4 Correction of malrotation (ST8)</p> |

| | |
|----------------------|---|
| Topic | Hirschsprungs disease |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <p><i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i></p> <p><i>To be able to construct an appropriate management plan for these children</i></p> <p><i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Mode of presentation both pre- and post natal</p> <p>3 Patho-physiology of the condition and anatomical variants</p> <p>4 Associated anomalies</p> <p>4 Outcome data on the condition</p> <p>4 Differing management strategies</p> |

| | |
|--|--|
| | 4 Role of genetic counselling |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 3 Rectal biopsy (ST5) 4 Rectal biopsy (ST6, ST7, ST8) 4 Rectal washout 1 Trans-anal pull through – open or laparoscopically assisted (ST5 & ST6) 2 Trans-anal pull through – open or laparoscopically assisted (ST7) 3 Trans-anal pull through – open or laparoscopically assisted (ST8) 1 Pull through (Duhamel procedure, Soave, Swenson) - ST5 2 Pull through (Duhamel procedure, Soave, Swenson) - ST6, ST7 3 Pull through (Duhamel procedure, Soave, Swenson) - ST8 |

| | |
|--|--|
| Topic | Oesophageal Atresia and Tracheo-oesophageal fistula |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i> <i>To be able to construct an appropriate management plan for these children</i> <i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 4 Mode of presentation both pre- and post natal 4 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies 4 Role of pre-natal counselling |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 2 Operation for oesophageal atresia/TOF (ST5 & ST6) 3 Operation for oesophageal atresia/TOF (ST7) 4 Operation for oesophageal atresia/TOF (ST8) 1 Repair of H fistula (ST5 & ST6) 2 Repair of H fistula (ST7 & ST8) 1 Repair of recurrent fistula (ST5, ST6, ST7) 2 Repair of recurrent fistula (ST8) 1 Oesophageal dilatation (neonatal) - ST5 & ST6 2 Oesophageal dilatation (neonatal) - ST7 3 Oesophageal dilatation (neonatal) - ST8 1 Oesophageal replacement 1 Aortopexy |

| | |
|-----------------|--------------------------------|
| Topic | Anorectal Malformations |
| Category | Neonatal Surgery |

| | |
|--|--|
| Sub-category: | None |
| Objective | <i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period To be able to construct an appropriate management plan for these children To understand the place of operative management in the neonatal period and be able to carry this out in selected cases To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 4 Mode of presentation both pre- and post natal 4 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies 4 Role of pre-natal counselling |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 2 Anoplasty (ST5 & ST6) 3 Anoplasty (ST7) 4 Anoplasty (ST8) 3 Sigmoid colostomy (ST5) 4 Sigmoid colostomy (ST6, ST7, ST8) 1 PSARP (ST5 & ST6) 2 PSARP (ST7) 3 PSARP (ST8) |

| | |
|--|--|
| Topic | Necrotising Enterocolitis |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period To be able to construct an appropriate management plan for these children To understand the place of operative management in the neonatal period and be able to carry this out in selected cases To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 4 Mode of presentation 4 Patho-physiology of the condition 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 2 Laparotomy and proceed (ST5 & ST6) 3 Laparotomy and proceed (ST7) 4 Laparotomy and proceed (ST8) 2 Intestinal resection/anastomosis (ST5 & ST6) 3 Intestinal resection/anastomosis (ST7) 4 Intestinal resection/anastomosis (ST8) |

| | |
|--|--|
| | |
|--|--|

| | |
|--|--|
| Topic | Neonatal Abdominal Wall Defects |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i> <i>To be able to construct an appropriate management plan for these children</i> <i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 4 Mode of presentation both pre- and post natal 4 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies 4 Role of pre-natal counselling |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 2 Repair of gastroschisis (ST5) 3 Repair of gastroschisis (ST6 & ST7) 4 Repair of gastroschisis (ST8) 3 Application of preformed silo (ST5 & ST6) 4 Application of preformed silo (ST7 & ST8) 2 Repair of exomphalos (ST5) 3 Repair of exomphalos (ST6 & ST7) 4 Repair of exomphalos (ST8) |

| | |
|--|--|
| Topic | Disorders of sex development |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i> <i>To be able to construct an appropriate management plan for these children</i> <i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 3 Mode of presentation both pre- and post natal 3 Patho-physiology of the condition and anatomical variants 3 Associated anomalies 3 Outcome data on the condition 3 Differing management strategies 3 Role of genetic counselling |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | None |

| | |
|--|--|
| Topic | Antenatal management |
| Category | Neonatal Surgery |
| Sub-category: | None |
| Objective | <i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i> <i>To be able to construct an appropriate management plan for these children</i> <i>To understand the place of operative management in the neonatal period and be able to carry this out in selected cases</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 4 Likely modes of presentation of different conditions 4 Place and value of investigations 4 Types of and indications for antenatal intervention 4 Role of ante-natal counselling |
| Clinical Skills | 4 Ability to counsel and inform parents 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | None |

| | |
|--|---|
| Topic | Wilms Tumour |
| Category | Oncology |
| Sub-category: | None |
| Objective | <i>To understand the presentation and management of childhood tumours</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 4 Mode of clinical presentation 4 Differential diagnosis 3 Relevant basic science knowledge of oncogenesis 4 Outcome data of treatment modalities 4 Role of surgery |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 2 Nephro-ureterectomy/nephrectomy for Wilms (ST5 & ST6) 3 Nephro-ureterectomy/nephrectomy for Wilms (ST7 & ST8) |

| | |
|----------------------|---|
| Topic | Neuroblastoma |
| Category | Oncology |
| Sub-category: | None |
| Objective | <i>To understand the presentation and management of childhood tumours</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 4 Mode of clinical presentation 4 Differential diagnosis |

| | |
|--|---|
| | <ul style="list-style-type: none"> 3 Relevant basic science knowledge of oncogenesis 4 Outcome data of treatment modalities 4 Role of surgery |
| Clinical Skills | <ul style="list-style-type: none"> 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | <ul style="list-style-type: none"> 1 Surgery for neuroblastoma (ST5 & ST6) 2 Surgery for neuroblastoma (ST7) 3 Surgery for neuroblastoma (ST8) |

| | |
|--|--|
| Topic | Hepatoblastoma |
| Category | Oncology |
| Sub-category: | None |
| Objective | <p><i>To understand the presentation and management of childhood tumours</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <ul style="list-style-type: none"> 4 Mode of clinical presentation 4 Differential diagnosis 3 Relevant basic science knowledge of oncogenesis 4 Outcome data of treatment modalities 4 Role of surgery |
| Clinical Skills | <ul style="list-style-type: none"> 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | <ul style="list-style-type: none"> 1 Surgery for hepatoblastoma (ST5 & ST6) only at specialist centre 2 Surgery for hepatoblastoma (ST7) only at specialist centre 3 Surgery for hepatoblastoma (ST8) only at specialist centre |

| | |
|------------------------|--|
| Topic | Soft tissue tumours |
| Category | Oncology |
| Sub-category: | None |
| Objective | <p><i>To understand the presentation and management of childhood tumours</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <ul style="list-style-type: none"> 4 Mode of clinical presentation 4 Differential diagnosis 3 Relevant basic science knowledge of oncogenesis 4 Outcome data of treatment modalities 4 Role of surgery |
| Clinical Skills | <ul style="list-style-type: none"> 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |

| | |
|--|--|
| Technical Skills and Procedures | 1 Local excision soft tissue tumour (ST5, ST6) 2 Local excision soft tissue tumour (ST7) 3 Local excision soft tissue tumour (ST8) |
|--|--|

| | |
|--|---|
| Topic | Haematological malignancies |
| Category | Oncology |
| Sub-category: | None |
| Objective | <i>To understand the presentation and management of childhood tumours</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 3 Mode of clinical presentation 3 Differential diagnosis 3 Relevant basic science knowledge of oncogenesis 3 Management strategies and basic outcome data of treatment modalities |
| Clinical Skills | 4 Ability to assess child 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 2 Cervical Lymph node biopsy (ST5) 3 Cervical Lymph node biopsy (ST6 & ST7) 4 Cervical Lymph node biopsy (ST8) |

| | |
|--|---|
| Topic | Benign tumours |
| Category | Oncology |
| Sub-category: | None |
| Objective | <i>To understand the presentation and management of childhood tumours</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 4 Mode of clinical presentation 4 Differential diagnosis 3 Relevant basic science knowledge of oncogenesis 4 Outcome data of treatment modalities 4 Role of surgery |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 2 Oophorectomy (ST5) 3 Oophorectomy (ST6 & ST7) 4 Oophorectomy (ST8) 2 Oophero-salpingectomy (ST5) 3 Oophero-salpingectomy (ST6 & ST7) 4 Oophero-salpingectomy (ST8) |

| | |
|----------------------|---------------------------|
| Topic | Generic procedures |
| Category | Oncology |
| Sub-category: | None |

| | |
|--|--|
| Objective | None |
| Knowledge | None |
| Clinical Skills | None |
| Technical Skills and Procedures | 2 Tumour biopsy ST5 3 Tumour biopsy ST6, ST7 4 Tumour biopsy ST8 |

| | |
|--|--|
| Topic | Adrenal gland |
| Category | Endocrine conditions |
| Sub-category: | None |
| Objective | None |
| Knowledge | None |
| Clinical Skills | None |
| Technical Skills and Procedures | 1 Adrenalectomy (ST5 & ST6) 2 Adrenalectomy (ST7 & ST8) |

| | |
|--|---|
| Topic | Disease of the thyroid gland |
| Category | Endocrine conditions |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of endocrine conditions in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to identify the need for surgery and influence of endocrine conditions on surgery</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of appropriate referral pathways |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 1 Thyroidectomy (ST5 & ST6) 2 Thyroidectomy (ST7 & ST8) |

| | |
|----------------------|---|
| Topic | Parathyroid disease |
| Category | Endocrine conditions |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of endocrine conditions in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to identify the need for surgery and influence of endocrine conditions on</i> |

| | |
|--|--|
| | <i>surgery</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of appropriate referral pathways |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | None |

| | |
|--|---|
| Topic | Diabetes |
| Category | Endocrine conditions |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of endocrine conditions in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to identify the need for surgery and influence of endocrine conditions on surgery</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of appropriate referral pathways |
| Clinical Skills | 4 Ability to assess child 3 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 3 OGD (ST5) 4 OGD (ST6, ST7, ST8) |

| | |
|------------------------|---|
| Topic | Disorders of Growth |
| Category | Endocrine conditions |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of endocrine conditions in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to identify the need for surgery and influence of endocrine conditions on surgery</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of appropriate referral pathways |
| Clinical Skills | 4 Ability to assess child 3 Ability to form a viable investigation and treatment plan |

| | |
|--|---|
| | 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 3 OGD (ST5) 4 OGD (ST6, ST7, ST8) |

| | |
|--|---|
| Topic | Disorders of secondary sexual development |
| Category | Endocrine conditions |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of endocrine conditions in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To be able to identify the need for surgery and influence of endocrine conditions on surgery</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of appropriate referral pathways |
| Clinical Skills | 4 Ability to assess child 3 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 1 Subcutaneous mastectomy (ST5 & ST6) 2 Subcutaneous mastectomy (ST7) 3 Subcutaneous mastectomy (ST8) |

| | |
|--|---|
| Topic | Chest wall anomalies |
| Category | Thoracic Anomalies |
| Sub-category: | None |
| Objective | <i>To understand the presenting symptoms of thoracic anomalies in childhood and their management</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i> <i>To identify the place of surgery</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i> <i>To be able to practice with integrity, respect and compassion</i> |
| Knowledge | 4 Likely modes of presentation 4 Differential diagnosis 4 Place and value of investigations 4 Knowledge of appropriate referral pathways 4 Outcomes of surgery |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 1 Repair pectus excavatum (ST5 & ST6) 2 Repair pectus excavatum (ST7 & ST8) 1 Repair pectus carinatum (ST5 & ST6) 2 Repair pectus carinatum (ST7 & ST8) |

| | |
|--|--|
| | |
|--|--|

| Topic | Congenital and acquired lung abnormalities including management of empyema |
|--|---|
| Category | Thoracic Anomalies |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of thoracic anomalies in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To identify the place of surgery</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Likely modes of presentation</p> <p>4 Differential diagnosis</p> <p>4 Place and value of investigations</p> <p>3 Knowledge of developmental embryology and pertinent anatomy</p> <p>4 Knowledge of appropriate referral pathways</p> <p>4 Outcomes of surgery</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>3 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>2 Thoracotomy (ST5 & ST6)</p> <p>3 Thoracotomy (ST7)</p> <p>4 Thoracotomy (ST8)</p> <p>1 Open biopsy of lung (ST5 & ST6)</p> <p>2 Open biopsy of lung (ST7)</p> <p>3 Open biopsy of lung (ST8)</p> <p>1 Pulmonary lobectomy (ST5 & ST6)</p> <p>2 Pulmonary lobectomy (ST7)</p> <p>3 Pulmonary lobectomy (ST8)</p> <p>1 Excision of extra lobar sequestration (ST5 & ST6)</p> <p>2 Excision of extra lobar sequestration (ST7)</p> <p>3 Excision of extra lobar sequestration (ST8)</p> <p>2 Aspiration of pleural cavity (ST5)</p> <p>3 Aspiration of pleural cavity (ST6)</p> <p>4 Aspiration of pleural cavity (ST7 & ST8)</p> <p>2 Insertion of open chest drain (ST5)</p> <p>3 Insertion of open chest drain (ST6)</p> <p>4 Insertion of open chest drain (ST7 & ST8)</p> <p>2 Insertion of percutaneous chest drain (ST5)</p> <p>3 Insertion of percutaneous chest drain (ST6)</p> <p>4 Insertion of percutaneous chest drain (ST7 & ST8)</p> <p>1 Open/thoracoscopic pleural debridement - ST5</p> <p>2 Open/thoracoscopic pleural debridement - ST6</p> <p>3 Open/thoracoscopic pleural debridement - ST7</p> <p>4 Open/thoracoscopic pleural debridement - ST8</p> |

| | |
|--|---|
| | <p>1 Rigid bronchoscopy -ST5, ST6 2 Rigid bronchoscopy -ST7, ST8</p> <p>1 Fibreoptic bronchoscopy -ST5, ST6 2 Fibreoptic bronchoscopy -ST7, ST8</p> |
|--|---|

| | |
|--|--|
| Topic | Tracheal anomalies |
| Category | Thoracic Anomalies |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of thoracic anomalies in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To identify the place of surgery</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>3 Likely modes of presentation</p> <p>3 Differential diagnosis</p> <p>3 Place and value of investigations</p> <p>3 Knowledge of developmental embryology and pertinent anatomy</p> <p>3 Knowledge of appropriate referral pathways</p> <p>3 Outcomes of surgery</p> |
| Clinical Skills | <p>4 Ability to assess child</p> <p>4 Ability to form a viable investigation and treatment plan</p> <p>4 Ability to communicate with all relevant groups</p> |
| Technical Skills and Procedures | <p>1 Tracheostomy (ST5, ST6, ST7, ST8)</p> <p>1 Rigid bronchoscopy (ST5 & ST6) 2 Rigid bronchoscopy (ST7 & ST8)</p> <p>1 Fibreoptic bronchoscopy (ST5 & ST6) 2 Fibreoptic bronchoscopy (ST7 & ST8)</p> |

| | |
|----------------------|--|
| Topic | Inhaled /aspirated /ingested foreign body |
| Category | Thoracic Anomalies |
| Sub-category: | None |
| Objective | <p><i>To understand the presenting symptoms of thoracic anomalies in childhood and their management</i></p> <p><i>To be able to formulate a differential diagnosis and an investigation and management plan</i></p> <p><i>To identify the place of surgery</i></p> <p><i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i></p> <p><i>To be able to practice with integrity, respect and compassion</i></p> |
| Knowledge | <p>4 Likely modes of presentation</p> <p>4 Differential diagnosis</p> <p>4 Place and value of investigations</p> |

| | |
|--|---|
| | 4 Knowledge of developmental embryology and pertinent anatomy 4 Knowledge of appropriate referral pathways 4 Outcomes of surgery |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups |
| Technical Skills and Procedures | 2 Rigid bronchoscopic removal of FB from bronchus (ST5, ST6, ST7, ST8) |

| | |
|--|---|
| Topic | Pre-operative care |
| Category | Operative skills |
| Sub-category: | None |
| Objective | <i>To ensure the trainee has reached a level of competence in a range of basic operative procedures.</i> |
| Knowledge | 3 Indications for surgery 3 Required preparation for surgery to include necessary pre-operative investigations 3 Outcomes and complications of surgery 3 Knowledge of the admission process |
| Clinical Skills | 3 Synthesis of history and examination into operative management plan 3 Ability to explain procedure and outcomes to patient and parents at an appropriate level 3 To be able to take informed consent 3 To construct an appropriate theatre list 3 To follow the admission procedure |
| Technical Skills and Procedures | No content |

| | |
|--|--|
| Topic | Intra-operative care |
| Category | Operative skills |
| Sub-category: | None |
| Objective | <i>To ensure the trainee has reached a level of competence in a range of basic operative procedures.</i> |
| Knowledge | 3 Anatomy to be encountered during procedure (ST5 & ST6) 3 Steps involved in operative procedure (ST5 & ST6) 3 Knowledge of alternative procedures in case of encountering difficulties (ST5 & ST6) 3 Potential complications of procedure (ST5 & ST6) 4 Anatomy to be encountered during procedure (ST7 & ST8) 4 Steps involved in operative procedure (ST7 & ST8) 4 Knowledge of alternative procedures in case of encountering difficulties (ST7 & ST8) 4 Potential complications of procedure (ST7 & ST8) |
| Clinical Skills | 3 Necessary hand-eye dexterity to complete procedure (ST5 & ST6) 3 Appropriate use of assistance (ST5 & ST6) 3 Communication with other members of theatre team (ST5 & ST6) 4 Necessary hand-eye dexterity to complete procedure (ST7 & ST8) 4 Appropriate use of assistance (ST7 & ST8) 4 Communication with other members of theatre team (ST7 & ST8) |
| Technical Skills and Procedures | 4 Open and laparoscopic operative skills |

| | |
|--|--|
| Topic | Post-operative care |
| Category | Operative skills |
| Sub-category: | None |
| Objective | <i>To ensure the trainee has reached a level of competence in a range of basic operative procedures.</i> |
| Knowledge | <ul style="list-style-type: none"> 3 Outcomes of procedure 3 Likely post-operative progress from disease process and intervention 3 Physiological and pathological changes in condition as a result of intervention |
| Clinical Skills | <ul style="list-style-type: none"> 3 Assessment of patient and physiological parameters 3 Appropriate intervention to deal with changing parameters 3 Communication skills for dealing with team members, patients and parents 3 Ability to prioritise interventions |
| Technical Skills and Procedures | No content |

| | |
|--|---|
| Topic | NHS Structure |
| Category | Management |
| Sub-category: | None |
| Objective | <ul style="list-style-type: none"> <i>To understand the current structure and function of the NHS</i> <i>To develop an understanding of leadership qualities required of a consultant</i> <i>To develop the ability to support colleagues and peers in the delivery of care</i> |
| Knowledge | <ul style="list-style-type: none"> 3 Current structure of NHS in the different parts of the UK (relative to where the trainee is working) 3 Role of Department of Health (England) and its equivalent bodies in Northern Ireland, Scotland and Wales 3 Role of Strategic Health Authority (England) and its equivalent bodies in Northern Ireland, Scotland and Wales 3 Role of regulatory agencies |
| Clinical Skills | <ul style="list-style-type: none"> 3 Ability to identify impact of structures / changes on delivery of care |
| Technical Skills and Procedures | No content |

| | |
|----------------------|---|
| Topic | Trust/Hospital/Health Authority Managerial structures |
| Category | Management |
| Sub-category: | None |
| Objective | <ul style="list-style-type: none"> <i>To understand the current structure and function of the NHS in the different parts of the UK</i> <i>To develop an understanding of leadership qualities required of a consultant</i> <i>To develop the ability to support colleagues and peers in the delivery of care</i> |
| Knowledge | <ul style="list-style-type: none"> 3 Local managerial structures 3 Alternative model(s) of management 3 Roles of Executive /Non -executive board members 3 Roles of different depts e.g. 3 Finance 3 Human resources 3 Risk management etc. |

| | |
|--|---|
| | |
| Clinical Skills | 3 Ability to interact appropriately with Trust structures to help in service delivery |
| Technical Skills and Procedures | No content |

| | |
|--|--|
| Topic | Leadership |
| Category | Management |
| Sub-category: | None |
| Objective | <i>To understand the current structure and function of the NHS To develop an understanding of leadership qualities required of a consultant To develop the ability to support colleagues and peers in the delivery of care</i> |
| Knowledge | 3 Differences between leadership and management 3 Different styles of leadership and their uses 3 Personal leadership styles 3 Roles of leaders in teams 3 NHS Leadership Qualities Framework |
| Clinical Skills | 3 Ability to identify own style of leadership 3 Ability to utilise appropriate style to management of managerial issues 3 Ability to lead a team of peers and colleagues in a project (research/audit/managerial) |
| Technical Skills and Procedures | No content |

| | |
|--|--|
| Topic | Supporting training |
| Category | Management |
| Sub-category: | None |
| Objective | <i>To develop the skills required to support training of peers and colleagues.</i> |
| Knowledge | 3 Principles of coaching, training and mentoring 3 Principles and uses of assessment and appraisal 3 Differing styles of feedback and their appropriate use 3 Knowledge of career pathways 3 Indicators of 'poor performance' 3 Teaching styles and their uses (see section 1.6) |
| Clinical Skills | 3 Ability to train junior trainees 3 Ability to provide appropriate guidance to trainees through use of techniques of feedback, appraisal and assessment 3 Ability to support poor performers appropriately 3 Ability to give career advice 3 Ability to support colleagues through use of appraisal and revalidation mechanisms |
| Technical Skills and Procedures | No content |

| | |
|----------------------|---|
| Topic | Interview process |
| Category | Management |
| Sub-category: | None |
| Objective | <i>To be able to participate appropriately in interview process.</i> |
| Knowledge | 3 Role of interview in selecting candidates for training 3 Use of different types of interview |

| | |
|--|--|
| | 3 Role of panel members 3 Legal requirements of panel members with respect to Employment and Equal Opportunities legislation |
| Clinical Skills | 3 Ability to ask appropriate questions depending on style of interview 3 Ability to provide feedback for both successful and unsuccessful candidates 3 Completion of paperwork for committee |
| Technical Skills and Procedures | No content |

| | |
|--|---|
| Topic | Urinary Tract Infection |
| Category | Paediatric Urology Special Interest |
| Sub-category: | None |
| Objective | None |
| Knowledge | 4 Patterns of symptoms and relation to likely pathology and age of child 4 Relevance of different symptom patterns 4 Differential diagnosis 4 Place and value of investigations |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan, including appropriate range of operative interventions 4 Ability to communicate with all relevant groups 4 Ability to independently interpret the results of investigations and act on same |
| Technical Skills and Procedures | None |

| | |
|--|---|
| Topic | Haematuria |
| Category | Paediatric Urology Special Interest |
| Sub-category: | None |
| Objective | None |
| Knowledge | 4 Patterns of symptoms and relation to likely pathology and age of child 4 Differential diagnosis 4 Place and value of investigations |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan, including appropriate range of operative interventions 4 Ability to communicate with all relevant groups 4 Ability to independently interpret the results of investigations and act on same |
| Technical Skills and Procedures | None |

| | |
|------------------------|--|
| Topic | Hypospadias |
| Category | Paediatric Urology Special Interest |
| Sub-category: | None |
| Objective | None |
| Knowledge | 4 Likely modes of presentation 4 Different anatomical variants 4 Place and value of investigations/operative intervention |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan, including appropriate range of operative interventions |

| | |
|--|---|
| | 4 Ability to communicate with all relevant groups 4 Ability to independently interpret the results of investigations and act on same |
| Technical Skills and Procedures | None |

| | |
|--|---|
| Topic | Upper tract obstruction(to include Pelvi-ureteric junction obstruction and Vesico-ureteric junction obstruction) |
| Category | Paediatric Urology Special Interest |
| Sub-category: | None |
| Objective | None |
| Knowledge | 4 Likely modes of presentation 4 Place and value of investigations/operative intervention 4 Differential diagnosis |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan, including appropriate range of operative interventions 4 Ability to communicate with all relevant groups 4 Ability to independently interpret the results of investigations and act on same |
| Technical Skills and Procedures | None |

| | |
|--|---|
| Topic | Posterior urethral valves |
| Category | Paediatric Urology Special Interest |
| Sub-category: | None |
| Objective | None |
| Knowledge | 4 Likely modes of presentation 4 Place and value of investigations/operative intervention 4 Differential Diagnosis |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan, including appropriate range of operative interventions 4 Ability to communicate with all relevant groups 4 Ability to independently interpret the results of investigations and act on same |
| Technical Skills and Procedures | None |

| | |
|------------------------|--|
| Topic | Urinary tract calculus disease |
| Category | Paediatric Urology Special Interest |
| Sub-category: | None |
| Objective | None |
| Knowledge | 4 Likely modes of presentation 4 Aetiological and biochemical factors 4 place and value of investigations/operative and non-operative intervention 4 Differential Diagnosis |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan, including appropriate range of operative interventions 4 Ability to communicate with all relevant groups, including adult urological services 4 Ability to independently interpret the results of investigations and act on same |

| | |
|--|------|
| Technical Skills and Procedures | None |
|--|------|

| | |
|--|---|
| Topic | Bladder dysfunction (including neuropathic bladder) |
| Category | Paediatric Urology Special Interest |
| Sub-category: | None |
| Objective | None |
| Knowledge | 4 Likely modes of presentation 4 Differential diagnosis 4 Place and value of investigations 4 Knowledge of appropriate referral pathways |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan, including appropriate range of operative interventions 4 Ability to communicate with all relevant groups 4 Ability to independently interpret the results of investigations and act on same |
| Technical Skills and Procedures | Removal |

| | |
|--|---|
| Topic | Renal Failure |
| Category | Paediatric Urology Special Interest |
| Sub-category: | None |
| Objective | None |
| Knowledge | 4 Likely modes of presentation 4 Differential diagnosis 4 Place and value of investigations 4 Knowledge of referral criteria to renal medical colleagues |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan, including appropriate range of operative interventions 4 Ability to communicate with all relevant groups 4 Ability to independently interpret the results of investigations and act on same |
| Technical Skills and Procedures | None |

| | |
|--|---|
| Topic | Bladder exstrophy (to include outlet anomalies e.g. epispadias) |
| Category | Paediatric Urology Special Interest |
| Sub-category: | None |
| Objective | None |
| Knowledge | 4 Likely modes of presentation 4 Differential diagnosis 4 Place and value of investigations |
| Clinical Skills | 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan, including appropriate range of operative interventions 4 Ability to communicate with all relevant groups 4 Ability to independently interpret the results of investigations and act on same |
| Technical Skills and Procedures | None |

| | |
|--|---|
| Topic | Duplication of urinary tract |
| Category | Paediatric Urology Special Interest |
| Sub-category: | None |
| Objective | None |
| Knowledge | <ul style="list-style-type: none"> 4 Likely modes of presentation 4 Embryological derivation and anatomical variants 4 Place and value of investigations/operative intervention 4 Differential diagnosis |
| Clinical Skills | <ul style="list-style-type: none"> 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan, including appropriate range of operative interventions 4 Ability to communicate with all relevant groups 4 Ability to independently interpret the results of investigations and act on same |
| Technical Skills and Procedures | None |

| | |
|--|---|
| Topic | Disorders of sex development |
| Category | Paediatric Urology Special Interest |
| Sub-category: | None |
| Objective | None |
| Knowledge | <ul style="list-style-type: none"> 4 Likely modes of presentation 4 Embryological derivation and anatomical variants 4 Place and value of investigations/operative intervention 4 Differential diagnosis |
| Clinical Skills | <ul style="list-style-type: none"> 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan, including appropriate range of operative interventions 4 Ability to communicate with all relevant groups 4 Ability to independently interpret the results of investigations and act on same |
| Technical Skills and Procedures | None |