

Paediatric surgery

Specialty Overview

Overview

- Paediatric Surgery is that branch of medicine that deals with the diseases, trauma and malformations of childhood years (foetal 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.
- 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
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 the CanMEDS framework of the Canadian Medical Association and Good Medical Practice documents of the General Medical Council of the UK.
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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.
 - 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 initial, intermediate, final and special interest reflect progress through the specialty.
 - The initial stage (ST1 and 2) is the early phase and comprises training in surgery in general
 - The intermediate stage (ST3 and 4) introduces specialist paediatric surgical skills
 - The final stage (ST5 and 6) develops these specialist skills further
 - The special interest (ST7 and 8) stage enables further development of paediatric specialisation and consolidation of specialist skills and forms the transition to CCT.
 - The syllabus 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.
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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 Skills and Behaviour

This is defined in detail in the syllabus on professional skills and behaviour 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 hypospadias
 - Assessment and management of children with haematuria
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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, Great Ormond Street and Manchester. Certain conditions e.g. bladder exstrophy are managed in designated supra-regional centres: 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

Laparoscopy is one of the fastest growing areas in paediatric surgery. Currently a number of enthusiasts are carrying out almost all paediatric surgical procedures with the aid of a laparoscope.

For the majority of paediatric surgeons this is some way off but it is anticipated that all current and future paediatric surgical trainees will be confident in the handling of a laparoscope and simple laparoscopic procedures.

Academic Surgery

At the time of writing (2007) clarity is currently being sought by the BAPS Education Committee about the nature, number and distribution of academic training posts in paediatric surgery in the UK.

The Configuration and Delivery of Paediatric Surgical Services

‘Surgical Care of the Young: The organisation of a first class service’ has just been published (July 07) and 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

Laparoscopy and the potential for robotics are important areas for future development.

Cost implications are currently limiting this in all but a few centres in the UK but this seems likely to change.

Antenatal surgery, formerly seen as the most likely focus for change in paediatric surgery remains the province of a small number of enthusiasts and observed with interest by the majority.

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

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

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Initial Stage

Overview of Initial Stage

The purpose of the initial stage of training (ST 1 and 2) is to enable the trainee to develop the key skills that will allow further progression in the specialty. The module Core Surgical Skills and Knowledge for all specialties is common to all the surgical specialties.

By the end of ST2, trainees including those following an academic pathway will need demonstrate competence to the defined level in the following areas:

- Generic Skills to allow teamworking, and management of paediatric patients
- Basic sciences (anatomy, physiology, pathology, embryology and genetics) as they relate to illness in children and the practice of Paediatric Surgery
- The diagnosis and management of common paediatric surgical conditions:
 - Child with abdominal pain
 - Vomiting child
 - Trauma
 - Groin conditions
 - - Hernia
 - - Hydrocoele
 - - Penile inflammatory conditions
 - - Undescended testis
 - - Acute scrotum
 - Abdominal wall pathologies
 - Urological conditions
 - Constipation
 - Head / Neck swellings
 - Intussusception
 - Abscess
 - Ingrowing toenail

In terms of general experience it is expected that trainees would have gained exposure to the following procedures and to be able to perform those marked (*) under direct supervision.

Elective Procedures

- Inguinal Hernia (not neo-natal)
- Orchidopexy
- Circumcision*
- Lymph node biopsy*
- Abdominal wall herniae
- Insertion of CV lines
- Management of Ingrowing toenails*
- EUA Rectum*
- Manual evacuation*
- Open rectal biopsy
- Excision of skin lesions*

Emergency Procedures

- Appendicectomy
- Incision and drainage of abscess*
- Pyloromyotomy
- Operation for testicular torsion*
- Insertion of pleural drain*
- Insertion of suprapubic catheter*
- Reduction of intussusception

ST1 Placement in Paediatric Surgery

Purpose

The purpose of a placement in Paediatric Surgery is to enable the trainee to develop some of the key skills that will underpin further training and experience in the specialty by:

- Understanding the differences between the adult and paediatric presentation of common surgical conditions.
- Understanding key differences between adult and child in the management of surgical conditions.
- Being able to diagnose common paediatric surgical conditions
- Undergoing exposure to a range of common surgical procedures
- Developing a number of generic skills specific to paediatric surgery

During the attachment it is expected that the trainee will cover the following (further detail is found in the syllabus).

Knowledge

- Variable requirements for communication according to age
- Basic Sciences relevant to child development and disease (including relevant genetics and embryology)
- Specific ethical and legal Issues affecting the practice of Paediatric Surgery (including issues of consent)
- The symptom patterns, differential diagnosis, investigation and management of common paediatric surgical conditions (see list below)
- The theoretical basis of life support approaches in paediatric surgery
- The principles of surgical intervention

Clinical Skills

- History taking relevant to specific age or developmental stage
- Appropriate examination techniques for children of different ages
- Basic life support skills in paediatric practice
- Ability to communicate appropriately with:
 - Patients
 - Relatives/carers
 - Colleagues, including ward & OP teams
- In respect of common clinical presentations, including:
 - The child with abdominal pain
 - Abdominal wall pathologies
 - The Vomiting child
 - Common Urological conditions
 - Trauma
 - Constipation
 - Head / Neck swellings
 - Intussusception
 - Ingrowing toenail
 - Abscess
 - Groin conditions:
 - Hernia
 - Hydrocoele
 - Penile inflammatory conditions
 - Undescended testis
 - Acute scrotum
- The ability to:

- Construct a differential diagnosis
- Interpret investigations
- Construct a management plan for common conditions

Operative Skills

The following procedures are those which the trainee will be able to undertake under direct senior supervision by completion of a 6-month module in Paediatric Surgery. There would be a reduced expectation for 4-month attachments.

Elective Procedures

- Circumcision
- Abdominal wall herniae
- Management of ingrowing toenails
- EUA rectum
- Manual evacuation
- Excision of skin lesions

Emergency Procedures

- Incision and drainage of abscess
- Operation for testicular torsion

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

Topics

Topic	Basic sciences
Category	Core Surgical Skills and Knowledge for All Specialties
Sub-category:	None
	<i>Underpinning basic science knowledge appropriate for the practice of surgery.</i>
	<i>Applied anatomy: Knowledge of anatomy appropriate for surgery</i>
	<i>Physiology: Knowledge of physiology relevant to surgical practice</i>
Objective	<i>Pathology: Knowledge of pathological principles underlying system specific pathology</i>
	<i>Microbiology: Knowledge of microbiology relevant to surgical practice</i>
	<i>Radiology: Knowledge of diagnostic and interventional radiology</i>
	Applied anatomy:
	2 Development, organs and structures, surface and imaging anatomy of thorax, abdomen, pelvis, perineum, limbs, neck as appropriate for surgical operations
Knowledge	Physiology:
	2 Homeostasis
	2 Thermoregulation

- 2 Metabolic pathways
- 2 Blood loss
- 2 Sepsis
- 2 Fluid balance and fluid replacement therapy
- 2 Metabolic abnormalities

Pathology:

- 2 Inflammation
- 2 Wound healing
- 2 Cellular injury
- 2 Vascular disorders
- 2 Disorders of growth, differentiation and morphogenesis
- 2 Tumours
- 2 Surgical immunology
- 2 Surgical haematology

Microbiology:

- 2 Surgically important microorganisms
- 2 Sources of infection
- 2 Asepsis and antisepsis
- 2 Sterilisation
- 2 Antibiotics
- 2 High risk patient management

Radiology:

- 2 Principles of diagnostic and interventional radiology

Clinical Skills No content

Technical Skills and Procedures No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic Basic surgical skills

Category Core Surgical Skills and Knowledge for All Specialties

Sub-category: None

Acquisition of basic surgical skills in instrument and tissue handling.

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

Objective

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

Knot tying: Ability to tie secure knots.

Haemostasis: Ability to achieve haemostasis of superficial vessels.

Tissue retraction: Use of suitable methods of retraction.

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

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

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

Incision of skin and subcutaneous tissue:

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

Closure of skin and subcutaneous tissue:

- 2 Options for closure
- 2 Suture and needle choice
- 3 Safe practice

Knot tying:

- 2 Choice of material

Knowledge

Haemostasis:

- 3 Techniques

Tissue retraction:

- 2 Choice of instruments

Use of drains:

- 2 Indications
- 2 Types
- 2 Management/removal

Tissue handling:

- 3 Choice of instruments

Incision of skin and subcutaneous tissue:

- 3 Ability to use scalpel, diathermy and scissors

Closure of skin and subcutaneous tissue:

Clinical Skills

- 3 Accurate and tension free apposition of wound edges

Knot tying:

- 2 Single handed
- 3 Double handed

3 Instrument
3 Superficial
2 Deep

Haemostasis:

3 Control of bleeding vessel (superficial)
3 Diathermy
3 Suture ligation
2 Tie ligation
2 Clip application

Tissue retraction:

3 Tissue forceps
2 Placement of wound retractors

Use of drains:

2 Insertion
2 Fixation
2 Removal

Tissue handling:

3 Appropriate application of instruments and respect for tissues

Skill as assistant:

2 Anticipation of needs of surgeon when assisting

**Technical Skills
and Procedures**

No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic	The Assessment and Management of the Surgical Patient
Category	Core Surgical Skills and Knowledge for All Specialties
Sub-category:	None
Objective	<i>Ability to assess the patient and manage the patient, and propose surgical or non-surgical management.</i>
Knowledge	No content
Clinical Skills	3 Surgical history and examination (elective and emergency)
	2 Construct a differential diagnosis
	2 Plan investigations
	2 Clinical decision making
	3 Case work up and evaluation; risk management
	2 Active participation in MDTs
	2 Taking consent for intermediate level intervention; emergency and elective
	3 Written clinical communication skills
3 Interactive clinical communication skills: patients	
3 Interactive clinical communication skills: colleagues	

Technical Skills and Procedures No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic	Peri-operative care
Category	Core Surgical Skills and Knowledge for All Specialties
Sub-category:	None
	<i>Ability to manage patient care in the peri-operative period.</i>
	<i>Pre-operative assessment and management: Ability to assess the patient adequately prior to operation and manage any pre-operative problems appropriately.</i>
Objective	<i>Intraoperative care: Ability to conduct safe surgery in the operating theatre environment.</i>
	<i>Post-operative care: Ability to care for the patient in the post-operative period.</i>
	<i>Blood Products: Appropriate use of blood products.</i>
	<i>Antibiotics: Appropriate use of antibiotics.</i>
	Pre-operative assessment and management:
	2 Cardiorespiratory physiology
	2 Diabetes mellitus
	2 Renal failure
	2 Pathophysiology of blood loss
	2 Pathophysiology of sepsis
	2 Risk factors for surgery and scoring systems
	3 Principles of day surgery
	Intraoperative care:
	3 Safety in theatre
	4 Sharps safety
Knowledge	3 Diathermy, laser use
	3 Infection risks
	2 Radiation use and risks
	2 Tourniquets
	2 Principles of local, regional and general anaesthesia
	Post-operative care:
	2 Cardiorespiratory physiology
	2 Diabetes mellitus
	2 Renal failure
	2 Pathophysiology of blood loss
	2 Pathophysiology of sepsis
	2 Complications specific to particular operation
	3 Critical care

Blood Products:

- 3 Components of blood
- 2 Alternatives to use of blood products

Antibiotics:

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

Pre-operative assessment and management:

- 3 History and examination
- 3 Interpretation of pre-operative investigations
- 3 Management of comorbidity
- 3 Resuscitation

Intraoperative care:

- 2 Safe conduct of intraoperative care

Post-operative care:

Clinical Skills

- 3 Assessment of patient's condition
- 3 Post-operative analgesia
- 3 Fluid and electrolyte management
- 3 Monitoring of post-operative patient
- 3 Detection of impending organ failure
- 3 Initial management of organ failure
- 2 Use of MDT meetings

Blood Products:

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

Antibiotics:

- 3 Appropriate prescription of antibiotics

**Technical Skills
and Procedures**

No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic	Assessment of multiply injured patients including children
Category	Core Surgical Skills and Knowledge for All Specialties
Sub-category:	None
Objective	<i>Safely assess the multiply injured patient.</i>
Knowledge	2 Anatomy 3 Pathogenesis of shock

	2 Differences In Children
	4 History and examination
	3 Investigation
Clinical Skills	3 Resuscitation and early management according to ATLS and APLS guidelines
	3 Referral to appropriate surgical subspecialties
Technical Skills and Procedures	2 Central venous line insertion
	3 Chest drain insertion
	1 Diagnostic peritoneal lavage
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic	Bleeding diathesis
Category	Core Surgical Skills and Knowledge for All Specialties
Sub-category:	None
	<i>Understand, Recognise and Manage bleeding diathesis in the surgical patient.</i>
Objective	<i>Diagnosis: Diagnose possible bleeding diathesis in the surgical patient.</i>
	<i>Treatment: Manage bleeding diathesis in the surgical patient.</i>
	Diagnosis:
	3 Mechanism of haemostasis
Knowledge	2 Pathology of impaired haemostasis e.g. haemophilia, liver disease, massive haemorrhage
	Treatment:
	2 Understands use of blood products
	Diagnosis:
	2 Recognition of conditions likely to lead to the diathesis
Clinical Skills	2 Recognition of abnormal bleeding during surgery
	Treatment:
	3 Avoidance by correct surgical techniques
Technical Skills and Procedures	3 Corrective measures, e.g. warming, packing
	No content
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic	Venous thrombosis + embolism
Category	Core Surgical Skills and Knowledge for All Specialties
Sub-category:	None
Objective	<i>Understanding of practice in the prevention and management of Venous thrombosis and Embolism.</i>

Coagulation: Understanding of the physiology and pathophysiology of coagulation.

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

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

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

Coagulation:

- 3 Clotting mechanism (Virchow Triad)
- 2 Effect of surgery and trauma on coagulation
- 2 Tests for thrombophilia and other disorders of coagulation

Diagnosis:

- 2 Methods of investigation for suspected thromboembolic disease

Knowledge

Treatment:

- 3 Anticoagulation, heparin and warfarin
- 2 Role of V/Q scanning, CT angiography and thrombolysis
- 2 Place of pulmonary embolectomy

Prophylaxis:

- 3 Knowledge of methods of prevention, mechanical and pharmacological

Coagulation:

- 3 Recognition of patients at risk

Diagnosis:

- 3 Awareness of symptoms and signs associated with pulmonary embolism and DVT
- 2 Role of duplex scanning, venography and d-dimer measurement

Clinical Skills

Treatment:

- 3 Initiate and monitor treatment

Prophylaxis:

- 3 Awareness at all times of the importance of prophylaxis

Technical Skills and Procedures

No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic

Nutrition

Category	Core Surgical Skills and Knowledge for All Specialties
Sub-category:	None
Objective	<i>Recognise the need for artificial nutritional support and arrange enteral nutrition.</i>
Knowledge	3 Effects of malnutrition, both excess and depletion 2 Methods of screening and assessment
Clinical Skills	3 Arrange access to suitable artificial nutritional support, preferably via a nutrition team: Dietary supplements 2 Arrange access to suitable artificial nutritional support, preferably via a nutrition team: Enteral nutrition 2 Arrange access to suitable artificial nutritional support, preferably via a nutrition team: Parenteral nutrition
Technical Skills and Procedures	No content
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic	Academic activity
Category	Core Surgical Skills and Knowledge for All Specialties
Sub-category:	None
	<i>An introduction to research methodology and to teaching others.</i>
Objective	<i>Research: Ability to perform a simple research study and present the results.</i> <i>Teaching: Ability to teach small groups such as medical students.</i>
Knowledge	Research: 2 Research methodology Teaching: 2 Teaching methods Research:
Clinical Skills	2 Ability to analyse published evidence Teaching: 3 Ability to teach small groups
Technical Skills and Procedures	No content
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic	Management of the dying patient
Category	Core Surgical Skills and Knowledge for All Specialties
Sub-category:	None
Objective	<i>Ability to manage the dying patient appropriately.</i>

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

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

Palliative Care:

- 2 Care of the terminally ill
- 3 Analgesia
- 2 Antiemetics
- 2 Laxatives

Knowledge

Principles of organ donation:

- 2 Circumstances in which consideration of organ donation is appropriate
- 3 Principles of brain death

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

Palliative Care:

Clinical Skills

- 2 Symptom control in the terminally ill patient

Technical Skills and Procedures

No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic **Endocrine and Metabolic Disorders**

Category Core Surgical Skills and Knowledge for All Specialties

Sub-category: None

Objective

To identify, investigate and managesurgical patients with common metabolic disorders

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

Thyrotoxicosis

2 Pathophysiology of thyroid hormone excess and associated risks from surgery

Hypothyroidism

2 Pathophysiology of thyroid hormone deficiency and associated risks from surgery

Knowledge

Hypercalcaemia

2 Causes and effects of hypercalcaemia

Cortico-steroid therapy

3 Complications

3 Steroid insufficiency

Diabetes Mellitus

2 Complications

Hyponatraemia

2 Pathophysiology of fluid and electrolyte balance

2 Causes of hyponatraemia

Thyrotoxicosis

2 History and examination

2 Investigation of thyrotoxicosis

Hypothyroidism

2 History and examination

2 Investigation

Hypercalcaemia

2 Investigation of hypercalcaemia

2 Treatment of hypercalcaemia

Clinical Skills

Cortico-steroid therapy

3 Peri-operative management of patients on steroid therapy

Diabetes Mellitus

3 Peri-operative management of diabetic patients

Hyponatraemia

3 Treatment

**Technical Skills
and Procedures**

No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic

Child Protection

Category

Core Surgical Skills and Knowledge for All Specialties

Sub-category:

None

Objective

No content

Knowledge

4 Working knowledge of trust and Local Safeguarding Children Boards (LSCBs) Child Protection Procedures

4 Basic understanding of child protection law

4 Understanding of Children's rights

4 Working knowledge of types and categories of child maltreatment, presentations, signs and other features (primarily physical, emotional, sexual, neglect, professional)

4 Understanding of one personal role, responsibilities and appropriate referral patterns in child protection

4 Understanding of the challenges of working in partnership with children and families

Ability to:

4 Recognise the possibility of abuse or maltreatment

Clinical Skills

4 Recognise limitations of own knowledge and experience and seek appropriate expert advice

4 Urgently consult immediate senior in surgery to enable referral to paediatricians

- 4 Keep appropriate written documentation relating to child protection matters
- 4 Communicate effectively with those involved with child protection, including children and their families

Technical Skills and Procedures

No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic	Anatomy
Category	Generic Paediatric Surgery Skills
Sub-category:	Basic Sciences
Objective	<p><i>To understand the basic anatomy that surgeons will encounter during the management of children, and the embryological development of anatomical systems.</i></p> <p>CARDIOVASCULAR:</p> <ul style="list-style-type: none"> 2 Embryogenesis of heart and major vessels, and formation of the lymphatic system 2 Common anatomical variations of heart chambers, valves and major vessels 2 Surgical anatomy of heart and major arteries + veins in thorax, neck, abdomen and groins <p>RESPIRATORY:</p> <ul style="list-style-type: none"> 2 Embryogenesis of trachea and bronchial tree 2 Lung development 2 Common anatomical variations of respiratory tree and lungs to include vascular anomalies 2 Surgical anatomy of pleura, lung and trachea and bronchial tree <p>GASTROINTESTINAL TRACT AND ABDOMINAL WALL:</p>
Knowledge	<ul style="list-style-type: none"> 2 Embryogenesis of the GIT to include formation of the solid organs, anorectum, and abdominal wall 2 Common anatomical variations in the formation of the GIT and abdominal wall 2 Surgical anatomy of the GIT and its relations to other systems <p>RENAL:</p> <ul style="list-style-type: none"> 2 Embryogenesis of the upper and lower renal tract to include male and female genital development 2 Common anatomical variations of the renal tract and genitalia 2 Surgical anatomy of the renal tract, and associated genital structures to include relationships to other systems <p>NEUROLOGICAL:</p> <ul style="list-style-type: none"> 2 Embryogenesis of the brain and spinal cord, and of the supporting structures (skull, vertebral column) 2 Common anatomical variations of the brain and spinal cord 2 Surgical anatomy of the brain, spinal cord and major somatic nerves (to

include relationships to other systems)

MUSCULO SKELETAL:

- 2 Embryogenesis of the skeleton and muscle development
- 2 Common anatomical variations of skeleton
- 2 Surgical anatomy of skeleton where relevant to other systems

CARDIOVASCULAR:

- 2 Relate knowledge to assessment of clinical situation or progress of disease condition

RESPIRATORY:

- 2 Relate knowledge to assessment of clinical situation or progress of disease condition

GASTROINTESTINAL TRACT AND ABDOMINAL WALL:

- 2 Relate knowledge to assessment of clinical situation or progress of disease condition

Clinical Skills

RENAL:

- 2 Relate knowledge to assessment of clinical situation or progress of disease condition

NEUROLOGICAL:

- 2 Relate knowledge to assessment of clinical situation or progress of disease condition

MUSCULO SKELETAL:

- 2 Relate knowledge to assessment of clinical situation or progress of disease condition

Technical Skills and Procedures

No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic	Physiology
Category	Generic Paediatric Surgery Skills
Sub-category:	Basic Sciences
Objective	<i>To understand the normal physiological processes at different ages. To understand the effects of disease and trauma on these processes.</i>
Knowledge	FLUID BALANCE: 2 Basic requirements of fluid and electrolytes at different ages 2 Mechanisms of homeostasis 2 Influence of disease states -renal -cardiac -gastrointestinal -trauma 2 Mechanisms of homeostasis 2 Abnormalities encountered in disease

ACID-BASE BALANCE:

- 2 Basic requirements of fluid and electrolytes at different ages
- 2 Mechanisms of homeostasis
- 2 Influence of disease states
 - renal
 - cardiac
 - gastrointestinal
 - trauma
- 2 Mechanisms of homeostasis
- 2 Abnormalities encountered in disease

OXYGEN TRANSPORT:

- 2 Airway function in health and disease
- 2 Alveolar function and gas exchange
- 2 Effect of disease
 - R.D.S.
 - Infection
 - Barotrauma
 - Prematurity
- 2 Effect of foetal circulation

GASTROINTESTINAL TRACT:

- 2 Motility of different regions of gut
- 2 Secretion and absorption
- 2 Function of sphincter regions
 - G.O. junction
 - Pylorus
 - Ileocaecal region
 - Anorectum
- 2 Defaecation and continence

HEPATOBIILIARY FUNCTION AND PANCREATIC FUNCTION:

- 2 Metabolic and synthetic hepatic function
- 2 Bile production and transport
- 2 Exocrine pancreatic function
- 2 Effect of disease on normal function

RENAL TRACT:

- 2 Renal mechanisms for maintenance of homeostasis
- 2 Effect of disease
- 2 Bladder function and continence
- 2 Transitional renal physiology in neonate and young child

GROWTH AND METABOLISM:

- 2 Nutritional requirements at different ages
- 2 Endocrine factors influencing growth
 - thyroid
 - pituitary
 - pancreatic
 - adrenal
 - gonadal
- 2 Effect of disease states including
 - chronic disease

-trauma
-response to operation
2 Influence and use of parenteral and enteral feeding

AUTONOMIC NERVOUS SYSTEM:

2 Differing effects of sympathetic and parasympathetic innervation
2 Effects on differing physiological processes

FLUID BALANCE:

2 Relate knowledge to assessment of clinical situation or progress of disease condition

ACID-BASE BALANCE:

2 Relate knowledge to assessment of clinical situation or progress of disease condition

OXYGEN TRANSPORT:

2 Relate knowledge to assessment of clinical situation or progress of disease condition

GASTROINTESTINAL TRACT:

2 Relate knowledge to assessment of clinical situation or progress of disease condition

Clinical Skills

HEPATOBIILIARY FUNCTION AND PANCREATIC FUNCTION:

2 Relate knowledge to assessment of clinical situation or progress of disease condition

RENAL TRACT:

2 Relate knowledge to assessment of clinical situation or progress of disease condition

GROWTH AND METABOLISM:

2 Relate knowledge to assessment of clinical situation or progress of disease condition

AUTONOMIC NERVOUS SYSTEM:

2 Relate knowledge to assessment of clinical situation or progress of disease condition

Technical Skills and Procedures

No content

Professional Skills

Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic
Category
Sub-category:
Objective

Surgical Pathology and Genetics

Generic Paediatric Surgery Skills

Basic Sciences

No content

Knowledge

INFLAMMATORY PROCESSES:

2 Processes of acute inflammatory response as it affects different organ systems
-Respiratory

- GIT
- Renal
- 2 Processes of chronic inflammatory response
- 2 Processes of wound healing

ONCOLOGY:

- 2 Basic mechanisms of tumour initiation and growth
- 2 Role of environmental factors
- 2 Role of genetic factors
- 2 Basic knowledge of staging of different tumours and relation to treatment strategies and outcome
- 2 Mechanism of action of chemo and radiotherapy

PRINCIPLES OF HUMAN GENETICS:

- 2 Relevance to clinical conditions

INFECTIVE PROCESSES:

- 2 Commonly encountered infective agents
- 2 Diagnostic procedures
- 2 Role and mechanism of antibiotics
- 2 Value of preventative measures

HAMARTOMATOUS LESIONS:

- 2 Basic pathology of lesions related to growth
- 2 Prognosis of differing lesions
- 2 Differential diagnosis and treatment modalities if required

INFLAMMATORY PROCESSES:

- 2 Relate knowledge to assessment of clinical situation or progress of disease condition

ONCOLOGY:

- 2 Relate knowledge to assessment of clinical situation or progress of disease condition

PRINCIPLES OF HUMAN GENETICS:

- Clinical Skills** 2 Relate knowledge to assessment of clinical situation or progress of disease condition

INFECTIVE PROCESSES:

- 2 Relate knowledge to assessment of clinical situation or progress of disease condition

HAMARTOMATOUS LESIONS:

- 2 Relate knowledge to assessment of clinical situation or progress of disease condition

Technical Skills and Procedures

No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic Good Clinical Care
Category Generic Paediatric Surgery Skills

Sub-category:	Understanding the specific features of the management of childrens health and illness
Objective	<i>To be able to take a history and make an appropriate physical examination. Keep accurate and relevant medical records.</i>
Knowledge	<p>Examination:</p> <p>2 Patterns of clinical signs</p> <p>Note keeping/Letters:</p> <p>Structure of:</p> <p>3 Medical notes</p> <p>3 Discharge letters</p> <p>2 Coding returns</p> <p>2 Outpatient letters/ Prescriptions</p> <p>2 Role of medical records in central data returns</p> <p>History Taking:</p> <p>2 Symptom patterns</p> <p>Examination:</p> <p>3 Appropriate explanation of procedure to parents and patients</p> <p>3 Ability to examine without causing undue discomfort</p> <p>2 Elicit signs and use equipment appropriately</p> <p>Note keeping/Letters:</p> <p>Legible accurate recording of:</p> <p>3 History examination Differential diagnosis</p> <p>3 Investigation and management plan</p> <p>3 Results and action taken</p> <p>2 Other relevant information</p> <p>4 Date and sign each entry</p> <p>3 Relevant IT skills (e-mail and internet skills)</p> <p>History Taking:</p> <p>3 Elicit a relevant history</p> <p>3 Identify and synthesise problems</p> <p>2 Take a history in difficult circumstances</p> <ul style="list-style-type: none"> - English is not the patient or parents first language - Patient with disability - Patient or parents have psychological problems - Confrontational parents <p>Examination:</p>
Clinical Skills	
Technical Skills and Procedures	<p>3 Note keeping/Letters:</p> <p>3 History Taking:</p>
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic	Good Clinical Care: Time management, Risk management and decision-making
Category	Generic Paediatric Surgery Skills
Sub-category:	Appropriate professional behaviours in dealing with children and families
Objective	<i>To manage time and problems effectively.</i> TIME MANAGEMENT: 2 Systematic approach to prioritisation of patient tasks
Knowledge	RISK MANAGEMENT: 2 Complications and side effects of treatments (surgical and non-surgical) and the effect of non-intervention DECISION MAKING: 2 Clinical priorities in investigation and management TIME MANAGEMENT: 3 Start with most important task 2 Show improved efficiency as skill develops 2 Recognise need to re-prioritise or call for help
Clinical Skills	RISK MANAGEMENT: 2 Discuss relevant risks with parents/patients (where applicable) DECISION MAKING: 2 Analyse and manage clinical problems 2 Involve appropriate other professionals and parents/patients
Technical Skills and Procedures	No content
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic	Pre-operative care
Category	Generic Paediatric Surgery Skills
Sub-category:	Operative Skills
Objective	<i>To ensure the trainee has reached a level of competence in a range of basic operative procedures.</i> 3 Indications for surgery 3 Required preparation for surgery to include necessary pre-operative
Knowledge	investigations 3 Outcomes and complications of surgery 3 Knowledge of the admission process 3 Synthesis of history and examination into operative management plan 3 Ability to explain procedure and outcomes to patient and parents at an
Clinical Skills	appropriate level 3 To be able to take informed consent 2 To construct an appropriate theatre list 3 To follow the admission procedure
Technical Skills and Procedures	No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic	Intra-operative care
Category	Generic Paediatric Surgery Skills
Sub-category:	Operative Skills
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 2 Steps involved in operative procedure 2 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
Technical Skills and Procedures	No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic	Post-operative care
Category	Generic Paediatric Surgery Skills
Sub-category:	Operative Skills
Objective	<i>To ensure the trainee has reached a level of competence in a range of basic operative procedures.</i>
Knowledge	3 Outcomes of procedure 2 Likely post-operative progress from disease process and intervention 2 Physiological and pathological changes in condition as a result of intervention
Clinical Skills	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 2 Ability to prioritise interventions
Technical Skills and Procedures	No content

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic	Intussusception
Category	Surgical conditions of childhood
Sub-category:	Assessment and management of children with acute abdominal pathology
Objective	<i>To be able to assess a child presenting acutely with intussusception as the suspected diagnosis</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 if required</i> <i>To be able to communicate the above information at the required level to</i>

patients/ parents/ other team members/ referral source

Knowledge	3 Patterns of symptoms and relation to likely pathology and age of child 2 Differential diagnosis 2 Role of radiology both for diagnosis and interventional management 2 Technique for non-operative reduction
Clinical Skills	3 Ability to assess child and recognise severity of illness, to include indications for operative intervention 2 Ability to take appropriate resuscitative measures and form a viable treatment plan 3 Ability to communicate with all relevant groups
Technical Skills and Procedures	ST1: 1 Air enema reduction 1 Operative reduction of intussusception ST2: 1 Air enema reduction 1 Operative reduction of intussusception
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic	Child with abdominal pain
Category	Surgical conditions of childhood
Sub-category:	Assessment and management of children with acute abdominal pathology <i>To be able to assess a child presenting with abdominal pain either acutely or through the OP clinic.</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i>
Objective	<i>To be able to treat the child appropriately up to and including operative intervention if required</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members</i>
Knowledge	3 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 (see Section 4)
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	ST1: 1 Appendicectomy ST2: 2 Appendicectomy
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic Vomiting child

Category	Surgical conditions of childhood
Sub-category:	Assessment and management of children with acute abdominal pathology <i>To be able to assess a child presenting with vomiting either acutely or through the OP clinic.</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i>
Objective	<i>To be able to treat the child appropriately up to and including operative intervention if required</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members</i>
Knowledge	2 Patterns of symptoms and relation to likely pathology 3 Significance of bile stained vomiting 2 Differential diagnosis 3 Place and value of investigations 2 Methods of medical management 2 Place of operative intervention, and associated outcomes (see Section 4)
Clinical Skills	3 Ability to assess ill child including an assessment of severity of dehydration. 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	ST1: 1 OGD 1 Pyloromyotomy ST2: 1 OGD 2 Pyloromyotomy
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic Trauma management

Category	Surgical conditions of childhood
Sub-category:	Assessment and management of trauma (including APLS certification) <i>To be able to assess a child presenting with trauma either through the A+ E Dept or directly to the hospital.</i> <i>To be able to formulate a differential diagnosis and an investigation and management plan</i>
Objective	<i>To be able to treat the child appropriately up to and including operative intervention if required</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members</i>
Knowledge	3 Algorithms for assessment of trauma victims -Primary survey -Secondary survey 2 Likely effects of different types of trauma and relation to age of child 2 Investigation protocols and local variations thereof 2 Awareness of NAI and local procedures for dealing with this category of trauma

Clinical Skills	3 Ability to appropriately assess trauma cases and carry out relevant resuscitative measures 2 Ability to prioritise interventions 2 Ability to act as part of team or lead team where appropriate
Technical Skills and Procedures	ST1: 1 Chest drain insertion ST2: 1 Chest drain insertion
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic	Good Clinical Care: Life Support Skills
Category	Surgical conditions of childhood
Sub-category:	Assessment and management of trauma (including APLS certification)
Objective	<i>To demonstrate basic + advanced life support skills</i>
Knowledge	3 Theoretical basis of life support
Clinical Skills	3 Basic, Advanced Life Support skills
Technical Skills and Procedures	No content
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic	Child with groin conditions
Category	Surgical conditions of childhood
Sub-category:	Management of benign surgical conditions
Objective	<i>To be able to assess a child presenting to the OP clinic or acutely with ‘groin pathology’ To be able to formulate a differential diagnosis and an investigation and management plan 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 patients/ parents/ other team members/ referral source</i>
Knowledge	INGUINAL HERNIA: 3 Developmental anatomy 2 Natural history 3 Indications and outcomes of surgery HYDROCELE: 3 Developmental anatomy 2 Natural history 3 Place of conservative management 3 Indications and outcomes of surgery UNDESCENDED TESTIS:

- 3 Developmental anatomy
- 2 Natural history of undescended testis and retractile testis
- 2 Place of conservative management
- 2 Indications and outcomes of surgery

PENILE INFLAMMATORY CONDITIONS:

- 3 Developmental anatomy
- 2 Natural history
- 3 Place of conservative management
- 3 Indications and outcomes of surgery

ACUTE SCROTUM:

- 3 Natural history
- 2 Place of conservative management
- 3 Indications and outcomes of surgery

INGUINAL HERNIA:

- 3 Ability to assess child and reach appropriate diagnosis
- 3 Ability to form a treatment plan
- 3 Ability to communicate with all relevant groups

HYDROCOELE:

- 3 Ability to assess child and reach appropriate diagnosis
- 3 Ability to form a treatment plan
- 3 Ability to communicate with all relevant groups

UNDESCENDED TESTIS:

- Clinical Skills**
- 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
 - 3 Ability to communicate with all relevant groups

PENILE INFLAMMATORY 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

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

Hernia (ST1):

- 1 Inguinal herniotomy (non-neonatal)

Technical Skills and Procedures

Hydrocoele (ST1):

- 1 Surgery for hydrocoele

Penile inflammatory conditions (ST1):

- 1 Prepuceplasty
- 1 Circumcision

Undescended testis (ST1):
1 Surgery for undescended testis

Acute scrotum (ST1):
1 Surgery for acute scrotum

Hernia (ST2):
2 Inguinal herniotomy (non-neonatal)

Hydrocele (ST2):
2 Surgery for hydrocoele

Penile inflammatory conditions (ST2):
1 Prepuceplasty
2 Circumcision

Undescended testis (ST2):
1 Surgery for undescended testis

Acute scrotum (ST2):
2 Surgery for acute scrotum

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic	Abdominal wall pathologies
Category	Surgical conditions of childhood
Sub-category:	Management of benign surgical conditions
Objective	<i>To be able to assess a child presenting to the OP clinic or acutely with abnormalities of the abdominal wall</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 if required</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i>

UMBILICAL HERNIA:

3 Developmental anatomy
3 Natural history
2 Place of conservative management
2 Indications and outcomes of surgery

Knowledge **SUPRA-UMBILICAL HERNIA:**
3 developmental anatomy
2 Natural history to include contrast with umbilical hernia
2 Indications and outcomes of surgery

EPIGASTRIC HERNIA:
3 Developmental anatomy
2 Natural history

	2 Indications and outcomes of surgery
	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
	SUPRA-UMBILICAL HERNIA:
Clinical Skills	3 Ability to assess child and reach appropriate diagnosis
	2 Ability to form a treatment plan
	3 Ability to communicate with all relevant groups
	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
	Umbilical hernia (ST1):
	1 Repair of umbilical hernia
	Epigastric hernia (ST1):
Technical Skills and Procedures	1 Repair of epigastric hernia
	Umbilical hernia (ST2):
	2 Repair of umbilical hernia
	Epigastric hernia (ST2):
	2 Repair of epigastric hernia
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic	Urological Conditions
Category	Surgical conditions of childhood
Sub-category:	Management of benign surgical conditions
	<i>To be able to assess a child presenting to the OP clinic or acutely with abnormalities in the urinary tract</i>
	<i>To be able to formulate a differential diagnosis and an investigation and management plan</i>
Objective	<i>To be able to treat the child appropriately up to and including operative intervention if required</i>
	<i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i>
	URINARY TRACT INFECTION:
	3 Patterns of symptoms and relation to likely pathology and age of child
	2 Relevance of different symptom patterns
	2 Differential diagnosis
Knowledge	2 Place and value of investigations
	HAEMATURIA:
	3 Patterns of symptoms and relation to likely pathology and age of child
	2 Differential diagnosis
	2 Place and value of investigations

URINARY TRACT INFECTION:

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

HAEMATURIA:

Technical Skills and Procedures
3 Ability to assess child
2 Ability to form a viable investigation and treatment plan
3 Ability to communicate with all relevant groups

ST1:

1 Insertion of supra-pubic catheter
1 Cystourethroscopy

ST2:

2 Insertion of supra-pubic catheter
2 Cystourethroscopy

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic	Constipation
Category	Surgical conditions of childhood
Sub-category:	Management of benign surgical conditions
Objective	<i>To be able to assess a child presenting to the OP clinic or acutely with constipation as the primary presenting symptom</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 if required</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i>
Knowledge	3 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 2 Place and value of investigations
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. 2 To include community aspects of further management
Technical Skills and Procedures	ST1: 1 Rectal biopsy 1 Manual Evacuation 1 EUA rectum 1 Anal stretch ST2: 2 Rectal biopsy 2 Manual Evacuation 2 EUA rectum 2 Anal stretch

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic	Head and neck swellings
Category	Surgical conditions of childhood
Sub-category:	Management of benign surgical conditions
Objective	<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> <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 if required</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i>
Knowledge	2 Patterns of symptoms and relation to likely pathology, relevant anatomy and age of child 2 Relevance of embryonic development of head and neck structures 2 Differential diagnosis 2 Place and value of investigations
Clinical Skills	3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 2 Ability to communicate with all relevant groups
Technical Skills and Procedures	ST1: 1 Excision skin lesion 1 Excision/biopsy of lymph nodes ST2: 1 Excision skin lesion 1 Excision/biopsy of lymph nodes
Professional Skills	Please see the Professional Skills and Behaviour » Initial section for these skills

Topic	Abscess
Category	Surgical conditions of childhood
Sub-category:	Other Conditions
Objective	<i>To be able to assess a child presenting acutely with acute surgical pathology (see example below) as the suspected diagnosis</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 if required</i> <i>To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source</i>
Knowledge	3 Patterns of symptoms and relation to likely pathology and age of child 2 Differential diagnosis 2 Place and value of investigations
Clinical Skills	3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 2 Ability to communicate with all relevant groups

Technical Skills and Procedures 2 Incision and drainage of abscess

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Topic **Ingrowing toenail**

Category Surgical conditions of childhood

Sub-category: Other Conditions

Objective
To be able to assess a child presenting acutely with non acute surgical pathology (see example below) as the suspected diagnosis
To be able to formulate a differential diagnosis and an investigation and management plan
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 patients/ parents/ other team members/ referral source

Knowledge
3 Patterns of symptoms and relation to likely pathology and age of child
3 Relevance of different symptom patterns
2 Differential diagnosis
2 Place and value of investigations

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 2 Operative management of ingrowing toenails

Professional Skills Please see the [Professional Skills and Behaviour » Initial](#) section for these skills

Intermediate Stage

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.

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 glandular 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

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	INGUINAL HERNIA:

- 3 Developmental anatomy
- 2 Natural history
- 3 Indications and outcomes of surgery

HYDROCELE:

- 3 Developmental anatomy
- 2 Natural history
- 3 Place of conservative management
- 3 Indications and outcomes of surgery

UNDESCENDED TESTIS:

- 3 Developmental anatomy
- 2 Natural history of undescended testis and retractile testis
- 2 Place of conservative management
- 2 Indications and outcomes of surgery

PENILE INFLAMMATORY CONDITIONS:

- 3 Developmental anatomy
- 2 Natural history
- 3 Place of conservative management
- 3 Indications and outcomes of surgery

ACUTE SCROTUM:

- 3 Natural history
- 2 Place of conservative management
- 3 Indications and outcomes of surgery

INGUINAL HERNIA:

- 3 Ability to assess child and reach appropriate diagnosis
- 3 Ability to form a treatment plan
- 3 Ability to communicate with all relevant groups

HYDROCELE:

- 3 Ability to assess child and reach appropriate diagnosis
- 3 Ability to form a treatment plan
- 3 Ability to communicate with all relevant groups

Clinical Skills

UNDESCENDED TESTIS:

- 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
- 3 Ability to communicate with all relevant groups

PENILE INFLAMMATORY 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

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

Hernia (ST3):

- 2 Inguinal herniotomy (non-neonatal)
- 1 Inguinal hernia (neonatal)

Hydrocele (ST3):

- 2 Surgery for hydrocoele

Penile Conditions (ST3):

- 2 Prepuceplasty
- 2 Circumcision

Undescended testis (ST3):

- 2 Surgery for undescended testis

Acute scrotum (ST3):

- 2 Surgery for acute scrotum

Technical Skills and Procedures

Hernia (ST4):

- 3 Inguinal herniotomy (non-neonatal)
- 2 Inguinal hernia (neonatal)

Hydrocele (ST4):

- 3 Surgery for hydrocoele

Penile Conditions (ST4):

- 3 Prepuceplasty
- 3 Circumcision

Undescended testis (ST4):

- 2 Surgery for undescended testis

Acute scrotum (ST4):

- 3 Surgery for acute scrotum

Professional Skills

Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic

Abdominal wall pathologies

Category

General Surgery of Childhood

Sub-category:

None

Objective

- To be able to assess a child presenting to the OP clinic or acutely with abnormalities of the abdominal wall*
- To be able to formulate a differential diagnosis and an investigation and management plan*
- 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*

patients/ parents/ other team members/ referral source

UMBILICAL HERNIA:

- 3 Developmental anatomy
- 3 Natural history
- 2 Place of conservative management
- 2 Indications and outcomes of surgery

Knowledge

SUPRA-UMBILICAL HERNIA:

- 3 developmental anatomy
- 2 Natural history to include contrast with umbilical hernia
- 2 Indications and outcomes of surgery

EPIGASTRIC HERNIA:

- 3 Developmental anatomy
- 2 Natural history
- 2 Indications and outcomes of surgery

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

Clinical Skills

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

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

Umbilical hernia (ST3):

- 2 Repair of umbilical hernia

Epigastric hernia (ST3):

- 2 Repair of epigastric hernia

Technical Skills and Procedures

Umbilical hernia (ST4):

- 3 Repair of umbilical hernia

Epigastric hernia (ST4):

- 3 Repair of epigastric hernia

Professional Skills

Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic

Access

Category

General Surgery of Childhood

Sub-category:

None

Objective

None

Knowledge	None
Clinical Skills	None
	Vascular access (ST3): 1 Central venous lines (incl perc)
Technical Skills and Procedures	Dialysis (ST3): 1 PD catheter insertion/removal
	Vascular access (ST4): 2 Central venous lines (incl perc)
	Dialysis (ST4): 2 PD catheter insertion/removal
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Pyloricstenosis
Category	Gastrointestinal
Sub-category:	None
Objective	<i>None</i>
Knowledge	None
Clinical Skills	None
	ST3: 2 Pyloromyotomy 2 OGD
Technical Skills and Procedures	ST4: 3 Pyloromyotomy 3 OGD
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

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 To be able to formulate a differential diagnosis and an investigation and management plan To be able to treat the child appropriately up to and including operative intervention in selected cases To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source 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: 1 Oesophageal dilatation 1 Gastrostomy - open 1 PEG (insertion/removal) 1 Fundoplication ST4: 2 Oesophageal dilatation 2 Gastrostomy - open 2 PEG (insertion/removal) 2 Fundoplication
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

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 2 Op reduction intussusception ST4: 3 Appendicectomy 2 Op reduction intussusception
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic **Constipation**

Category	Gastrointestinal
Sub-category:	None
	<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>
Objective	<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
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Gastro-intestinal bleeding
Category	Gastrointestinal
Sub-category:	None
	<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>
Objective	<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
	ST3:
	2 OGD
	1 Colonoscopy
	2 Sigmoidoscopy
Technical Skills and Procedures	1 Small bowel resection/anastomosis (Meckels)
	ST4:
	3 OGD
	1 Colonoscopy
	3 Sigmoidoscopy
	2 Small bowel resection/anastomosis (Meckels)
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic **Intestinal obstruction**
Category Gastrointestinal
Sub-category: None

To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management
To be able to formulate a differential diagnosis and an investigation and management plan
Objective *To be able to treat the child appropriately up to and including operative intervention in selected cases*
To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source
To be able to practice with integrity, respect and compassion

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

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for

these skills

Topic	Inflammatory bowel disease
Category	Gastrointestinal
Sub-category:	None
	<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>
Objective	<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
	3 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
	ST3:
	1 Colonoscopy
	2 Sigmoidoscopy
	1 Small bowel resection/anastomosis
	1 Right hemicolectomy
	1 Left hemicolectomy
Technical Skills and Procedures	1 Total colectomy
	ST4:
	1 Colonoscopy
	3 Sigmoidoscopy
	1 Small bowel resection/anastomosis
	2 Right hemicolectomy
	1 Left hemicolectomy
	1 Total colectomy
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Short bowel syndrome
Category	Gastrointestinal
Sub-category:	None
	<i>To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management</i>
Objective	<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</i>

intervention in selected cases
To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source
To be able to practice with integrity, respect and compassion

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
 No content

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic **Liver disease**

Category Gastrointestinal

Sub-category: None

To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management

To be able to formulate a differential diagnosis and an investigation and management plan

Objective *To be able to treat the child appropriately up to and including operative intervention in selected cases*

To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source

To be able to practice with integrity, respect and compassion

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:
 1 Cholecystectomy

ST4:
 1 Cholecystectomy

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

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 Differing 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:</p> <p>1 Operation for diaphragmatic hernia (neonate)</p> <p>ST4:</p> <p>2 Operation for diaphragmatic hernia (neonate)</p>
Professional Skills	<p>Please see the Professional Skills and Behaviour » Intermediate section for these skills</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	<p>2 Mode of presentation both pre- and post natal</p> <p>2 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 Duodeno- duodenostomy</p> <p>1 Intestinal resection/anastomosis</p> <p>1 Stoma formation</p> <p>ST4:</p> <p>1 Duodeno- duodenostomy</p>

1 Intestinal resection/anastomosis
1 Stoma formation

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic **Meconium ileus**

Category Neonatal Surgery

Sub-category: None

Objective
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

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 + 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
ST3:
1 Operation for meconium ileus

ST4:
1 Operation for meconium ileus

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic **Malrotation**

Category Neonatal Surgery

Sub-category: None

Objective
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

Knowledge
To be able to practice with integrity, respect and compassion
2 Mode of presentation
2 Patho-physiology of the condition and anatomical variants
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 Correction of malrotation ST4: 2 Correction of malrotation
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Hirschsprungs disease
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	ST3: 1 Rectal biopsy 2 Rectal washout 1 Trans-anal pull through 1 Duchamel procedure ST4: 2 Rectal biopsy 2 Rectal washout 1 Trans-anal pull through 1 Duchamel procedure
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Anorectal malformations
Category	Neonatal Surgery

Sub-category:	None
	<i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i>
Objective	<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 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 Anoplasty 1 Sigmoid colostomy 1 PSARP ST4: 2 Anoplasty 2 Sigmoid colostomy 1 PSARP
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Oesophageal atresia and tracheo-oesophageal fistula
Category	Neonatal Surgery
Sub-category:	None
	<i>To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period</i>
Objective	<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 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 Operation for oesophageal atresia/TOF 1 Oeophageal dilatation (neonatal)

ST4:
1 Operation for oesophageal atresia/TOF
1 Oeophageal dilatation (neonatal)

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic **Necrotising enterocolitis**

Category Neonatal Surgery

Sub-category: None

Objective
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

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

Professional Skills
ST4:
1 Laparotomy
1 Intestinal resection/anastomosis
Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic **Neonatal abdominal wall defects**

Category Neonatal Surgery

Sub-category: None

Objective
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

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 1 Repair of exomphalos ST4: 2 Repair of gastroschisis 1 Repair of exomphalos
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Intersex anomalies
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
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

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>

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

2 Likely modes of presentation of different conditions

2 Place and value of investigations

Knowledge 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

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

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

Professional Skills

Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic **Wilms tumour**

Category Oncology

Sub-category: None

Objective

To understand the presentation and management of childhood tumours

To be able to formulate a differential diagnosis and an investigation and management plan

To be able to practice with integrity, respect and compassion

2 Mode of clinical presentation

2 Differential diagnosis

Knowledge

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
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

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
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

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
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

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
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

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	ST3:

and Procedures 2 Cervical Lymph node biopsy

ST4:
2 Cervical Lymph node biopsy

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic **Osteosarcoma**

Category Oncology

Sub-category: None

Objective
To understand the presentation and management of childhood tumours
To be able to formulate a differential diagnosis and an investigation and management plan
To be able to practice with integrity, respect and compassion

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**

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic **Benign tumours**

Category Oncology

Sub-category: None

Objective
To understand the presentation and management of childhood tumours
To be able to formulate a differential diagnosis and an investigation and management plan
To be able to practice with integrity, respect and compassion

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
Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

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

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic Thyroid gland
Category Endocrine conditions
Sub-category: None

To understand the presenting symptoms of endocrine conditions in childhood and their management
To be able to formulate a differential diagnosis and an investigation and management plan
Objective *To be able to identify the need for surgery and influence of endocrine conditions on surgery*
To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source
To be able to practice with integrity, respect and compassion

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

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic	Parathyroid disease
Category	Endocrine conditions
Sub-category:	None
	<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>
Objective	<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>
	2 Likely modes of presentation
Knowledge	2 Differential diagnosis
	2 Place and value of investigations
	2 Knowledge of appropriate referral pathways
	3 Ability to assess child
Clinical Skills	2 Ability to form a viable investigation and treatment plan
	3 Ability to communicate with all relevant groups
Technical Skills and Procedures	No content
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Diabetes
Category	Endocrine conditions
Sub-category:	None
	<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>
Objective	<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>
	2 Likely modes of presentation
Knowledge	2 Differential diagnosis
	2 Place and value of investigations
	2 Knowledge of appropriate referral pathways
	2 Ability to assess child
Clinical Skills	2 Ability to form a viable investigation and treatment plan
	3 Ability to communicate with all relevant groups
	ST3:
Technical Skills and Procedures	2 OGD
	ST4:
	2 OGD
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for

these skills

Topic	Disorders of growth
Category	Endocrine conditions
Sub-category:	None
	<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>
Objective	<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>
	2 Likely modes of presentation
Knowledge	2 Differential diagnosis
	2 Place and value of investigations
	2 Knowledge of appropriate referral pathways
	2 Ability to assess child
Clinical Skills	2 Ability to form a viable investigation and treatment plan
	3 Ability to communicate with all relevant groups
	ST3:
Technical Skills and Procedures	2 OGD
	ST4:
	2 OGD
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Disorders of secondary sexual development
Category	Endocrine conditions
Sub-category:	None
	<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>
Objective	<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>
	2 Likely modes of presentation
Knowledge	2 Differential diagnosis
	2 Place and value of investigations
	2 Knowledge of appropriate referral pathways
	2 Ability to assess child
Clinical Skills	2 Ability to form a viable investigation and treatment plan
	3 Ability to communicate with all relevant groups

Technical Skills and Procedures	ST3: 1 Subcutaneous mastectomy
Professional Skills	ST4: 1 Subcutaneous mastectomy Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Chest wall anomalies
Category	Thoracic Surgery
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	2 Likely modes of presentation 2 Differential diagnosis 2 Place and value of investigations 2 Knowledge of appropriate referral pathways 2 Outcomes 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 Repair Pectus excavatum 1 Repair Pectus carinatum
Professional Skills	ST4: 1 Repair Pectus excavatum 1 Repair Pectus carinatum Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Congenital and acquired lung abnormalities
Category	Thoracic Surgery
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>

To be able to practice with integrity, respect and compassion

Knowledge	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	3 Ability to assess child 2 Ability to form a viable investigation and treatment plan 3 Ability to communicate with all relevant groups ST3: 2 Thoracotomy 1 Open biopsy of lung 1 Pulmonary lobectomy 1 Partial pulmonary lobectomy 1 Excision of extra lobar sequestration 2 Aspiration of pleural cavity 2 Insertion of open chest drain 2 Insertion of percutaneous chest drain 1 Open pleural debridement 1 Thorascopic pleural debridement 1 Rigid bronchoscopy
Technical Skills and Procedures	ST4: 2 Thoracotomy 1 Open biopsy of lung 1 Pulmonary lobectomy 1 Partial pulmonary lobectomy 1 Excision of extra lobar sequestration 3 Aspiration of pleural cavity 3 Insertion of open chest drain 3 Insertion of percutaneous chest drain 2 Open pleural debridement 2 Thorascopic pleural debridement 1 Rigid bronchoscopy
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic **Tracheal anomalies**
Category Thoracic Surgery
Sub-category: None

Objective *To understand the presenting symptoms of thoracic anomalies in childhood and their management*
To be able to formulate a differential diagnosis and an investigation and management plan
To identify the place of surgery
To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source

To be able to practice with integrity, respect and compassion

Knowledge	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	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	ST3: 1 Fiberoptic bronchoscopy 1 Tracheostomy 1 Rigid bronchoscopy 1 Fiberoptic bronchoscopy ST4: 1 Fiberoptic bronchoscopy 1 Tracheostomy 1 Rigid bronchoscopy 1 Fiberoptic bronchoscopy
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic **Inhaled foreign body**
Category Thoracic Surgery
Sub-category: None

To understand the presenting symptoms of thoracic anomalies in childhood and their management
To be able to formulate a differential diagnosis and an investigation and management plan
Objective *To identify the place of surgery*
To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source
To be able to practice with integrity, respect and compassion

Knowledge	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	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 Rigid removal of FB from bronchus ST4:

1 Rigid removal of FB from bronchus

Professional Skills

Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic Urinary tract infection

Category Urology

Sub-category: None

To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract

To be able to formulate a differential diagnosis and an investigation and management plan

Objective *To be able to treat the child appropriately up to and including operative intervention in selected cases*

To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source

To be able to practice with integrity, respect and compassion

3 Patterns of symptoms and relation to likely pathology and age of child

3 Relevance of different symptom patterns

Knowledge 3 Differential diagnosis

3 Place and value of investigations

3 Ability to assess child

Clinical Skills 2 Ability to form a viable investigation and treatment plan

3 Ability to communicate with all relevant groups

ST3:

2 Cysto-urethroscopy

Technical Skills 1 STING/deflux

and Procedures

ST4:

3 Cysto-urethroscopy

1 STING/deflux

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic Haematuria

Category Urology

Sub-category: None

To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract

To be able to formulate a differential diagnosis and an investigation and management plan

Objective *To be able to treat the child appropriately up to and including operative intervention in selected cases*

To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source

To be able to practice with integrity, respect and compassion

3 Patterns of symptoms and relation to likely pathology and age of child

Knowledge 3 Differential diagnosis

	3 Place and value of investigations
	3 Ability to assess child
Clinical Skills	3 Ability to form a viable investigation and treatment plan
	3 Ability to communicate with all relevant groups
	ST3:
Technical Skills and Procedures	2 Haematuria
	ST4:
	3 Haematuria
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Urethral meatus
Category	Urology
Sub-category:	None
Objective	<i>None</i>
Knowledge	None
Clinical Skills	None
	ST3:
	1 Meatotomy
	1 Meatoplasty
Technical Skills and Procedures	1 Urethral dilatation
	ST4:
	2 Meatotomy
	2 Meatoplasty
	2 Urethral dilatation
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Hypospadias
Category	Urology
Sub-category:	None
	<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>
Objective	<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 Different anatomical variants

	2 Place and value of investigations/ operative intervention
	3 Ability to assess child
Clinical Skills	2 Ability to form a viable investigation and treatment plan
	3 Ability to communicate with all relevant groups
	ST3:
	1 Repair coronal/glanular hypospadias
	1 Repair penile hypospadias
	1 Repair proximal hypospadias
Technical Skills and Procedures	1 Repair urethral fistula
	ST4:
	1 Repair coronal/glanular hypospadias
	1 Repair penile hypospadias
	1 Repair proximal hypospadias
	1 Repair urethral fistula
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Upper tract obstruction (to include pelvi-ureteric junction obstruction and vesico-ureteric junction obstruction)
Category	Urology
Sub-category:	None
	<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>
Objective	<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 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
	ST3:
	1 Pyeloplasty
	1 Nephrectomy
	1 Nephro- ureterectomy
	1 Insertion of percutaneous nephrostomy
Technical Skills and Procedures	1 Insertion of open nephrostomy
	1 Insertion of JJ stent
	1 Ureteric reimplantation
	ST4:
	1 Pyeloplasty
	2 Nephrectomy

- 2 Nephro- ureterectomy
- 1 Insertion of percutaneous nephrostomy
- 1 Insertion of open nephrostomy
- 1 Insertion of JJ stent
- 1 Ureteric reimplantation

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic **Posterior urethral valves**

Category Urology

Sub-category: None

To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract
To be able to formulate a differential diagnosis and an investigation and management plan

Objective *To be able to treat the child appropriately up to and including operative intervention in selected cases*
To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source
To be able to practice with integrity, respect and compassion

Knowledge 2 Likely modes of presentation
 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 Destruction of PUV
 ST4:

1 Destruction of PUV

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic **Urinary tract calculus disease**

Category Urology

Sub-category: None

To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract
To be able to formulate a differential diagnosis and an investigation and management plan

Objective *To be able to treat the child appropriately up to and including operative intervention in selected cases*
To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source
To be able to practice with integrity, respect and compassion

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
	3 Ability to assess child
Clinical Skills	2 Ability to form a viable investigation and treatment plan
	3 Ability to communicate with all relevant groups
	ST3:
	1 Nephrolithotomy
	1 Pyleolithotomy
	1 Ureterolithotomy
Technical Skills and Procedures	1 Removal of bladder calculus
	ST4:
	1 Nephrolithotomy
	1 Pyleolithotomy
	1 Ureterolithotomy
	1 Removal of bladder calculus
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

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: 2 Cysto-urethroscopy 1 Vesicostomy 1 Closure of vesicostomy 1 Suprapubic catheter 1 Endoscopic cauterisation of lesion of bladder 1 Endoscopic removal of clot from bladder 1 Ileal bladder reconstruction 1 Colonic bladder reconstruction 1 Ureteric diversion 1 Ureteric un-diversion

ST4:
 3 Cysto-urethroscopy
 1 Vesicostomy
 1 Closure of vesicostomy
 2 Suprapubic catheter
 1 Endoscopic cauterisation of lesion of bladder
 1 Endoscopic removal of clot from bladder
 1 Ileal bladder reconstruction
 1 Colonic bladder reconstruction
 1 Ureteric diversion
 1 Ureteric un-diversion

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

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>3 Ability to assess child</p> <p>3 Ability to communicate with all relevant groups</p>
Technical Skills and Procedures	<p>ST3:</p> <p>1 Renal transplant</p> <p>1 Transplant nephrectomy</p> <p>1 PD catheter insertion/removal</p> <p>1 Haemodialysis catheter insertion</p>
Professional Skills	<p>ST4:</p> <p>1 Renal transplant</p> <p>1 Transplant nephrectomy</p> <p>2 PD catheter insertion/removal</p> <p>2 Haemodialysis catheter insertion</p> <p>Please see the Professional Skills and Behaviour » Intermediate section for these skills</p>

Topic **Bladder exstrophy (incl. epispadias)**

Category	Urology
Sub-category:	None
	<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>
Objective	<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
Clinical Skills	3 Ability to assess child
	2 Ability to communicate with all relevant groups
	ST3:
	1 Repair of bladder exstrophy
	1 Repair of epispadias
Technical Skills and Procedures	1 Closure of bladder neck
	ST4:
	1 Repair of bladder exstrophy
	1 Repair of epispadias
	1 Closure of bladder neck
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Duplication of urinary tract
Category	Urology
Sub-category:	None
	<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>
Objective	<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	ST3:

and Procedures 1 Hemi-nephrectomy
1 Excision of ureterocoele
1 Endoscopic incision of ureterocoele

ST4:
1 Hemi-nephrectomy
1 Excision of ureterocoele
1 Endoscopic incision of ureterocoele

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic Vesico-ureteric reflux

Category Urology

Sub-category: None

Objective None

Knowledge None

Clinical Skills None

ST3:
1 Ureteric reimplantation

Technical Skills and Procedures ST4:
1 Ureteric reimplantation

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic Orthopaedic Surgery

Category Surgical Disciplines

Sub-category: None

Objective *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

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

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic Paediatric Cardiac Surgery

Category	Surgical Disciplines
Sub-category:	None
	<i>To understand the basic principles involved in other Paediatric Surgical Specialties</i>
Objective	<i>To understand how these disciplines interact with General Paediatric Surgery and Paediatric Urology</i> <i>To be able to refer to other specialties appropriately</i>
	0 To understand the basic principles of major conditions in the specialty
	0 To understand the referral mechanisms to the discipline
Knowledge	0 To be aware of the influence of conditions on child health
	0 To recognise the associated anomalies when dealing with children
Clinical Skills	0 To construct an appropriate investigation and referral plan
Technical Skills and Procedures	No content
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

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

Topic	Paediatric plastic surgery
Category	Surgical Disciplines
Sub-category:	None
	<i>To understand the basic principles involved in other Paediatric Surgical Specialties</i>
Objective	<i>To understand how these disciplines interact with General Paediatric Surgery and Paediatric Urology</i> <i>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
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Paediatric ophthalmology
Category	Surgical Disciplines
Sub-category:	None
	<i>To understand the basic principles involved in other Paediatric Surgical Specialties</i>
Objective	<i>To understand how these disciplines interact with General Paediatric Surgery and Paediatric Urology</i>
	<i>To be able to refer to other specialties appropriately</i>
	2 To understand the basic principles of major conditions in the specialty
	2 To understand the referral mechanisms to the discipline
Knowledge	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
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Topic	Paediatric E.N.T. Surgery
Category	Surgical Disciplines
Sub-category:	None
	<i>To understand the basic principles involved in other Paediatric Surgical Specialties</i>
Objective	<i>To understand how these disciplines interact with General Paediatric Surgery and Paediatric Urology</i>
	<i>To be able to refer to other specialties appropriately</i>
	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
Knowledge	
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
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

these skills

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
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

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
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

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	No content

and Procedures

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic **Child abuse**

Category Surgical Disciplines

Sub-category: None

Objective *To understand the principles of diagnosis and management in a number of conditions as they present to the General Paediatric Surgeon*

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**

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

Topic **Pre-operative care**

Category Operative skills

Sub-category: None

Objective *To ensure the trainee has reached a level of competence in a range of basic operative procedures.*

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**

Professional Skills Please see the [Professional Skills and Behaviour » Intermediate](#) section for these skills

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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 3 Necessary hand-eye dexterity to complete procedure 3 Appropriate use of assistance 3 Communication with other members of theatre team
Technical Skills and Procedures	No content
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these 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
Professional Skills	Please see the Professional Skills and Behaviour » Intermediate section for these skills

Final (including special interests) Stage

Overview of Final Stage

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
- 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
- Destruction of posterior urethral valves
- Bladder extrophy closure
- Bladder augmentation / artificial sphincter insertion
- Epispadias repair
- Complex 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 destruction 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
- Bladder augmentation
- Urethral sphincter insertion
- Epispadias repair
- Gender re-assignment surgery

Review of Module

The responsibility for the review of the outcomes of this module rests with the British Association of Paediatric Urology (BAPU) working in concert with the Education and Training Committee of British Association of Paediatric Surgeons who have overall responsibility for the curriculum.

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

Topics

Topic	Groin conditions
Category	General Surgery of Childhood
Sub-category:	None
Objective	<i>To be able to assess a child presenting to the OP clinic or acutely with ‘groin pathology’ To be able to formulate a differential diagnosis and an investigation and management plan 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 patients/ parents/ other team members/ referral source</i>
Knowledge	INGUINAL HERNIA:

- 4 Developmental anatomy
- 4 Natural history
- 4 Indications and outcomes of surgery

HYDROCELE:

- 4 Developmental anatomy
- 4 Natural history
- 4 Place of conservative management
- 4 Indications and outcomes of surgery

UNDESCENDED TESTIS:

- 4 Developmental anatomy
- 4 Natural history of undescended testis and retractile testis
- 4 Place of conservative management
- 4 Indications and outcomes of surgery

PENILE INFLAMMATORY CONDITIONS:

- 4 Developmental anatomy
- 4 Natural history
- 4 Place of conservative management
- 4 Indications and outcomes of surgery

ACUTE SCROTUM:

- 4 Natural history
- 4 Place of conservative management
- 4 Indications and outcomes of surgery

INGUINAL HERNIA:

- 4 Ability to assess child and reach appropriate diagnosis
- 4 Ability to form a treatment plan
- 4 Ability to communicate with all relevant groups

HYDROCOELE:

- 4 Ability to assess child and reach appropriate diagnosis
- 4 Ability to form a treatment plan
- 4 Ability to communicate with all relevant groups

Clinical Skills

UNDESCENDED TESTIS:

- 4 Ability to assess child and reach appropriate diagnosis
- 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

PENILE INFLAMMATORY 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

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

Hernia (ST5):

- 3 Inguinal herniotomy (non-neonatal)
- 3 Inguinal hernia (neonatal)

Hydrocoele (ST5):

- 3 Surgery for hydrocoele

Penile Conditions (ST5):

- 3 Prepuceplasty
- 4 Circumcision

Undescended testis (ST5):

- 3 Surgery for undescended testis

Acute scrotum (ST5):

- 4 Surgery for acute scrotum

**Technical Skills
and Procedures**

Hernia (ST6):

- 3 Inguinal herniotomy (non-neonatal)
- 3 Inguinal hernia (neonatal)

Hydrocoele (ST6):

- 4 Surgery for hydrocoele

Penile Conditions (ST6):

- 4 Prepuceplasty
- 4 Circumcision

Undescended testis (ST6):

- 4 Surgery for undescended testis

Acute scrotum (ST6):

- 4 Surgery for acute scrotum

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic	Abdominal wall pathologies
Category	General Surgery of Childhood
Sub-category:	None
	<i>To be able to assess a child presenting to the OP clinic or acutely with abnormalities of the abdominal wall</i>
Objective	<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</i>

intervention if required

To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source

UMBILICAL HERNIA:

- 4 Developmental anatomy
- 4 Natural history
- 4 Place of conservative management
- 4 Indications and outcomes of surgery

SUPRA-UMBILICAL HERNIA:

Knowledge

- 4 developmental anatomy
- 4 Natural history to include contrast with umbilical hernia
- 4 Indications and outcomes of surgery

EPIGASTRIC HERNIA:

- 4 Developmental anatomy
- 4 Natural history
- 4 Indications and outcomes of surgery

UMBILICAL HERNIA:

- 4 Ability to assess child and reach appropriate diagnosis
- 4 Ability to form a treatment plan
- 4 Ability to communicate with all relevant groups

SUPRA-UMBILICAL HERNIA:

Clinical Skills

- 4 Ability to assess child and reach appropriate diagnosis
- 4 Ability to form a treatment plan
- 4 Ability to communicate with all relevant groups

EPIGASTRIC HERNIA:

- 4 Ability to assess child and reach appropriate diagnosis
- 4 Ability to form a treatment plan
- 4 Ability to communicate with all relevant groups

Umbilical hernia (ST5):

- 4 Repair of umbilical hernia

Epigastric hernia (ST5):

- 4 Repair of epigastric hernia

Technical Skills and Procedures

Umbilical hernia (ST6):

- 4 Repair of umbilical hernia

Epigastric hernia (ST6):

- 4 Repair of epigastric hernia

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic	Access
Category	General Surgery of Childhood
Sub-category:	None
Objective	<i>None</i>
Knowledge	None
Clinical Skills	None
Technical Skills and Procedures	Vascular access (ST5): 3 Central venous lines (incl perc)
	Dialysis (ST5): 3 PD catheter insertion/removal
	Vascular access (ST6): 3 Central venous lines (incl perc)
Professional Skills	Dialysis (ST6): 3 PD catheter insertion/removal
	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Pyloricstenosis
Category	Gastrointestinal
Sub-category:	None
Objective	<i>None</i>
Knowledge	None
Clinical Skills	None
Technical Skills and Procedures	3 Pyloromyotomy - ST5
	4 Pyloromyotomy - ST6, ST7, ST8
	4 OGD - ST5, ST6, ST7, ST8
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

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>
Knowledge	<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>
	3 Pathophysiology 3 Investigation and management

Clinical Skills

- 3 Indications for operative intervention
- 3 Ability to synthesise history and investigations into appropriate management plan
- 3 Ability to communicate information to parents/child
- 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

Technical Skills and Procedures

- 3 Fundoplication (ST5, ST6, ST7)
- 4 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)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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	<ul style="list-style-type: none"> 4 Patterns of symptoms and relation to likely pathology and age of child 4 Differential diagnosis 4 Place and value of investigations 4 Place of operative intervention, and associated outcomes 4 Ability to assess ill child
Clinical Skills	<ul style="list-style-type: none"> 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 Appendicectomy (ST5) 4 Appendicectomy (ST6, ST7, ST8) 3 Op reduction intussusception (ST5 & ST6) 4 Op reduction intussusception (ST7 & ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic	Constipation
Category	Gastrointestinal
Sub-category:	None
	<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>
Objective	<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	4 Patterns of symptoms and relation to likely pathology and age of child
	3 Differential diagnosis to include medical anomalies and socio-psychological aspects of symptom
	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.
	3 To include community aspects of further management
Technical Skills and Procedures	4 Rectal Biopsy
	4 Manual evacuation
	4 EUA rectum
	4 Anal stretch
	1 ACE procedure (ST5)
	2 ACE procedure (ST6)
	3 ACE procedure (ST7 & ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic	Gastro-intestinal bleeding
Category	Gastrointestinal
Sub-category:	None
	<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>
Objective	<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

	4 Place and value of investigations
	3 Place of operative intervention, and associated outcomes
	4 Ability to assess ill child
Clinical Skills	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
	4 OGD
	2 Colonoscopy (ST5 & ST6)
	3 Colonoscopy (ST7)
Technical Skills and Procedures	4 Colonoscopy (ST8)
	3 Sigmoidoscopy (ST5,)
	4 Sigmoidoscopy (ST6, ST7, ST8)
	3 Small bowel resection/anastomosis (Meckels) - ST5 & ST6
	4 Small bowel resection/anastomosis (Meckels) - ST7 & ST8
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic **Intestinal obstruction**
Category Gastrointestinal
Sub-category: None

To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management
To be able to formulate a differential diagnosis and an investigation and management plan
Objective *To be able to treat the child appropriately up to and including operative intervention in selected cases*
To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source
To be able to practice with integrity, respect and compassion

	4 Patterns of symptoms and relation to likely pathology and age of child
Knowledge	4 Differential diagnosis
	4 Place and value of investigations
	4 Place of operative intervention, and associated outcomes
	4 Ability to assess ill child
Clinical Skills	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
	3 Laparotomy (ST5 & ST6)
	4 Laparotomy (ST7 & ST8)
Technical Skills and Procedures	3 Adhesiolysis (ST5 & ST6)
	4 Adhesiolysis (ST7 & ST8)
	3 Small bowel resection/anastomosis (ST5 & ST6)
	4 Small bowel resection/anastomosis (ST7 & ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic	Inflammatory bowel disease
Category	Gastrointestinal
Sub-category:	None
	<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>
Objective	<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	4 Ability to assess ill child
	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
	4 OGD
	2 Colonoscopy (ST5 & ST6)
	3 Colonoscopy (ST7)
	4 Colonoscopy (ST8)
	3 Sigmoidoscopy (ST5 & ST6)
	4 Sigmoidoscopy (ST7 & ST8)
	3 Small bowel resection/anastomosis (ST5 & ST6)
	4 Small bowel resection/anastomosis (ST7 & ST8)
Technical Skills and Procedures	2 Right hemicolectomy (ST5)
	3 Right hemicolectomy (ST6, ST7)
	4 Right hemicolectomy (ST8)
	2 Left hemicolectomy (ST5)
	3 Left hemicolectomy (ST6, ST7)
	4 Left hemicolectomy (ST8)
	2 Total colectomy (ST5)
	3 Total colectomy (ST6, ST7)
	4 Total colectomy (ST8)
	1 Pouch formation (ST5 & ST6)
	2 Pouch formation (ST7)
	3 Pouch formation (ST8)
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Short bowel syndrome
Category	Gastrointestinal
Sub-category:	None
	<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>
Objective	<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
	4 Ability to assess ill child
Clinical Skills	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	None
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Liver/biliary disease
Category	Gastrointestinal
Sub-category:	None
	<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>
Objective	<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
	4 Ability to assess ill child
Clinical Skills	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
	2 Cholecystectomy
Technical Skills and Procedures	1 Choledochal cyst (ST5 & ST6)
	2 Choledochal cyst (ST7)
	3 Choledochal cyst (ST8)

- 1 Kasai procedure - ST5 & ST6 (specialist centre)
- 2 Kasai procedure - ST7 (specialist centre)
- 3 Kasai procedure - ST8 (specialist centre)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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> <p>3 Cysto-urethroscopy (ST5 & ST6)</p> <p>4 Cysto-urethroscopy (ST7 & ST8)</p>
Technical Skills and Procedures	<p>2 STING/deflux (ST5 & ST6)</p> <p>3 STING/deflux (ST7)</p> <p>4 STING/deflux (ST8)</p>

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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	4 Patterns of symptoms and relation to likely pathology and age of child

	4 Differential diagnosis
	4 Place and value of investigations
	4 Ability to assess child
Clinical Skills	4 Ability to form a viable investigation and treatment plan
	4 Ability to communicate with all relevant groups
Technical Skills and Procedures	3 Cysto-urethroscopy (ST5 & ST6)
	4 Cysto-urethroscopy (ST7 & ST8)
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Hypospadias
Category	Urology
Sub-category:	None
	<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>
Objective	<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
	3 Different anatomical variants
	4 Place and value of investigations/ operative intervention
	4 Ability to assess child
Clinical Skills	4 Ability to form a viable investigation and treatment plan
	4 Ability to communicate with all relevant groups
	2 Repair coronal/glanular hypospadias (ST5 & ST6)
	3 Repair coronal/glanular hypospadias (ST7)
	4 Repair coronal/glanular hypospadias (ST8)
Technical Skills and Procedures	1 Repair penile hypospadias (ST5 & ST6)
	2 Repair penile hypospadias (ST7)
	3 Repair penile hypospadias (ST8)
	1 Repair proximal hypospadias (ST5 & ST6)
	2 Repair proximal hypospadias (ST7)
	3 Repair proximal hypospadias (ST8)
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Upper tract obstruction (to include Pelvi-ureteric junction obstruction and Vesico-ureteric junction obstruction)
Category	Urology
Sub-category:	None

To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract
To be able to formulate a differential diagnosis and an investigation and management plan

Objective *To be able to treat the child appropriately up to and including operative intervention in selected cases*
To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source
To be able to practice with integrity, respect and compassion

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
4 Ability to communicate with all relevant groups

1 Repair urethral fistula (ST5 & ST6)
2 Repair urethral fistula (ST7)
3 Repair urethral fistula (ST8)

2 Pyeloplasty (ST5 & ST6)
3 Pyeloplasty (ST7)
4 Pyeloplasty (ST8)

2 Nephrectomy (ST5)
3 Nephrectomy (ST6 & ST7)
4 Nephrectomy (ST8)

Technical Skills and Procedures 2 Nephro- ureterectomy (ST5)
3 Nephro- ureterectomy (ST6 & ST7)
4 Nephro- ureterectomy (ST8)

2 Insertion of percutaneous nephrostomy (ST5 & ST6)
3 Insertion of percutaneous nephrostomy (ST7)
4 Insertion of percutaneous nephrostomy (ST8)

2 Insertion of open nephrostomy (ST5 & ST6)
3 Insertion of open nephrostomy (ST7)
4 Insertion of open nephrostomy (ST8)

2 Insertion of JJ stent (ST5 & ST6)
3 Insertion of JJ stent (ST7)
4 Insertion of JJ stent (ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic **Posterior urethral valves**

Category Urology

Sub-category: None

Objective *To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract*
To be able to formulate a differential diagnosis and an investigation and

management plan

To be able to treat the child appropriately up to and including operative intervention in selected cases

To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source

To be able to practice with integrity, respect and compassion

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
4 Ability to communicate with all relevant groups

Technical Skills and Procedures 1 Ureteric reimplantation (ST5 & ST6)
2 Ureteric reimplantation (ST7)
3 Ureteric reimplantation (ST8)

1 Destruction of PUV (ST5 & ST6)

2 Destruction of PUV (ST7)

3 Destruction of PUV (ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic Urinary tract calculus disease

Category Urology

Sub-category: None

To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract

To be able to formulate a differential diagnosis and an investigation and management plan

Objective *To be able to treat the child appropriately up to and including operative intervention in selected cases*

To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source

To be able to practice with integrity, respect and compassion

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

1 Nephrolithotomy (ST5 & ST6)

2 Nephrolithotomy (ST7)

3 Nephrolithotomy (ST8)

Technical Skills and Procedures 1 Pyleolithotomy (ST5 & ST6)
2 Pyleolithotomy (ST7)
3 Pyleolithotomy (ST8)

1 Ureterolithotomy (ST5 & ST6)

2 Ureterolithotomy (ST7)

3 Ureterolithotomy (ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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	0 Likely modes of presentation 0 Differential diagnosis 0 Place and value of investigations 0 Knowledge of appropriate referral pathways
Clinical Skills	0 Ability to assess child 0 Ability to form a viable investigation and treatment plan 0 Ability to communicate with all relevant groups 1 Removal of bladder calculus (ST5 & ST6) 2 Removal of bladder calculus (ST7) 3 Removal of bladder calculus (ST8) 2 Cysto-urethroscopy (ST5) 3 Cysto-urethroscopy (ST6) 4 Cysto-urethroscopy (ST7 & ST8) 2 Vesicostomy (ST5 & ST6) 3 Vesicostomy (ST7) 4 Vesicostomy (ST8)
Technical Skills and Procedures	2 Closure of vesicostomy (ST5) 3 Closure of vesicostomy (ST6) 4 Closure of vesicostomy (ST7 & ST8) 3 Suprapubic catheter (ST5 & ST6) 3 Suprapubic catheter (ST7 & ST8) 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) 2 Endoscopic removal of clot from bladder (ST5 & ST6) 3 Endoscopic removal of clot from bladder (ST7) 4 Endoscopic removal of clot from bladder (ST8) 1 Ileal bladder reconstruction (ST5 & ST6)

- 2 Ileal bladder reconstruction (ST7)
- 3 Ileal bladder reconstruction (ST8)

- 1 Colonic bladder reconstruction (ST5 & ST6)
- 2 Colonic bladder reconstruction (ST7)
- 3 Colonic bladder reconstruction (ST8)

- 1 Ureteric diversion (ST5 & ST6)
- 2 Ureteric diversion (ST7)
- 3 Ureteric diversion (ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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"> 4 Ability to assess child 4 Ability to communicate with all relevant groups 1 Ureteric un-diversion (ST5 & ST6) 2 Ureteric un-diversion (ST7) 3 Ureteric un-diversion (ST8)
Technical Skills and Procedures	<ul style="list-style-type: none"> 1 Renal transplant (ST5 & ST6) 2 Renal transplant (ST7) 3 Renal transplant (ST8) 1 Transplant nephrectomy (ST5 & ST6) 2 Transplant nephrectomy (ST7) 3 Transplant nephrectomy (ST8) 3 PD catheter insertion/removal (ST5 & ST6) 4 PD catheter insertion/removal (ST7 & ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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

Sub-category:	None
	<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>
Objective	<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
	3 Differential diagnosis
	3 Place and value of investigations
Clinical Skills	4 Ability to assess child
	4 Ability to communicate with all relevant groups
	2 Haemodialysis catheter insertion (ST5)
	3 Haemodialysis catheter insertion (ST6)
	4 Haemodialysis catheter insertion (ST7 & ST8)
Technical Skills and Procedures	1 Repair of bladder exstrophy (ST5 & ST6)
	2 Repair of bladder exstrophy (ST7)
	3 Repair of bladder exstrophy (ST8)
	1 Repair of epispadias (ST5 & ST6)
	2 Repair of epispadias (ST7)
	3 Repair of epispadias (ST8)
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Duplication of urinary tract
Category	Urology
Sub-category:	None
	<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>
Objective	<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
	3 Embryological derivation and anatomical variants
	3 Place and value of investigations/ 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	1 Closure of bladder neck (ST5 & ST6)
	2 Closure of bladder neck (ST7)

3 Closure of bladder neck (ST8)

1 Hemi-nephrectomy (ST5)

2 Hemi-nephrectomy (ST6)

3 Hemi-nephrectomy (ST7)

4 Hemi-nephrectomy (ST8)

1 Excision of ureterocoele - ST5, ST6

2 Excision of ureterocoele - ST7

3 Excision of ureterocoele - ST8

1 Endoscopic incision of ureterocoele ST5

2 Endoscopic incision of ureterocoele ST6, ST7

3 Endoscopic incision of ureterocoele ST8

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic	Epispadias
Category	Urology
Sub-category:	None
Objective	<i>None</i>
Knowledge	None
Clinical Skills	None
Technical Skills and Procedures	1 Repair of epispadias - ST5, ST6
	2 Repair of epispadias - ST7
	3 Repair of epispadias - ST8

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic	Vesico-ureteric reflux
Category	Urology
Sub-category:	None
Objective	<i>None</i>
Knowledge	None
Clinical Skills	None
Technical Skills and Procedures	1 Ureteric reimplantation ST5, ST6 2 Ureteric reimplantation ST7 3 Ureteric reimplantation ST8
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Small bowel duplications
Category	Neonatal Surgery
Sub-category:	None
Objective	<i>None</i>
Knowledge	None
Clinical Skills	None
Technical Skills and Procedures	2 Intestinal resection/anastomosis - ST5, ST6 3 Intestinal resection/anastomosis - ST7 4 Intestinal resection/anastomosis - ST8
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Sacro coccygeal teratoma
Category	Neonatal Surgery
Sub-category:	None
Objective	<i>None</i>
Knowledge	None
Clinical Skills	None
Technical Skills and Procedures	1 Excision of sacro coccygeal teratoma ST5, ST6 2 Excision of sacro coccygeal teratoma ST7 3 Excision of sacro coccygeal teratoma ST8
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

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 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 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)
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

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 3 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 2 Duodeno- duodenostomy (ST5) 3 Duodeno- duodenostomy (ST6 & ST7) 4 Duodeno- duodenostomy (ST8)
Technical Skills and Procedures	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)
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

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</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>
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

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>
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Hirschsprungs disease
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>

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

Knowledge

- 4 Mode of presentation both pre- and post natal
- 3 Patho-physiology of the condition and anatomical variants
- 4 Associated anomalies
- 4 Outcome data on the condition
- 4 Differing management strategies
- 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
- 3 Rectal biopsy (ST5)
- 4 Rectal biopsy (ST6, ST7, ST8)

4 Rectal washout

Technical Skills and Procedures

- 1 Trans-anal pull through (ST5 & ST6)
- 2 Trans-anal pull through (ST7)
- 3 Trans-anal pull through (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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic **Oesophageal Atresia and Tracheo-oesophageal fistula**

Category Neonatal Surgery

Sub-category: None

Objective

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

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

- 1 Operation for oesophageal atresia/TOF (ST5 & ST6)
- 2 Operation for oesophageal atresia/TOF (ST7)
- 3 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 replacement

1 Aortopexy

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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</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 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)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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</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</i>

be able to carry this out in selected cases
To be able to practice with integrity, respect and compassion

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
1 Oeophageal dilatation (neonatal) - ST5 & ST6
2 Oeophageal dilatation (neonatal) - ST7
3 Oeophageal dilatation (neonatal) - ST8

Technical Skills and Procedures
1 Laparotomy (ST5)
2 Laparotomy (ST6)
3 Laparotomy (ST7)
4 Laparotomy (ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic Neonatal Abdominal Wall Defects
Category Neonatal Surgery
Sub-category: None
Objective
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
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
1 Intestinal resection/anastomosis (ST5)
2 Intestinal resection/anastomosis (ST6)
3 Intestinal resection/anastomosis (ST7)
4 Intestinal resection/anastomosis (ST8)
2 Repair of gastroschisis (ST5)
3 Repair of gastroschisis (ST6 & ST7)

4 Repair of gastroschisis (ST8)

2 Repair of exomphalos (ST5)

3 Repair of exomphalos (ST6 & ST7)

4 Repair of exomphalos (ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic	Intersex anomalies
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
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

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	None

and Procedures

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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) 4 Nephro-ureterectomy/nephrectomy for Wilms (ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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 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	1 Surgery for neuroblastoma (ST5 & ST6) 2 Surgery for neuroblastoma (ST7) 3 Surgery for neuroblastoma (ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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	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	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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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	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	1 Local excision soft tissue tumour (ST5, ST6) 2 Local excision soft tissue tumour (ST7) 3 Local excision soft tissue tumour (ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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)
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

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	3 Mode of clinical presentation 3 Differential diagnosis 3 Relevant basic science knowledge of oncogenesis 3 Management strategy and basic outcome data of treatment modalities 3 Role of surgery
Clinical Skills	4 Ability to assess child 4 Ability to communicate with all relevant groups
Technical Skills and Procedures	None
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

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)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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
3 Adrenalectomy - ST8

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic Disease of the thyroid gland

Category Endocrine conditions

Sub-category: None

	<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>
Objective	<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>
	3 Likely modes of presentation
Knowledge	3 Differential diagnosis
	3 Place and value of investigations
	3 Knowledge of appropriate referral pathways
	4 Ability to assess child
Clinical Skills	4 Ability to form a viable investigation and treatment plan
	4 Ability to communicate with all relevant groups
	1 Thyroidectomy (ST5 & ST6)
Technical Skills and Procedures	2 Thyroidectomy (ST7)
	3 Thyroidectomy (ST8)
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Parathyroid disease
Category	Endocrine conditions
Sub-category:	None
	<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>
Objective	<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>
	3 Likely modes of presentation
Knowledge	3 Differential diagnosis
	3 Place and value of investigations
	3 Knowledge of appropriate referral pathways
	4 Ability to assess child
Clinical Skills	4 Ability to form a viable investigation and treatment plan
	4 Ability to communicate with all relevant groups
Technical Skills and Procedures	Not at this level
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Diabetes
Category	Endocrine conditions
Sub-category:	None

	<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>
Objective	<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>
	3 Likely modes of presentation
Knowledge	3 Differential diagnosis
	3 Place and value of investigations
	3 Knowledge of appropriate referral pathways
	4 Ability to assess child
Clinical Skills	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)
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Disorders of Growth
Category	Endocrine conditions
Sub-category:	None
	<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>
Objective	<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>
	3 Likely modes of presentation
Knowledge	3 Differential diagnosis
	3 Place and value of investigations
	3 Knowledge of appropriate referral pathways
	4 Ability to assess child
Clinical Skills	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)
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

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>

To be able to formulate a differential diagnosis and an investigation and management plan

To be able to identify the need for surgery and influence of endocrine conditions on surgery

To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source

To be able to practice with integrity, respect and compassion

3 Likely modes of presentation

3 Differential diagnosis

3 Place and value of investigations

3 Knowledge of appropriate referral pathways

4 Ability to assess child

Clinical Skills 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)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic **Chest wall anomalies**

Category Thoracic Anomalies

Sub-category: None

To understand the presenting symptoms of thoracic anomalies in childhood and their management

To be able to formulate a differential diagnosis and an investigation and management plan

Objective *To identify the place of surgery*

To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source

To be able to practice with integrity, respect and compassion

4 Likely modes of presentation

4 Differential diagnosis

Knowledge 4 Place and value of investigations

4 Knowledge of appropriate referral pathways

4 Outcomes of surgery

4 Ability to assess child

Clinical Skills 4 Ability to form a viable investigation and treatment plan

4 Ability to communicate with all relevant groups

1 Repair pectus excavatum (ST5 & ST6)

2 Repair pectus excavatum (ST7)

3 Repair pectus excavatum (ST8)

Technical Skills and Procedures 1 Repair pectus carinatum (ST5 & ST6)

2 Repair pectus carinatum (ST7)

3 Repair pectus carinatum (ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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> <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>
Technical Skills and Procedures	<p>1 Partial pulmonary lobectomy (ST5 & ST6)</p> <p>2 Partial pulmonary lobectomy (ST7)</p> <p>3 Partial 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>

- 2 Insertion of percutaneous chest drain (ST5)
- 3 Insertion of percutaneous chest drain (ST6)
- 4 Insertion of percutaneous chest drain (ST7 & ST8)

- 1 Open pleural debridement - ST5
- 2 Open pleural debridement - ST6
- 3 Open pleural debridement - ST7
- 4 Open pleural debridement - ST8

- 1 Thorascopic pleural debridement - ST5
- 2 Thorascopic pleural debridement - ST6
- 3 Thorascopic pleural debridement - ST7
- 4 Thorascopic pleural debridement - ST8

- 1 Rigid bronchoscopy -ST5, ST6
- 2 Rigid bronchoscopy -ST7
- 3 Rigid bronchoscopy -ST8

- 1 Fibreoptic bronchoscopy -ST5, ST6
- 2 Fibreoptic bronchoscopy -ST7
- 3 Fibreoptic bronchoscopy -ST8

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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	<ul style="list-style-type: none"> 3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of developmental embryology and pertinent anatomy 3 Knowledge of appropriate referral pathways 3 Outcomes 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 Tracheostomy (ST5 & ST6) 2 Tracheostomy (ST7) 3 Tracheostomy (ST8) 2 Rigid bronchoscopy (ST5 & ST6) 3 Rigid bronchoscopy (ST7)

4 Rigid bronchoscopy (ST8)

1 Fibreoptic bronchoscopy (ST5 & ST6)

2 Fibreoptic bronchoscopy (ST7)

3 Fibreoptic bronchoscopy (ST8)

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic	Inhaled /aspirated /ingested foreign body
Category	Thoracic Anomalies
Sub-category:	None
Objective	<i>To understand the presenting symptoms of thoracic anomalies in childhood and their management To be able to formulate a differential diagnosis and an investigation and management plan To identify the place of surgery To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source 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 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 removal of FB from bronchus (ST5 & ST6) 3 Rigid removal of FB from bronchus (ST7) 4 Rigid removal of FB from bronchus (ST8)
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic Intra-operative care
Category Operative skills
Sub-category: None
Objective *To ensure the trainee has reached a level of competence in a range of basic operative procedures.*

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

Technical Skills and Procedures No content

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic Post-operative care
Category Operative skills
Sub-category: None
Objective *To ensure the trainee has reached a level of competence in a range of basic operative procedures.*

Knowledge

- 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

- 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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic NHS Structure
Category Management
Sub-category: None

To understand the current structure and function of the NHS

Objective *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

Knowledge
3 Current structure of NHS
3 Role of DoH
3 Role of Strategic Health Authority
3 Role of regulatory agencies

Clinical Skills 3 Ability to identify impact of structures / changes on delivery of care

Technical Skills and Procedures No content

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic **Trust Managerial structures**

Category Management

Sub-category: None

Objective
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

Knowledge
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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic **Leadership**

Category Management

Sub-category: None

Objective
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

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
	3 Ability to identify own style of leadership
Clinical Skills	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
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Supporting training
Category	Management
Sub-category:	None
Objective	<i>To develop the skills required to support training of peers and colleagues.</i>
	3 Principles of coaching, training and mentoring
	3 Principles and uses of assessment and appraisal
Knowledge	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)
	3 Ability to train junior trainees
	3 Ability to provide appropriate guidance to trainees through use of techniques of feedback, appraisal and assessment
Clinical Skills	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
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Interview process
Category	Management
Sub-category:	None
Objective	<i>To be able to participate appropriately in interview process.</i>
	3 Role of interview in selecting candidates for training
	3 Use of different types of interview
Knowledge	3 Role of panel members
	3 Legal requirements of panel members with respect to Employment and Equal Opportunities legislation
	3 Ability to ask appropriate questions depending on style of interview
Clinical Skills	3 Ability to provide feedback for both successful and unsuccessful candidates
	3 Completion of paperwork for committee
Technical Skills and Procedures	No content
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Urinary Tract Infection
Category	Paediatric Urology Special Interest
Sub-category:	None
Objective	<i>None</i>
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 4 Ability to assess child
Clinical Skills	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
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Haematuria
Category	Paediatric Urology Special Interest
Sub-category:	None
Objective	<i>None</i>
Knowledge	4 Patterns of symptoms and relation to likely pathology and age of child 4 Differential diagnosis 4 Place and value of investigations 4 Ability to assess child
Clinical Skills	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
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Hypospadias
Category	Paediatric Urology Special Interest
Sub-category:	None
Objective	<i>None</i>
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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic **Urinary tract calculus disease**

Category Paediatric Urology Special Interest

Sub-category:	None
Objective	<i>None</i>
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
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Bladder dysfunction (Incl. neuropathic bladder)
Category	Paediatric Urology Special Interest
Sub-category:	None
Objective	<i>None</i>
Knowledge	4 Likely modes of presentation 4 Differential diagnosis 4 Place and value of investigations 4 Knowledge of appropriate referral pathways 4 Ability to assess child 4 Ability to form a viable investigation and treatment plan, including appropriate range of operative interventions
Clinical Skills	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
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills

Topic	Renal Failure
Category	Paediatric Urology Special Interest
Sub-category:	None
Objective	<i>None</i>
Knowledge	4 Likely modes of presentation 4 Differential diagnosis 4 Place and value of investigations 4 Knowledge of referral criteria to renal medical colleagues 4 Ability to assess child
Clinical Skills	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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic **Duplication of urinary tract**

Category Paediatric Urology Special Interest

Sub-category: None

Objective *None*

Knowledge 4 Likely modes of presentation
4 Embryological derivation and anatomical variants
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

Professional Skills Please see the [Professional Skills and Behaviour » Final](#) section for these skills

Topic **Intersex conditions**

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
Professional Skills	Please see the Professional Skills and Behaviour » Final section for these skills