

Basic Training Paediatrics & Child Health







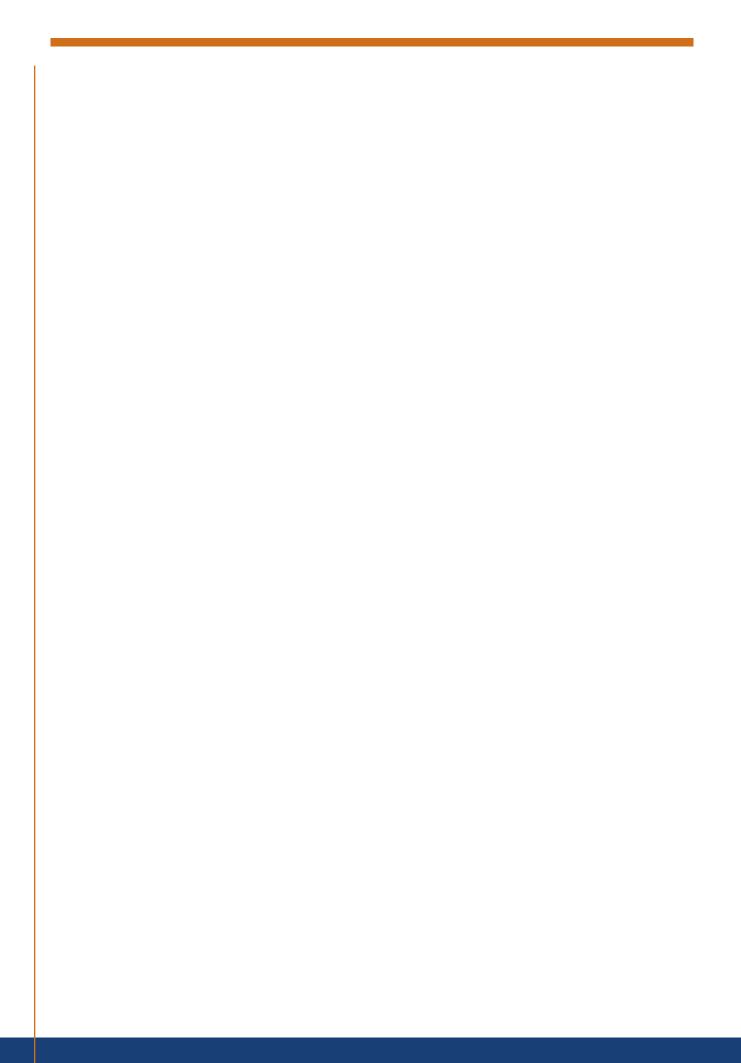
The Royal Australasian College of Physicians

BASIC TRAINING PROGRAM CURRICULUM

PAEDIATRICS & CHILD HEALTH

TO BE USED IN CONJUNCTION WITH:

Professional Qualities Curriculum



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Please note: No Domains, Themes or Learning Objectives have been updated for this edition; design changes ONLY.

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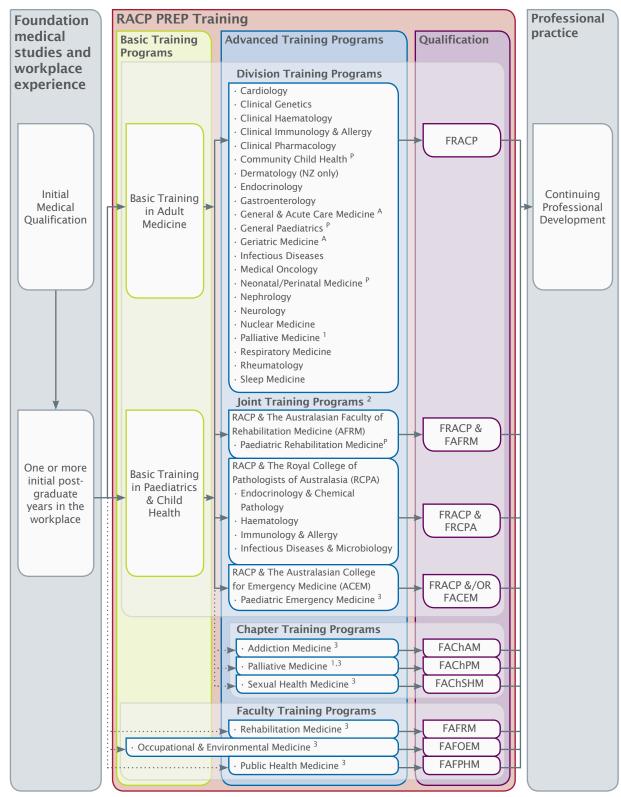
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RACP FELLOWSHIP TRAINING PATHWAYS AND THE CONTINUUM OF LEARNING



- Trainees must complete Basic Training in Paediatrics & Child Health to enter this program.
- Trainees must complete Basic Training in Adult Medicine to enter this program.

 Trainees who have entered Advanced Training in Palliative Medicine via a RACP Basic Training Program will be awarded FRACP upon completion and may subsequently be awarded FAChPM. Trainees who have NOT entered Advanced Training in Palliative Medicine via a RACP Basic Training Program will only be awarded FAChPM upon completion.
- The Child & Adolescent Psychiatry Joint Training Program with the Royal Australian and New Zealand College of Psychiatrists (RANZCP) is currently under review by the RACP and RANZCP and closed to new entrants at present.
- Alternative entry requirements exist for these training programs; please see the corresponding PREP Program Requirements Handbook for further information.

NB1: This diagram only depicts training programs that lead to Fellowship. Please see the RACP website for additional RACP training programs.

NB2: For further information on any of the above listed training programs, please see the corresponding PREP Program Requirements Handbook.

THE CONTEXT OF BASIC TRAINING

The medical profession is currently operating within a context of rapidly increasing change in terms of the various professional, societal, economic, political and technological aspects which impact upon its practice and the society within which it operates. Trainees will need to be cognisant of these various situations and incorporate the relevant aspects into the context of their overall training program.

Some of these key impacts include:

- changing views of the profession towards training and assessment
- increased community expectations of health care providers
- exponential growth in the scope and depth of medical knowledge
- rapid introduction of new medical technology and procedures
- certification and continuing education
- increased litigation
- increased concern regarding the cost of health care
- worldwide shortage of doctors
- shorter working hours, and changing industrial landscape
- mismatches between health care needs and health care delivery locally and internationally.

FOCUS OF BASIC TRAINING IN PAEDIATRICS & CHILD HEALTH

This training program will focus on developing core skills and knowledge, introducing each of the disciplines and providing a foundation for consolidation and further study within Advanced Training.

- The aim of the Basic Training program is to produce trainees capable of entering any of the specialty training programs.
- Such trainees are differentiated from others by their:
 » high level of medical basic science knowledge
 » generic skills development.
- They will have:
 - » the ability to diagnose and manage all common acute medical presentations and refer as appropriate
 - » skills, including communication and working as a team, in the management of complex and chronic medical conditions
 - » a good 'breadth of competence' and some 'depth of competence' across the medical specialties.

Trainees need to develop a reasonable working knowledge of either Aboriginal or Māori attitudes towards health as a basis for working skills with Aboriginal/Māori children and their families and as a template for recognising the cultural component in history taking, examination and management.

LINK TO PROFESSIONAL QUALITIES CURRICULUM

The Professional Qualities Curriculum outlines the range of concepts and specific learning objectives required by, and utilised by, all physicians and paediatricians, regardless of their specialty or area of expertise.

Each of these concepts and objectives will be taught, learnt and assessed within the context of everyday clinical practice. It is important, therefore, that they be aligned with, and fully integrated into, the learning objectives within this curriculum.

EXPECTED OUTCOMES AT THE COMPLETION OF TRAINING

At the completion of Basic Training, it is expected that trainees will have:

- built on the knowledge and skills acquired during medical school and the pre-vocational post-graduate years
- gained experience within, and had the opportunity to develop and demonstrate competency in a comprehensive range of 'core' generic and disciplinespecific knowledge, clinical skills and attitudes
- had a broad-based exposure to, and clinical experience within, each of the discipline areas that will be further developed and focussed on during the subsequent Advanced Training program
- acquired a 'breadth of competence' that will be further developed into a 'depth of competence' within their Advanced Training program
- rotated through a series of training opportunities
- gained a background knowledge and understanding of the full range of discipline areas which will facilitate cross-referral/multi-specialty team work etc.
- demonstrated the ability to communicate effectively and sensitively with patients and their families, colleagues and other allied health professionals
- gained an initial understanding of, and be able to acknowledge, the importance of the various socioeconomic factors that contribute to illness and vulnerability

- acquired an awareness of, and sensitivity to, the special needs of patients from culturally and linguistically diverse backgrounds
- acquired the skills to be able to work within and fully utilise multidisciplinary team-based approaches to the assessment, management and care of their patients
- implemented their future career planning and decision making processes based on a more informed level of knowledge and understanding.

COMMON ATTITUDES AND BEHAVIOURS

The range of desirable personal and professional behavioural attitudes required of, and commonly utilised by, all consultant physicians and paediatricians in the course of their daily clinical practice and in their relationship with others are listed below. These will facilitate appropriate patient care and management associated with professional practice when working with patients, their families, professional colleagues, and allied medical and administrative personnel. Depending upon the clinical context, each of these may be utilised individually, or, more commonly, in combination with others.

PERSONAL ATTITUDES

- having an inherent attitude that children are good and to approach the challenges they may bring in a spirit of optimism and as a learning opportunity for parents
- fostering of a patient-centred approach to health care
- maintenance of a balanced and broad perspective on health care delivery
- preparedness to learn and adopt new and validated approaches to diagnosis and management, despite logistical difficulties, and to change work practices when appropriate
- willingness to reflect on, and learn from, mistakes
- preparedness to change management plans
- tolerance of uncertainty
- ability to cope with unexpected disappointments
- equanimity, resiliency and calmness in the face of challenging clinical demands
- desire to contribute to improvements in the health system
- desire to foster clinical practice, research and teaching in general internal medicine
- preparedness to acknowledge doubt and uncertainty in clinical practice.

ATTITUDES AND BEHAVIOURS WITH PATIENTS AND FAMILIES

- use of a positive, compassionate, caring and empathic attitude towards patients and their family/carers
- involvement of patients as equals in identification of treatment priorities and in the development of the care plan
- ensuring patient confidentiality, particularly where others are involved in the development of a care plan
- imparting of 'bad news' in a compassionate and positive manner
- use of a clinical approach that models and reinforces preventive and prophylactic approaches to health care
- encouragement of patient mastery, including participation in self-awareness and rehabilitation programs
- use of a non-judgemental approach to the assessment of all determinants of illness
- willingness to accede to requests for a second opinion
- provision of constructive and evidence-based advice on complementary and alternative management approaches, when patients and their families wish this.

ATTITUDES AND BEHAVIOURS WITH COLLEAGUES

- preparedness to collaborate with primary carers, other referrers and sub-specialists in the care of patients by providing consultative advice, sharing of care, or accepting ongoing care in the best interests of the patient
- willingness to work in a multidisciplinary team
- use of an independent, assertive, inquiring but nonetheless professionally courteous manner in interactions with subspecialty colleagues
- willingness to share knowledge and skills with colleagues
- fostering of a peer network and collaborative relationships in the health care system
- provision of reassurance and support to colleagues
- zero tolerance in the workplace of sexual harassment and discrimination
- respect for, and acknowledgement of, professional contributions of all others in the workplace, including office staff and employees.

ASSESSMENT

OVERVIEW

Below is an overview of the assessment tools used during Basic Training. A variety of tools are used, with the emphasis on provision of constructive feedback to trainees, to aid their learning. The assessment tools require the trainee to provide good patient care and act as quality assurance towards this goal. Thus, the better a person performs on the job, the better they will perform within the formal assessment program.

The assessment system links closely with service provision, reducing the need to spend time away from the job studying books and examination technique. Rather, the centralised examinations are linked with the curriculum and are complemented with on-the-job assessment.

OUTLINE OF STRATEGIES

A similar range of strategies will be employed for Basic Training and Advanced Training. This section deals with those tools that will be used during Basic Training.

Formative mini-Clinical Evaluation Exercise (mini-CEX)

Trainees are required to complete a number of formative mini-CEX activities throughout Basic Training, covering history taking, clinical examination, and health promotion aspects of the curriculum. These are carried out in the trainee's usual workplace.

Multi-Source Feedback (MSF)

Also known as 360° feedback, the MSF is designed to assess areas of the Professional Qualities Curriculum, particularly around communication, management, and to some degree cultural competency.

APLS/ALS course

Is compulsory for all trainees, and should ideally be completed during Basic Training.

Centralised Written Examination

A multiple-choice examination, blueprinted to the curriculum.

Centralised Clinical Examination

Consists of two long cases and four short cases.

HOW THEY ARE TO BE USED

Progression to Advanced Training will depend on completion of the requirements for Basic Training as well as:

- A summative Written Examination
- Four summative short cases and two summative long cases, which make up the central Clinical Examination.

NOTE: Trainees should refer to the RACP Basic Training Portal (www.racp.edu.au/btp) for the most up-to-date assessment requirements.

RELEVANT LITERATURE

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CURRICULUM DOMAINS, THEMES AND LEARNING OBJECTIVES

Each of the curriculum documents has been developed using a common format, thereby ensuring a degree of consistency and approach across the spectrum of training.

Domains

The Domains are the broad fields which group common or related areas of learning.

Themes

The Themes identify and link more specific aspects of learning into logical or related groups.

Learning Objectives

The Learning Objectives outline the specific requirements of learning. They provide a focus for identifying and detailing the required knowledge, skills and attitudes. They also provide a context for specifying assessment standards and criteria, as well as providing a context for identifying a range of teaching and learning strategies.

Domain 1: Clinical Process

THEME 1.1 - CLINICAL SKILLS

Learning objectives

- 1.1.1 Elicit the history and obtain other relevant data
- 1.1.2 Conduct an appropriate physical examination
- 1.1.3 Synthesise findings from history and physical examination to develop a differential diagnosis and management plan
- 1.1.4 Plan and arrange investigations appropriately

THEME 1.2 - PATIENT CARE AND THERAPEUTICS

Learning objectives

- 1.2.1 Manage general care of the sick child and youth
- 1.2.2 Prescribe appropriate and safe pharmacotherapy
- 1.2.3 Incorporate health and wellness promotion in clinical practice
- 1.2.4 Manage patients with surgical problems
- 1.2.5 Facilitate ongoing care planning

THEME 1.3 - PROCEDURAL SKILLS

Learning objectives*

- 1.3.1 Prepare patient and family for procedures
- 1.3.2 Competently perform procedures relevant to Paediatric Medicine
- 1.3.3 Provide care following procedure

^{*} Note: Refer also to Appendix 1 for a list of assumed Procedural Skills relevant to General Medicine

THEME 2.1 - MANAGEMENT OF ACUTE MEDICAL PROBLEMS

Learning objectives

- 2.1.1 Recognise and manage the critically ill patient
- 2.1.2 Manage specific acute medical problems
- 2.1.3 Communicate with patients and their families/carers in an emergency situation

THEME 2.2 - MANAGE PATIENTS WITH UNDIFFERENTIATED PRESENTATIONS Learning objectives

2.2.1 Manage patients with undifferentiated presentations

THEME 2.3 - MANAGE PATIENTS WITH DISORDERS OF ORGAN SYSTEMS Learning objectives

- 2.3.1 Manage patients with disorders of the cardiovascular system
- 2.3.2 Manage patients with endocrine and metabolic disorders
- 2.3.3 Manage patients with disorders of the gastrointestinal system
- 2.3.4 Manage patients with non-malignant disorders of the haematological system
- 2.3.5 Manage patients with disorders of the immune system
- 2.3.6 Manage patients with mental health disorders
- 2.3.7 Manage patients with disorders of the musculoskeletal system
- 2.3.8 Manage patients with disorders of the neurological system
- 2.3.9 Manage patients with disorders of the renal and genitourinary systems
- 2.3.10 Manage patients with disorders of the respiratory and sleep system
- 2.3.11 Manage patients with skin disorders
- 2.3.12 Manage patients with ophthalmological disorders
- 2.3.13 Manage patients with otorhinolaryngology (ENT) and oral health problems

THEME 2.4 - MANAGE PATIENTS WITH DEFINED DISEASE PROCESSES Learning objectives

- 2.4.1 Manage patients with neoplastic diseases
- 2.4.2 Manage patients with genetic disorders
- 2.4.3 Manage patients with infectious diseases
- 2.4.4 Manage patients with disorders of metabolism

Domain 2: Medical Expertise (Cont.)

THEME 2.5 - MEDICINE THROUGHOUT THE LIFESPAN/GROWTH AND DEVELOPMENT Learning objectives

- 2.5.1 Manage common presentations in the newborn period
- 2.5.2 Manage common presentations related to growth during childhood
- 2.5.3 Manage common presentations in adolescents
- 2.5.4 Recognise and manage common problems of behaviour and development
- 2.5.5 Recognise and manage common child protection problems
- 2.5.6 Manage patients at the end of life

LEARNING OBJECTIVE TABLES

The following tables indicate the range of underpinning knowledge and skills associated with each of the specific learning objectives.

Colour Coding for the Domains		
Tan	-	Basic Science
Orange	- -	common and important conditions – essential knowledge/skills must be known in depth
Green	- -	conditions – important knowledge/skills must have a sound understanding

THEME 1.1: Clinical Skills

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 1.1.1: Elicit the history and obtain other relevant data

LINKS: BTC – 2.1.1, PQC – communication; resource management

KNOWLEDGE

Comprehensive approach to patient history, including systems review.

Different approaches to history taking as needed in various clinical settings, such as acute inpatient, emergency, ambulatory care and telephone/video conference consultation settings.

Other potential sources of data, e.g. personal health records, medical records, immunisation register, general practitioner, family developmental and educational history.

An approach to history taking that is adaptable to the circumstances, family culture, age of the child and nature of the problem.

Appropriate knowledge of Aboriginal and Māori cultural attitudes towards children and health as a template for cultural awareness.

SKILLS

Ability to:

- establish a rapport and professional relationship with patients of all ages, their carers and relatives
- take and document an appropriate history from the child, young person or adolescent appropriate to their developmental stage
- involve parents/carers in history taking process as and when appropriate
- develop a reasonable working knowledge of either Aboriginal or Māori attitudes towards health as a basis for working skills with Aboriginal/Māori children and their families and as a template for recognising the cultural component in history taking, examination and management
- take and document a behavioural and developmental history
- obtain a focussed, efficient, time-effective and accurate history
- give appropriate emphasis to functional and social history
- use a range of strategies to corroborate information given by patient and carers taking particular account of their culture
- evaluate critically the history in light of the degree of functional impairment, physical findings, and other data
- gather accurate data in complex situations (e.g. non-English speakers, confused patients etc.)
- persist in seeking information to assist in clinical decision making and clarification
- alertly observe parent/carer and child interaction, child behaviour, body language
- capacity to work skilfully with Māori and Aboriginal children and their families
- identify actual carer accurate determination of who is legally responsible for care of child.

THEME 1.1: Clinical Skills

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 1.1.2: Conduct an appropriate physical examination

LINKS: PQC – obtaining consent, communication skills, cultural competency, ethics, clinical decision making

KNOWLEDGE	SKILLS
Structured, systematic approach to examination in all ages including detailed system examinations. Clinical signs and patterns. Evidence base for physical signs, e.g. reliability, areas of uncertainty. Ranges of normal stages of development and behaviour. Patterns of non-accidental injury.	 Ability to: perform a thorough, accurate, complete age and developmentally appropriate physical examination of patients perform a focussed clinical examination in selected settings tailor a physical examination according to the patient's clinical history, age and developmental stage (may include involvement of parent/carer to assist) consider patient dignity and the need for a chaperone for some or all of the examination interpret physical signs accurately integrate data obtained by other health care workers (e.g. observations) into the physical examination findings document the examination findings clearly demonstrate sensitivity to patients who are in pain, embarrassed, or who are vulnerable.

THEME 1.1: Clinical Skills

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 1.1.3: Synthesise findings from history and physical examination to develop a differential diagnosis and management plan

LINKS: PQC - clinical decision making; discharge planning; identifying learning needs; reflective practice; organ systems; undifferentiated presentations (for differential diagnoses, provisional diagnoses); communication regarding illness severity, presenting a patient on a ward round, patient care and therapeutics

KNOWLEDGE	SKILLS
Refer to knowledge as listed in objectives 1.1.1 and 1.1.2.	Interprets and integrates the history and physical examination.
	Records history, examination findings, synthesis, and plans for and manages investigations accurately and concisely.
	Develops and maintains accurate documentation.
	Synthesises data and uses it appropriately.
	Formulates a complete and reasoned problem list with differential diagnoses and a management plan.
	Prioritises the problem list, particularly in patients with multiple medical problems.
	Adapts approach to management of each disorder to take account of patient factors and comorbidities.
	Justifies the diagnosis based on clinical information.
	Modifies working diagnosis based on new information or response to therapy.
	Communicates with the patient, their families and their carers and other health professionals to develop a management plan.
	Provides instructions regarding frequency of observations and clear instructions on parameters for action.

THEME 1.1: Clinical Skills

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 1.1.4: Plan and arrange investigations appropriately

LINKS: PQC – diagnostic reasoning, informed consent, communication; BTC – medical expertise systems based

Clinical indications, contra-indications and relative risks of investigations. Relative cost of investigations. Impact of false negatives and false positives on patient care. Understand the capabilities and limitations of chosen tests, including an understanding of the statistical properties of tests. Rationally and efficiently plans and arranges investigations based on findings from history and physical examination. Adapts approach to investigations taking into account patient factors and comorbidities. Weighs the costs and benefits of investigations in each clinical situation. Chooses the most cost-effective investigations used for	KNOWLEDGE	SKILLS
effective clinical care and recognises situations where it is appropriate to not investigate at all. Checks results of investigations in a timely manner and acts on results appropriately. Modifies working diagnosis and treatment plan in response to investigation results.	risks of investigations. Relative cost of investigations. Impact of false negatives and false positives on patient care. Understand the capabilities and limitations of chosen tests, including an understanding of the	investigations based on findings from history and physical examination. Adapts approach to investigations taking into account patient factors and comorbidities. Weighs the costs and benefits of investigations in each clinical situation. Chooses the most cost-effective investigative path. Minimises the number of investigations used for effective clinical care and recognises situations where it is appropriate to not investigate at all. Checks results of investigations in a timely manner and acts on results appropriately. Modifies working diagnosis and treatment plan in

THEME 1.2: Patient Care and Therapeutics

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 1.2.1: Manage general care of the sick child and youth

LINKS: BTC – 2.2.4 Haematological, 1.2.2, 2.3.6, 2.4.3; PQC – self-management, professional practice (diligence in reviewing patients, checking results before leaving etc.), 2.5.5

KNOWLEDGE	SKILLS
Management of fluid and electrolyte balance Physiology of body fluids. Fluid and electrolyte requirements in well and unwell infants and children of different ages. Principles of fluid/electrolyte replacement and maintenance. Content of commonly available replacement fluids.	Performs accurate clinical assessment of fluid status. Identifies appropriate replacement and maintenance fluids with respect to patient's current fluid/electrolyte status, age and comorbidities. Selects appropriate method of delivery of fluids and electrolytes. Appropriately monitors ongoing fluid and electrolyte status and responds to changes in status.
Use of oxygen therapy Indications for use of oxygen therapy and positive pressure ventilation in both acute and chronic setting (Link to respiratory and emergency). Methods of delivery of oxygen and ventilation in children of different ages. Adverse effects of oxygen therapy.	Uses pulse oximetry and blood gases appropriately to determine need for, and monitoring of, therapy. Selects appropriate method of oxygen delivery and monitors for effectiveness and complications of therapy.
Use of blood products Components of commonly available blood products. Indications, contra-indications and adverse effects of the use of blood products. Consent issues for the use of human blood products. Local guidelines for ensuring safe use of blood products.	Uses products within local guidelines. Recognises adverse effects of transfusion and manages appropriately

KNOWLEDGE (Cont.)	SKILLS (Cont.)
Nutrition Normal nutritional requirements in the neonatal period, infancy and childhood	Performs appropriate assessment of nutritional status, including contribution of comorbidities, cultural and religious factors.
Effect of disease on nutrition status and growth. Effect of nutritional status on clinical outcomes.	Is able to interpret growth over time using growth charts.
Available forms of nutritional supplementation, together with potential complications and cost.	Selects appropriate form of nutritional supplementation for patient's needs and circumstances.
	Appropriately monitors response to nutritional supplementation including potential complications of therapy.
Pain management	Takes a relevant pain history:
Pathophysiology of pain (links to palliative care).	• identifies source (or potential sources) of pain
Measurement of pain. Non-pharmacologic or non-drug approaches to	 understands and completes common pain scoring tools
management of pain.	utilises non-drug approaches to pain
Classes of commonly available analgesics and	management
adjuvants with respect to mode of action, pharmacokinetics, potency and efficacy in various pain syndromes.	 prescribes appropriate analgesia and adjuvants with reference to cause, severity, comorbidities and co-medications
Common adverse effects and drug interactions for drug class.	 monitors efficacy of treatment and adjusts regime appropriately.
Principles of acute and chronic pain management.	regime appropriately.
Principles of adjuvant therapy in pain management.	
Psychosocial care	Identifies psychosocial factors impacting on
Psychosocial and cultural factors impacting on illness behaviour.	presentation and outcomes in individual patients.
Risk factors for and symptoms of mental health	Identifies the impact of illness on the family.
disorder in children with acute and chronic illness.	Ensures appropriate strategies in place to assist in managing social and cultural issues.
Prevention of infection	Complies with isolation procedures.
Universal precautions.	Complies with universal precautions.
Hospital practices to reduce infectious risk.	Complies with hand washing guidelines and other
Isolation procedures.	guidelines to limit nosocomial infection.
Hand washing.	
Infection control principles.	
Child protection issues	Identifies the at-risk child and youth.
Identification of presentations of at-risk children.	Complies with legislative requirements.
Understanding of legislation surrounding mandatory notification and use of statutory powers.	

THEME 1.2: Patient Care and Therapeutics

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 1.2.2: Prescribe appropriate and safe pharmacotherapy

LINKS: BTC – 2.4.1, 2.3.6; PQC – quality and safety

KNOWLEDGE	SKILLS
Mechanisms of action of drugs at the receptor and intracellular level. Principles of absorption, distribution, metabolism and excretion of drugs. Principles of transmission of drugs in breast milk. Pharmacokinetics in premature and term newborn infants, and children of different ages. Importance of genetic alterations in drug metabolism. Pharmological basis of drug interactions. Impact of organ dysfunction on pharmacokinetics and dose modification.	Applies basic science principles in prescribing. Prescribes appropriately with reference to specific patient factors, including allergies and adverse effects. Calculates loading doses and maintenance doses. Calculates GFR, body surface area.
Principles of prescribing Patient factors impacting on prescribing – allergy, age. Appropriate dose adjustments in disease, growth. Principles of dose titration. Legislation regarding prescribing, and controlled and restricted drugs.	Takes a complete drug history, including history of use of complementary therapies and over-the-counter medicines. Consults pharmacist/MIMS/similar databases to obtain prescribing information. Uses locally appropriate guidelines for prescribing. Writes a clear and unambiguous prescription. Provides accurate medication list on discharge and clinic letters, along with a plan for evaluating drug effect/dose adjustment/monitoring for adverse effects.

KNOWLEDGE (Cont.)	SKILLS (Cont.)
Adverse drug reactions and interactions Common and life-threatening drug interactions and common presentations of drug-induced disease, adverse drug reactions. Common interactions between prescription and non-prescription and complementary and alternative therapies. Understanding of why patients may use complementary and alternative therapies.	Identifies presence of, or potential for, adverse drug reaction and drug interactions, and treats appropriately. Monitors for development of common adverse drug reactions including selection of appropriate laboratory investigations (e.g. monitoring of renal or hepatic function).
Therapeutic drug monitoring Indications for monitoring plasma concentrations or pharmacological effects of specific drugs.	Monitors drug levels and effects when appropriate and responds accordingly to results.
Quality use of medicines Factors affecting adherence. Factors increasing risk of medication error. Techniques for enhancing medication safety. Factors predisposing to polypharmacy (therapeutic cascade) and reasons for over- prescribing. Age and developmentally appropriate delivery techniques. Mode of action, adverse effects, interactions, pharmacokinetics of commonly used drugs in child and youth, and of specific drugs used for treatment of disorders as listed in 2.1, 2.2, 2.3, 2.4 and 2.5. Understanding of problems of addiction in the foetus and newborn. Epidemiology, natural history, clinical factors and complications of diseases and disorders associated with substance abuse and depression.	Practices regular medication review with appropriate adjustment of regimen and avoidance of polypharmacy. Ceases medications where proven ineffective or no longer indicated. Engages patient, family and/or carers in decision making, explaining drug therapy and monitoring and following up verbal with written information where appropriate. Assesses patient uses of delivery devices. Uses a range of strategies to enhance patient adherence. Use medications in accordance with nationally accepted current guidelines.

THEME 1.2: Patient Care and Therapeutics

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 1.2.3: Incorporate health and wellness promotion in clinical practice

LINKS: PQC – population health; BTC – organ systems

KNOWLEDGE	SKILLS
Normal nutritional requirements in the neonatal period, infancy and childhood. Benefits of breast-feeding for pre-term and term infants. Principles of healthy eating across childhood including infancy and adolescence. Causes of obesity in children and impact on health. Strategies to attain healthy weight. Composition of commonly available breast-milk substitutes and indications for use.	Assesses nutritional and growth status during clinical encounters. Supports breast-feeding in infants where possible. Identifies reasons for obesity in individual patients and develops strategies to manage weight. Communicates importance of healthy eating to patients and parents and refers appropriately for assistance.
Healthy lifestyle Importance of and preventive strategies for appropriate levels of physical activity. Importance of and preventive strategies for psychosocial wellbeing. Importance of and preventive strategies for safety and injury prevention, including ingestions. Role of environmental exposures, e.g. smoking, fluoride. Safe sleeping environments and SIDS prevention.	Assesses lifestyle factors during clinical encounters. Provides specific advice regarding modification of negative risk factors.

KNOWLEDGE (Cont.)	SKILLS (Cont.)
Immunisation Benefits of immunisation to the individual and to	Assesses immunisation status during clinical encounters.
the community Current schedule and indications and contra- indications for immunisation.	Answers appropriately commonly asked questions about childhood immunisation.
Indications for additional immunisations in specific groups of children.	
Common as well as rare but serious adverse events from immunisation.	
Screening for health	Counsels parents on benefits of screening
Principles of effective screening and surveillance.	programs.
Neonatal screening tests.	
Healthy hearing screening.	
Self-management	
Techniques for encouraging self-management of health and chronic disease.	
Best practice self-monitoring in established chronic disease, e.g. diabetes.	

Domain 1: Clinical Process	
THEME 1.2: Patient Care and Therapeutics	BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH
LEARNING OBJECTIVE 1.2.4: Manage patients with surgical problems	
LINKS: BTC – 1.2.1, 1.2.2, 2.3.1, 2.3.2.	
KNOWLEDGE	SKILLS
Embryology and anatomy relevant to conditions below. Peri-operative treatment of child with chronic illness who needs surgery.	 Demonstrates proficiency in: suturing and other techniques for wound repair perioperative fluid and electrolyte management appropriate pain relief application of splints and plasters interpretation of abdominal X-ray, abdominal contrast studies and computerised tomography identification of high-risk perioperative patients and development of a management plan that minimises risk communication with appropriate services.

KNOWLEDGE (Cont.)

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications, and therapeutic options:

- pyloric stenosis
- testicular torsion
- hydrocele
- appendicitis
- inguinal hernia
- · acute abdominal pain
- intussusception
- intestinal obstruction
- neck masses
- congenital diaphragmatic hernia
- tracheo-oesophageal fistula
- hypospadias
- fractures
- choanal atresia
- anorectal malformations
- cleft lip and palate
- head injury
- lacerations
- burns.

Peri-operative management of systemic and chronic disease

Indications for SBE prophylaxis.

Peri-operative care of the diabetic patient.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations. Initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

Appropriate prescribing of SBE prophylaxis.

Appropriate care of the peri-operative diabetic patient.

THEME 1.2: Patient Care and Therapeutics

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 1.2.5: Facilitate ongoing care planning

LINKS: PQC – 1.3.1, 1.3.2, 1.3.3, 7.2.1

KNOWLEDGE SKILLS

Basic Science

Discharge planning as a component of case management.

Goal setting.

Available educational support services.

Available local community resources.

Developmental and psychological impact of the chronic condition.

Transition to adult care.

Performs an assessment, including:

- nutrition
- continence
- · contractures/spasticity
- · activities of daily living
- developmental and educational status
- mental health status
- attitudes and goals of patients and carers
- family support
- pain.

Writes a concise, accurate and relevant discharge summary.

Writes concise, accurate and relevant outpatient and referral letters.

Works effectively in a multidisciplinary team.

Refers appropriately to other subspecialty services.

Refers appropriately to other allied health and community-based services.

Liaises with educational services.

Provides holistic overview of patient's progress.

Advocates for patient and carers.

Forms partnerships with patient and family.

Prepares patient and family for transition to adult

Facilitates medical aids and device, e.g. home oxygen/wheelchairs.

KNOWLEDGE (Cont.)

For the following common and important conditions, the epidemiology, principles of ongoing management, potential complications of the disease and its management, preventive strategies:

- cerebral palsy
- neural tube defect
- diabetes
- cystic fibrosis
- trisomy 21
- chronic neonatal lung disease
- common neuromuscular disorders.

For the following conditions, the potential complications, therapeutic options and indications for referral:

- · acquired brain injury
- · spinal cord injury
- burns.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and independently initiates appropriate management for uncomplicated disease.

Recognises complications and refers appropriately.

Monitors for complications.

Domain 1: Clinical Process

THEME 1.3: Procedural Skills (refer also to Appendix 1 for a list of assumed Procedural Skills relevant to General Medicine)

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 1.3.1: Prepares patient and family for procedure

KNOWLEDGE SKILLS Indications, contra-indications and potential Explains procedure to patient and family and adverse events related to procedure. obtains informed consent. Principles of informed consent and Documents discussion and informed consent with documentation of consent. patient and family. Indications, contra-indications, side-effects of Prepares the patient, carers, staff and environment analgesia, anaesthesia and sedation. for procedure. Administers appropriate analgesia, local Potential complications of procedure. anaesthetic, sedation and distraction activities. Appropriate instruments and environment including infection-control measures and staffing Responds appropriately to changes in requirements required for procedure. observations.

THEME 1.3: Procedural Skills

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 1.3.2: Competently perform procedures relevant to Paediatric Medicine (Note: Other procedures may be performed during Basic Training but will require further experience under supervision during advanced paediatrics training.)

KNOWLEDGE	SKILLS
Relevant anatomy. Indicators. Contra-indications. Risks and complication of procedures. Pain relief and sedation requirements for procedures.	Demonstrates proficiency in: venepuncture, cannulation of a child and neonate sterile access of an indwelling central venal catheter setting up a complete drip set and burette arterial blood sampling urethral catheterisation – male and female basic airway management bag and mask application of oxygen-administration devices basic and advanced life support intubations in straightforward situations spirometry and peak expiratory flow rate determiation umbilical vessel catheterisation nasogastric tube insertion 4 limb blood pressure supra pubic bladder aspiration DC cardioversion – emergency and elective pleural fluid aspiration, needle thoracocentesis intercostal tube insertion and intercostal drain management lumbar puncture non-invasive ventilation (e.g. CPAP, BiPaP) tracheostomy care and immediate complication management.

THEME 1.3: Procedural Skills

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 1.3.3: Provide care following procedure

LINKS: PQC Domain 1 – Communication – age-appropriate communication of what is happening to child

KNOWLEDGE	SKILLS
Potential complications of procedure.	Regular assessment of patient progress. Documents procedure and provides clear instructions related to observations required. Provides appropriate analgesia post procedure.

THEME 2.1: Management of Acute Medical Problems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.1.1: Recognise and manage the critically ill patient

LINKS: Procedural skills intubation, venous access, NIV: patient care – oxygen therapy, NIV; Resp; CVS; infectious disease;

PQC – communicating with colleagues and broader health care team; PQC – leadership and managing others

KNOWLEDGE	SKILLS
Different approaches to history taking as needed in various clinical settings, such as acute inpatient, emergency, ambulatory care and telephone/video conference consultation settings.	Provides pre hospital care advice. Recognises emergency situations. Recognises the critically ill child and youth.
Signs and symptoms of impending cardiorespiratory arrest.	
Principles of transportation.	Determines rapidly the clinical context and sequence of events leading to the emergency.
Clinical features and pathophysiological consequences of serious illness.	
Clinical features and pathophysiological consequences of major trauma.	Conducts a rapid focussed clinical examination and applies basic science knowledge to interpret clinical signs.
Causes of acute airway obstruction, respiratory	
failure, shock and coma. Principles of oxygen delivery and assisted	Establishes a provisional diagnosis and plans and arranges appropriate initial investigations.
ventilation.	Initiates appropriate emergency management,
Principles of fluid resuscitation.	including summoning help and urgent referral to other services.
Principles of inotropic support.	
Principles and practice of defibrillation.	Initiates and competently performs CPR and Basic Life Support.
Principles and practice of Basic Life Support. Principles and practice of Advanced Life	Initiates and competently performs Advanced Life
	Support.
Support.	Initiates and competently performs neonatal

KNOWLEDGE (Cont.)	SKILLS (Cont.)
Local admission criteria for ICU. Use of retrieval services. Principles of teamwork and leadership in an emergency situation.	Uses a range of strategies to advocate for the patient in situations where other services may appear slow to respond to the urgency of the situation. Discusses the situation with a more senior staff member at earliest appropriate opportunity and recognises if transportation or retrieval to another facility is required. Anticipates patients in whom there may well be a rapid deterioration, and reflects indicators and actions to be taken in the management plan. Develops appropriate care plans for patients in whom resuscitation or emergency escalation of care is not indicated. Appropriately documents these plans in the notes, and verbally to relevant health care staff.

Domain 2: Medical Expertise THEME 2.1: Management of Acute Medical **BASIC TRAINING CURRICULUM: Problems** PAEDIATRICS & CHILD HEALTH **LEARNING OBJECTIVE 2.1.2:** Manage specific acute medical problems **LINKS:** PQC – communication **SKILLS KNOWLEDGE** For the following emergencies or potential Recognises the emergency. emergencies, the trainee describes the clinical presentation, differential diagnosis, Conducts focussed clinical examination and underlying pathophysiology, initial applies basic science knowledge to interpret investigations, initial management, and clinical signs. likely complications: • stridor/airway obstruction, hypoxia, respiratory Establishes a provisional diagnosis, plans and arranges appropriate initial investigations, failure, status asthmaticus determines severity of organ dysfunction(s). • hypotension and/or shock – hypovolaemic, Initiates appropriate emergency management, septic, cardiogenic, neurogenic, anaphylactic including summoning help, and urgent referral to other services. • arrhythmias and rhythm disorders Monitors patient's condition appropriately and • collapse, altered conscious state, seizures, acute recognises and acts on complications. paraplegia/weakness, ascending motor-sensory level • acute agitation, suicidal behaviour, aggression • severe acid-base and electrolyte disturbances, hypoglycaemia, diabetic ketoacidosis (DKA), thyroid, adrenal and pituitary crisis • meningitis, encephalitis

hyperthermia and hypothermiaburns, extensive skin blistering

• tumour lysis syndrome.

KNOWLEDGE (Cont.)

The trainee describes the related pharmacology, clinical presentation and initial acute management of the following common and serious poisonings/overdoses:

- paracetamol
- antidepressants
- antipsychotic drugs
- alcohol
- amphetamines
- opioid drugs
- benzodiazepines
- anticholinesterases
- · carbon monoxide
- iron
- envenomation.

The trainee describes the pharmacology and clinical presentation of the following common and serious toxic syndromes:

- digoxin toxicity
- lead and arsenic poisoning
- anticholinergic syndromes
- serotonergic syndrome
- neuroleptic malignant syndrome.

SKILLS (Cont.)

For each of these poisonings the trainee identifies history, symptoms and signs of common poisonings and toxic syndromes, assesses and monitors for other serious consequences of poisoning, initiates emergency management including:

- Specific antidotes and antivenom.
- Enhancement of removal of drugs and poisons.
- Seeks specialist and ICU advice in a timely manner.
- Uses information databases and the poisons centre.
- Gives prevention advice.
- Assesses child protection risk.
- Assesses risk of deliberate self harm.

THEME 2.1: Management of Acute Medical Problems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.1.3: Communicate with patients and their families/carers in an emergency situation

LINKS: PQC – communication skills, communication with patient's family, ethical dimensions of the workplace, informed consent and competence

KNOWLEDGE	SKILLS
Refer to following aspects of the Professional Qualities Curriculum: • communicating with a patient's family and/or carers	Conveys to families the progress to date, likely cause for patient's condition, immediate therapeutic goals, expected outcome, and any limits on escalation of care.
ethical dimensions of the workplaceinformed consentcultural competency.	Discusses the current situation within the broader context of the trajectory (anticipation) of patient illness and quality of life including areas of uncertainty.
• •	Indicates when medical staff will review the situation and/or meet with family again.

THEME 2.2: Manage patients with undifferentiated presentations

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.2.1: Manage patients with undifferentiated presentations

LINKS: BTC 1.3; 2.4; 2.5; PQC

Differential diagnosis, appropriate investigations and initial management for common, undifferentiated clinical presentations including: • pain

- fever
- recurrent unexplained presentation
- failure to thrive

KNOWLEDGE

- vomiting
- irritable infant.

SKILLS

Establishes a differential diagnosis and a provisional diagnosis, based on clinical history and physical examination.

Initiates basic investigations.

Interprets investigations, to plan a further diagnostic process.

Initiates management on the basis of clinical findings.

Identifies acutely unwell patients and initiates appropriate resuscitation and/or therapy.

Initiates symptomatic management of problems such as pain, nausea, dyspnoea etc.

For any presentation the trainee recognises the possible contribution of psychological factors, mental illness or personality disorder to the clinical presentation.

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.1: Manage patients with disorders of the cardiovascular system

LINKS: BTC – 2.3.8. 2.4.2

LINKS: BTC – 2.3.8, 2.4.2		
KNOWLEDGE	SKILLS	
Basic Science Embryology, anatomy and physiology of the cardiovascular system. Foetal circulation and haemodynamic changes after birth. Cardiovascular structure and function: • conduction	Conducts focussed clinical examination and applies basic science knowledge to interpret clinical signs. Performs an ECG if required.	
 cardiac cycle cardiac output. Blood pressure homeostasis: circulatory control (e.g. splanchnic, macro and microvascular, pulmonary, cerebral) shock. Pharmacology of major drug classes used. 	Applies basic science knowledge to interpret chest radiographs and ECGs at varying ages. Applies basic science knowledge to appreciate the significance of and appropriately act on reports of echocardiograms and cardiac catheterisation data.	
For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, potential complications of the disease and its management, preventive strategies: • heart failure • innocent murmurs	For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and can independently initiate appropriate medical (non-procedural) management for uncomplicated disease. Trainee monitors for complications of disease and treatment.	
 arrhythmias and syncope acute rheumatic fever infective endocarditis Kawasaki disease cyanotic neonate 	If there are complications and/or if procedural intervention is required, the trainee recognises this, provides initial emergency management and refers appropriately.	

• duct dependent lesions.

KNOWLEDGE (Cont.)

For the following conditions, the trainee describes the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral:

- congenital heart disease
- valvular heart disease
- hypertension
- cardiomyopathy.

Cardiovascular manifestations of systemic and chronic disease

Common chromosomal syndromes, e.g. trisomy 21, Turner's, 22q11 deletion, Noonan's, Williams, VACTERAL, CHARGE.

- muscular dystrophy
- Marfans syndrome
- cytotoxic treatments.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately for echocardiography and cardiology review.

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.2: Manage patients with endocrine and metabolic disorders

LINKS: BTC – 2.4.2, 2.1.1, 2.3.3

KNOWLEDGE

Basic Science

Embryology, anatomy and physiology of the endocrine system.

Structure and function of hormones, hormone receptors, second messengers and hormone action.

Secretion, transport and feedback control of hormones.

Structure and function of hypothalamus, pituitary, thyroid, adrenals, gonads, parathyroids, adipose tissue.

Sexual differentiation, growth, and puberty.

Pharmacology of major drug classes used.

For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, potential complications of the disease and its management, primary and secondary preventive strategies:

• diabetes mellitus – type 1.

SKILLS

Conducts focussed clinical examination and applies basic science knowledge to interpret clinical signs, including assessment of puberty and the use of orchidometry.

Applies basic science knowledge to interpret basic endocrine testing (diagnosis of diabetes, thyroid function testing, cortisol, synacthen tests) and tests of bone and mineral metabolism (Ca/PO4/PTH/VitD, bone age).

Measures and interprets accurate weight and height measurements, body mass index, and assesses growth velocity.

Applies basic science knowledge to appreciate the significance of, and appropriately act on, reports of thyroid scans and bone densitometry.

For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and independently initiates appropriate management for uncomplicated disease.

Trainee monitors for complications of disease and treatment.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications and disease associations, therapeutic options, adverse effects of disease management and indications for referral:

- diabetes type 2
- hypopituitary disease
- parathyroid disease
- polycystic ovarian syndrome
- metabolic syndrome
- hypoglycaemia
- hypothyroidism
- hyperthyroidism
- Addison's disease
- Cushing's syndrome
- congenital adrenal hyperplasia
- hypogonadism
- ambiguous genitalia
- precocious puberty
- endocrine bone disease
- short stature.

Endocrine manifestations of systemic and chronic disease

Vitamin D deficiency.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.3: Manage patients with disorders of the gastrointestinal system

LINKS: BTC – 1.2.4, 1.2.1, 2.3.12

KNOWLEDGE	SKILLS

Basic Science

Embryology, anatomy and physiology of the gastrointestinal system.

Function of the gastrointestinal tract.

Hormonal/enzymatic control of the alimentary tract including control of acid and pancreatic secretion.

Bilirubin metabolism.

Laboratory markers of hepatic and pancreatic function.

Macro and micronutrient absorption.

Nutrition (Link to patient care and therapeutics).

For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, potential complications of the disease and its management, preventive strategies:

- gastroenteritis
- gastro-esophageal reflux disease
- diarrhoea (acute and chronic)
- recurrent abdominal pain
- cyclical vomiting
- constipation and encopresis
- · acute and chronic liver disease
- coeliac disease
- malabsorptive syndromes.

Conducts focussed clinical examination and applies basic science knowledge to interpret clinical signs.

Performs rectal examination when indicated and in an age-appropriate manner.

Applies basic science knowledge to interpret abdominal X-ray, abdominal CT scan, and LFT/ coeliac serology, faecal microbiological testing, malabsorption laboratory tests.

Applies basic science knowledge to appreciate the significance of, and appropriately act on, reports of abdominal ultrasound, upper and lower endoscopy, breath tests, and upper GI pH probes.

For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and can independently initiate appropriate medical (non-procedural) management for uncomplicated disease.

Monitors for complications of disease and treatment.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral:

- peptic ulcer disease
- acute pancreatitis
- inflammatory bowel disease
- irritable bowel syndrome.

Congenital malformations – TOF, duodenal atresia, malrotation, Hirschsprung's, anorectal malformations.

Gastrointestinal manifestations of systemic and chronic disease

Cystic fibrosis.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.4: Manage patients with non-malignant disorders of the haematological system

LINKS: BTC – 1.2.1 blood products, 2.3.3

KNOWLEDGE

Basic Science

Embryology, anatomy and physiology of the haematological system.

Structure and function of blood-forming tissues, reticuloendothelial system.

Haemoglobin structure and function and changes with age.

Haemoglobinopathies, including thalassaemia and sickle cell disease.

Haemopoiesis.

Haemolysis.

Normal coagulation.

Iron, B12 and folate metabolism.

Principles of transfusion and bone-marrow transplantation.

Pharmacology of major haematinics and erythropoietin.

Anticoagulant and thrombolytic therapy.

For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, potential complications of the disease and its management, preventive strategies:

- anaemia nutritional
- thrombocytopaenia
- haemolytic disease of the newborn.

SKILLS

Conducts focussed clinical examination and applies basic science knowledge to interpret clinical signs.

Applies basic science knowledge to interpret full blood count and film comments, coagulation profile, thrombophilia screens, and haemoglobin electrophoresis patterns.

Applies basic science knowledge to appreciate the significance of, and appropriately act on reports of, bone marrow aspirate and trephine, cytogenetics.

Knows indications for use of transfusions and blood products.

For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and independently initiates appropriate management for uncomplicated disease.

Monitors for complications of disease and treatment.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral:

- neutropenia
- pancytopenias
- anaemias
- polycythemias
- leucocyte disorders
- haemorrhagic and coagulation disorders
- platelet disorders
- haemophilia and other factor deficiencies
- thrombotic disorders
- splenic disorders
- haemoglobinopathies
- disseminated intravascular coagulopathy
- aplastic anaemia/bone marrow failure.

Haematological manifestations of systemic and chronic disease

Haemolytic anaemia of the newborn.

Anaemia of chronic disease.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.5: Manage patients with disorders of the immune system

LINKS: BTC – 1.2.1, 1.2.2, 1.2.3, 2.3.1, 2.3.3, 2.3.7, 2.4.2, 2.4.3, 2.2.10, 2.2.11, patient care, steroids

KNOWLEDGE	SKILLS
Basic Science Inflammation – acute and chronic. Structure and function of spleen, lymph nodes and other lymphoid tissue. Immune responses – innate and adaptive and variation with age. Principles of action of immunosuppressive agents. Allergic responses.	Conducts focussed immunological clinical examination and applies basic science knowledge to interpret clinical signs. Applies basic science knowledge to interpret commonly used investigations of immune function (e.g. FBC, immunoglobulins, inflammatory markers, ANA, ENA, complement profiles, RAST tests and skin tests, challenge tests).
Autoimmunity. Principles of immunisation. Transplant biology including HLA. Pharmacology of major drug classes used. Healing and repair.	Provision of advice to immune-suppressed individuals on immunisation. Applies basic science knowledge in the use of: immunosuppression blood products writing an acute anaphylaxis plan.
Appropriate administration of immunisations particularly to the immune suppressed.	• withing an acute anaphylaxis plan.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications and disease associations, therapeutic options, adverse effects of disease management and indications for referral:

Allergic disorders:

- asthma (see respiratory)
- allergic rhinitis (see ENT)
- eczema
- anaphylaxis
- food allergy
- urticaria
- adverse drug reactions including serum sickness.

Autoimmune diseases – JCA, SLE, dermatomyositis (Link to musculoskeletal).

Vasculitis.

Vasculitis (Link to cardiology).

HSP, Kawasaki disease.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral:

Common and important immunodeficiency syndromes:

- agammaglobulinaemias and hypogammaglobulinaemias
- primary defects of cellular immunity
- combined B & T cell immunodeficiencies
- HIV.

Neutrophil abnormalities:

- leukocyte adhesion deficiency
- chronic granulomatous disease
- neutropaenia.

Complement deficiencies.

Immunological manifestations of systemic and chronic disease.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

Monitors for complications of disease and treatment.

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.6: Manage patients with mental health disorders

LINKS: BTC – 1.2.1, 1.2.3, nervous system; adolescent medicine; acute withdrawal in acute medicine; 2.4.4, population health (substance abuse)

KNOWLEDGE

Basic Science

- structure and function of limbic system and hippocampus
- neurotransmitters
- pharmacology of major drug classes used
- principles of addiction and tolerance
- broad knowledge of normal and abnormal child and adolescent psychological development and the relationship to child and adolescent mental health
- understanding of the nature and specific manifestations of mental health problems in the young, including:
 - » knowledge of health, education and welfare services in the community which support children/adolescents in their ordinary life and which provide resources for children with special needs, especially those with mental health problems and disorders.

SKILLS

Develop clinical skills in assessment and diagnosis of a range of mental health problems in physically healthy children and adolescents and in children with chronic illness and an understanding of the management of these problems including:

- taking a mental health history
- ability to take a history from the adolescent patient, e.g. using HEADS assessment
- Mental State Examination
- evaluation of suicide risk
- administration of simple psychological and behavioural assessments, e.g. Connor's rating scale.

Interviewing and counselling skills which demonstrate understanding of parent-child interaction and family style and functioning.

Develop an awareness of personal reactions to childhood illness, behaviour, disability, family situations and the impact these may have on professional practice (Link to Professional Qualities Curriculum)

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications and disease associations, therapeutic options, adverse effects of disease management and indications for referral:

The nature and specific manifestations of:

- Attention Deficit Disorder
- grief and bereavement
- family function and dysfunction
- substance abuse (alcohol, nicotine, cannabis, solvents, amphetamines, opioids).

Knowledge of appropriate treatment options for mental health conditions:

- pharmacotherapy
- · family therapy
- cognitive-behavioural therapy
- play therapy.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral:

- depression and anxiety disorders
- autistic spectrum disorders
- conduct disorders
- eating disorders
- psychoses.

Mental health manifestations of systemic and chronic diseases.

SKILLS (Cont.)

For each condition the trainee recognises the clinical presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations to rule out organic causes, discusses broad therapeutic options, initiates appropriate emergency management and involves other members of the team wherever appropriate and refers appropriately.

For any presentation the trainee recognises the possible contribution of mental illness or personality disorder to the clinical presentation.

If there is possible substance abuse: acquires adequate history of drug use, recognises signs of drug use and abuse on general history and examination, recognises impact of drug use on presentation, institutes appropriate emergency management of overdose/toxic effects of illicit drug use and management of withdrawal.

Conduct brief interventions to reduce harm from drug use.

Formulate a basic management plan.

Monitors for complications and, if present, the trainee recognises these and refers appropriately.

Demonstrate communication/liaison skills with these services.

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.7: Manage patients with disorders of the musculoskeletal system

LINKS: BTC – 2.3.5

KNOWLEDGE

Basic Science

Embryology, anatomy and physiology of the musculoskeletal system.

For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, potential complications of the disease and its management, preventive strategies:

- musculoskeletal pain
- common gait disturbances
- juvenile idiopathic arthritis
- acute arthritis
- rheumatic fever
- rickets
- irritable hip
- developmental dysplasia of the hip.

SKILLS

Conducts focussed clinical musculoskeletal examination and applies basic science knowledge to interpret clinical signs.

Applies basic science knowledge to interpret radiographs, laboratory tests of bone and mineral metabolism, investigations to monitor inflammation and disease activity and to diagnose immunologically-mediated disease, synovial fluid analysis.

Apply basic science knowledge to appreciate the significance of, and appropriately act on, reports of specialised imaging of bones and joints, bone densiometry.

For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and independently initiates appropriate management for uncomplicated disease.

Monitors for complications of disease and treatment.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral:

- common congenital disorders of bone and cartilage, e.g. achondroplasia
- autoimmune diseases
- common orthopaedic problems such as Perthes disease, slipped upper femoral epiphysis, developmental dysplasia of the hip, talipes equinovarus, scoliosis, common fractures.
- Osteogenesis imperfecta
- Rickets.

Musculoskeletal manifestations of systemic and chronic disease.

Osteoporosis in chronic disease.

Non-accidental factors.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.8: Manage patients with disorders of the neurological system

LINKS: BTC – 2.1.2

ATTITUDES: Respect and empathy for children and families with intellectual, developmental and behavioural disorders			
KNOWLEDGE	SKILLS		
Embryology, anatomy and physiology of the neurological system. Neuroanatomy including cerebral blood supply. Electrical activity of the brain and nerve conduction. Neurotransmitters and neurotransmission. Sleep-wake regulation. Concept of brain death. Pharmacology of major drug classes used – particularly anticonvulsants.	Conducts focussed neurodevelopmental examination and applies basic science knowledge to interpret clinical signs. Applies basic science knowledge to interpret clinical signs and major abnormalities on CT, MRI. Initiates appropriate investigation of common neurological disorders. Applies basic science knowledge to appreciate the significance of, and appropriately act on reports of, EEGs, nerve condition studies and EMGs.		
For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, potential complications of the disease and its management, preventive strategies: • seizure disorder including febrile seizures and	For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and independently initiates appropriate management for uncomplicated disease. Monitors for complications of disease and treatment.		
epilepsy • meningitis, encephalitis • cerebral palsy • headache	If there are complications and/or if procedural intervention is required, the trainee recognises this, provides initial emergency management and refers appropriately.		

• abnormal head size or shape.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral:

- neuromuscular diseases
- neuropathies acquired and hereditary
- spinal cord disorders
- CNS tumours (Link to oncology)
- cerebellar disorders
- degenerative disorders
- inherited and acquired encephalopathies, including neuronal storage disorders
- neurocutaneous syndromes tuberous sclerosis, neurofibromatosis
- congenital brain abnormalities
- abnormalities of movement, e.g. tics, chorea, dystonia
- hydrocephalus and raised intracranial pressure.

Neurological manifestations of systemic and chronic disease.

Chromosomal abnormalities.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.9: Manage patients with disorders of the renal and genitourinary systems

LINKS: BTC – 1.2.4 surgery

KNOWLEDGE

Basic Science

Embryology, anatomy and physiology of the renal and genitourinary system, particularly renal physiology pertaining to water and salt balance, acid-base, regulation of potassium, calcium, phosphorus, urea and creatinine, vitamin D, erythropoietin.

Structure and function of the renal tract and male and female genital tracts.

Regulation of fluid and electrolyte status.

Acid-base regulation (Link to respiratory).

Urine composition.

Hormonal regulation – ADH, renin-angiotensin system (Link to endocrine).

Principles of renal replacement therapy – transplant and dialysis.

Pharmacology of major drug classes used.

For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, potential complications of the disease and its management, preventive strategies:

- haematuria
- proteinuria (nephrotic syndrome)
- vesico-ureteric reflux
- pelvi-ureteric junction obstruction
- urinary tract infection
- hypertension
- enuresis.

SKILLS

Conducts focussed clinical renal and genitourinary examination and applies basic science knowledge to interpret clinical signs.

Applies basic science knowledge to interpret laboratory tests (renal function, electrolytes, MSU, ABGs, GFR).

Measures renal function/calculation of creatinine clearance and GFR.

Applies basic science knowledge to appreciate the significance of, and appropriately act on reports of, imaging (renal tract ultrasound, functional renal scans, renal angiograms, urograms), renal biopsies.

For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and independently initiates appropriate management for uncomplicated disease.

Trainee monitors for complications of disease and treatment.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral:

- acute and chronic renal failure, including types of dialysis
- renal transplant management, including immunosuppression
- neuropathic bladder
- glomerulonephritis.

Renal and genitourinary manifestations of systemic and chronic disease.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.10: Manage patients with disorders of the respiratory and sleep system

LINKS: BTC – 2.3.5, 2.4.3

KNOWLEDGE

Basic Science

Embryology, anatomy and physiology of the respiratory system.

Gas exchange.

Ventilation.

Ventilation perfusion matching.

Acid-base balance.

Applied respiratory physiology – to interpret basic pulmonary function tests.

Pharmacology of major drug classes used.

Sleep physiology.

SKILLS

Conducts focussed clinical respiratory examination and applies basic science knowledge to interpret clinical signs.

Applies basic science knowledge to interpret sweat testing, pulse oximetry, chest X-ray, CT chest, blood gases and basic pulmonary function tests.

Applies basic science knowledge, appreciates the significance of, and appropriately acts on effects of, bronchoscopy and sleep studies.

For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, potential complications of the disease and its management, preventive strategies:

- asthma (acute and chronic)
- bronchiolitis
- cystic fibrosis
- upper respiratory tract infections
- pneumonia
- croup.

For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and independently initiates appropriate management for uncomplicated disease.

Monitors for complications of disease and treatment.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral:

- pulmonary tuberculosis
- congenital lung abnormalities
- sleep disturbances including night terrors, sleep paralysis, somnambulism (sleep walking, sleep talking), obstructive sleep apnoea
- inhaled foreign body
- bronchiectasis.

Respiratory and sleep manifestations of systemic and chronic disease

Chronic neonatal lung disease.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

Domain 2: Medical Expertise

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.11: Manage patients with skin disorders

LINKS: BTC – 2.4.3

KNOWLEDGE

Basic Science

Structure and function of skin, hair and nails, and changes with age.

Pigmentary, inflammatory and immune responses of the skin.

Pharmacology of major drug classes used.

SKILLS

Conducts focussed clinical dermatological examination and applies basic science knowledge to interpret clinical signs including description of skin lesions using standard nomenclature.

Applies basic science knowledge to appreciate the significance of, and appropriately act on, reports of skin and lesion biopsy.

Uses the Wood's lamp.

Educates patients in the use of ointments, creams, dressings and preventive management.

For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, potential complications of the disease and its management, preventive strategies:

- viral exanthem
- eczema
- psoriasis
- · vascular lesions
- naevi
- cellulitis
- common viral and fungal infections
- drug eruptions
- scabies
- parasitic infection
- head lice
- acne.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications and disease associations, therapeutic options, adverse effects of disease management and indications for referral.

Congenital skin disorders – epidermolysis.

Skin manifestations of systemic and chronic disease.

Neurocutaneous syndromes.

Streptococcal skin manifestations.

Kawasaki disease.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and independently initiates appropriate management for uncomplicated disease.

Monitors for complications of disease and treatment.

If there are complications and/or if procedural intervention is required, the trainee recognises this, provides initial emergency management and refers appropriately.

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.12: Manage patients with ophthalmological disorders

LINKS: PQC – communication

	I FD	

Basic Science

Embryology, anatomy and neuroanatomy of the visual system.

For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, potential complications of the disease and its management, preventive strategies:

- strabismus
- refractive defects (hyperopia, myopia, astigmatism)
- amblyopia
- nystagmus
- papilloedema
- infections (blepharitis, conjunctivitis including trachoma, periorbital cellulitis)
- trauma/foreign body.

SKILLS

Conducts focussed clinical ophthalmological examination including fundoscopy, extra-ocular movements, visual field testing, visual acuity and colour vision testing and applies basic science knowledge to interpret clinical signs.

Elicits red reflex.

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, discusses broad therapeutic options, and refers appropriately.

Monitors for complications of disease and treatment.

KNOWLEDGE (Cont.)	SKILLS (Cont.)
For the following conditions, the trainee describes the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral: Congenital eye abnormalities: coloboma	
corneal opacification	
ectopia lentis and cataract	
• septo-optic dysplasia.	
Primary eye diseases: • retinopathy of prematurity	
• optic neuritis.	
Developmental issues relating to blind children: • glaucoma	
• retinoblastoma	
• subconjunctival haemorrhage.	
Ophthalmological manifestations of systemic and chronic disease.	
Ophthalmological manifestations of systemic and chronic disease.	
Ophthalmic manifestations of syndromes and systemic disease: • chromosomal: trisomy 13,18, 21, Turner's and Klinefelter's	
 metabolic: Gangliosidoses (e.g. Tay-Sachs), mucopolysaccharidoses, diabetes mellitus, connective tissue disorders (e.g. Ehlers-Danlos, Marfan's, Osteogenesis imperfecta), other (Wilson's, Foetal Alcohol Syndrome). 	
Intrauterine infections: • rubella	
varicella and zoster	
• herpes simplex	
• cytomegalovirus	
• syphilis	
• toxoplasmosis.	
Postnatal infections.	
Inflammatory conditions: • juvenile rheumatoid arthritis	
Crohn's, systemic lupus erythematosus.	

THEME 2.3: Manage Patients with Disorders of Organ Systems

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.3.13: Manage patients with otorhinolaryngoplogy (ENT) and oral health problems

KNOWLEDGE

Basic Science

Embryology, anatomy and physiology of the ENT system.

Eruption and normal appearance of teeth.

Decay, dental abscess, teeth trauma

For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management , potential complications of the disease and its management, primary and secondary preventive strategies:

Infections:

- acute and chronic otitis media
- acute and chronic tonsillitis
- cervical adenitis
- parotiditis
- epiglottitis
- sinusitis.

Hearing loss and age appropriate hearing investigations (including screening).

Upper airway obstruction:

- tonsillar and adenoid hypertrophy
- haemangioma.

Nose and sinus disease:

• epistaxis.

SKILLS

Conducts focussed clinical examination including otoscopy, nasoscopy and teeth, mouth and throat examination of children at all ages and applies basic science knowledge to interpret clinical signs.

Removes foreign body from the ear and nose. Interprets audiological testing.

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

Monitors for complications of disease and treatment.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications and disease associations, therapeutic options, adverse effects of disease management and indications for referral:

Congenital malformations:

- cleft lip and palate including velopharyngeal incompetence
- thyroglossal and branchial cysts
- choanal atresia
- laryngeal webs and malacia
- Pierre Robin sequence
- polyps.

Developmental issues related to deaf children.

Management of the child with a cochlear implant.

Central auditory processing disorder.

ENT manifestations of systemic and chronic disease.

ENT and dental involvement in syndromes, e.g. CHARGE and 22q11.

Tracheostomy – indications and associated issues

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

THEME 2.4: Manage Patients with Defined Disease Processes

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.4.1: Manage patients with neoplastic diseases

LINKS: Clinical decision making, disease trajectory, palliative care and symptom control

ATTITUDES: Respect and empathy for children and families with neoplastic disorders

KNOWLEDGE

Basic Science

Neoplasia.

Metastatic spread.

Apoptosis.

Cell injury.

Principles of staging.

Broad pharmacological principles of chemo, radio and immunotherapy.

Potentially curable cancers.

Screening tests (link to population in generic, preventive health in BTC).

For the following malignancies, the risk factors, clinical presentation, natural history, broad therapeutic options and preventive strategies including screening:

- leukaemias (ALL, B-cell, T-cell, AML)
- lymphomas
- solid organ malignancies Wilm's tumour, rhabdomyosarcoma, neuroblastoma, medulloblastoma, ependymoma, glial cell tumours, retinoblastoma, hepatoblastoma, osteosarcoma, Ewing's tumour, gonadal cell tumours.

SKILLS

Conducts focussed clinical examination particularly to detect lymphadenopathy, hepatosplenomegaly and applies basic science knowledge to interpret clinical signs.

Applies basic science knowledge to interpret CXR, CT head, chest, abdomen, bone scan, laboratory tests (e.g. tumour markers, cytology, body fluid analysis).

Applies basic science knowledge to appreciate the significance of, and appropriately act on reports of, more specialised imaging, predictive genetic testing.

For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and independently initiates appropriate management of presenting symptoms.

If a diagnosis of cancer is considered, the trainee develops an appropriate management plan in consultation with their supervisor.

KNOWLEDGE (Cont.)	SKILLS (Cont.)
The management of important acute complications of cancer. Uncontrolled pain. Malignant hypercalcemia. Spinal cord compression. SVC obstruction. Pericardial tamponade. The management of important complications of cancer therapy. Bone marrow suppression. Neutropenic sepsis. Tumour lysis syndrome. Mucositis. Graft v. host disease. Management of delayed effects. Oncological manifestations of systemic and chronic disease.	 Communicate with parents/carers and patient regarding major illness, including prognosis. Management of: febrile neutropenia tumour lysis syndrome common chemotherapeutic side effects. Safe administration of chemotherapeutic medications under supervision.

THEME 2.4: Manage Patients with Defined Disease Processes

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.4.2: Manage patients with genetic disorders

ATTITUDES: • Sensitivity when discussing reproductive options

• Adopting a non-directive approach to genetic counselling

KNOWLEDGE

Basic Science

Structure and function of human cells, genes, DNA, RNA, proteins.

Principles of (Classical) Mendelian and population genetics.

Non-Mendelian inheritance patterns: mitochondrial, parental disomy, repeating triplet sequences, polygenic inheritance.

Definitions of polymorphism, mutation, genetic segregation analysis, sex linked, multifactorial and polygenic inheritance.

Basic principles of individualised medicine and pharmacogenetics.

Dysmorphology principles.

Genetic testing techniques: PCR, FISH, gene sequencing.

Awareness of genetic databases, e.g. London dysmorphology, POSSUM, Online Mendelian Inheritance in Man (OMIM).

Implications to a family of a genetic diagnosis.

SKILLS

Conducts focussed clinical examination particularly to detect dysmorphic variations and applies basic science knowledge to interpret clinical signs.

Consults with local genetic services.

Applies basic science knowledge to collate an accurate family history.

Constructs and interprets a family pedigree.

Applies basic science knowledge to appreciate the significance of, and appropriately act on, reports of genetic tests.

Basic genetic counselling.

Recognition of common dysmorphic syndromes.

If genetic disease is present or considered, the trainee develops an appropriate management plan in consultation with their supervisor.

KNOWLEDGE (Cont.)	SKILLS (Cont.)
For the following common genetic diseases, the inheritance, phenotype(s), clinical presentation, natural history, complications and comorbidities principles of ongoing management and appropriate referral:	
• trisomy 21	
Turner's syndrome	
cystic fibrosis	
Marfan's syndrome	
Kleinefelter's	
22q deletion	
chromosomal disorders	
Fragile X syndrome.	
Prenatal options:	
» pre-implantation diagnosis	
» parental testing	
» non-testing	
» foetal gender determination	
» foetal mutation testing.	

THEME 2.4: Manage Patients with Defined Disease Processes

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.4.3: Manage patients with infectious diseases

LINKS: PQC – population health; notifiable diseases; therapeutics; pre and post-test counselling – communication, every other organ system; antimicrobial therapy – therapeutics; BTC – 2.3.5

KNOWLEDGE

Basic Science

Biology of common and important pathogens.

Host response to infection.

Principles underlying laboratory testing for infectious diseases.

Principles of infection control.

Immunisation.

Pharmacology of major drug classes used.

Antimicrobial assistance, strategies for prevention.

For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, potential complications of the disease and its management, preventive strategies:

- fever of unknown origin
- upper respiratory tract infections
- pneumonia/lower respiratory tract infections
- meningitis/encephalitis
- UTI
- infective endocarditis
- cellulitis
- diarrhoeal illness
- blood stream infections
- osteomyelitis, septic arthritis
- infections in the immunocompromised host
- congenital infections
- meningococcemia.

SKILLS

Conducts focussed clinical examination and applies basic science knowledge to interpret clinical signs.

Applies basic science knowledge to interpret laboratory tests – PBC, inflammatory markers, microbiology, virology, serology.

Applies basic science knowledge to assess potential routes of infection/transmission, secondary sites of infection.

Applies basic science knowledge to appreciate the significance of and appropriately act on reports of complex investigations – nuclear medicine scanning.

For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and independently initiates appropriate management for uncomplicated disease.

If there are complications, the trainee recognises these, and refers appropriately.

Monitors for complications.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications and disease associations, therapeutic options, adverse effects of disease management and indications for referral:

- TB
- HIV
- hepatitis viruses
- fever in the returning traveller
- EBV/CMV/Toxo
- common STDs.

Infectious diseases manifestations of systemic and chronic disease infections in the immunosuppressed.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates empiric therapy, discusses broad therapeutic options, and refers appropriately.

Domain 2: Medical Expertise

THEME 2.4: Manage Patients with Defined Disease Processes

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.4.4: Manage patients with disorders of metabolism

LINKS: BTC – 2.3.2

KNOWLEDGE

Basic Science

The metabolism and defects of:

- amino acids
- sugars
- fatty acids
- fatty acid oxidisation
- urea cycle
- purines and pyrimidines
- theory behind dietary therapy in Inherited
 Errors of Metabolism (IEMs)
- use of co-factors in IEMs
- appreciation of enzyme replacement therapy and substrate inhibition therapy.

SKILLS

Conducts focussed clinical examination and applies basic science knowledge to interpret clinical signs.

Interpret simple biochemical investigations.

Perform investigations of:

- hypoglycaemia
- hyperammonaemia
- metabolic acidosis.

Perform emergency management of more common IEMs.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral:

- lysosomal storage disorders
- peroxisomal disorders
- mitochondrial disorders.

Metabolic manifestations of systemic and chronic disease.

SKILLS (Cont.)

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

Domain 2: Medical Expertise

THEME 2.5: Medicine Throughout the Lifespan/Growth and Development

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.5.1: Manage common presentations in the newborn period

KNOWLEDGE

Basic Science

Physiology of extrauterine adaptation, including initiation of feeding, changes to cardiac and respiratory physiology.

Effect of intrauterine and perinatal events on outcome.

Pathophysiology of prematurity.

Principles of infant nutrition.

Principles of drug metabolism in the newborn and breast-feeding mother.

Principles associated with successful initiation and maintenance of breast-feeding.

Management of breast-feeding.

Principles of infant maternal attachment.

Recognition and understanding of post-natal depression.

Pathophysiology of common and important neonatal presentations including jaundice, lethargy, acute respiratory distress, cyanosis, shock and vomiting.

Principles of neonatal resuscitation and mechanical ventilation.

SKILLS

Advises a mother about the risks and possible physical and psychosocial consequences of premature delivery.

Recognises and manages the common breast-feeding problems in the mother and the baby:

- breast engorgement
- sore and cracked nipples
- overactive letdown reflex
- poor feeding in the baby
- infection risks associated with breast-feeding
- failure to thrive
- non-breast-feeding jaundice
- breast milk jaundice.

Takes an obstetric and newborn history.

Undertakes a standard examination of a newborn infant and make an assessment of gestational age.

Resuscitates a newborn infant, including intubation and initiation of mechanical ventilation.

Places intravenous, intra-arterial, and umbilical vascular catheters.

Pleural drainage.

For the following common and important problems in children the trainee describes the epidemiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, preventive strategies:

- respiratory distress syndrome
- apnea
- meconium aspiration syndrome
- Group B Streptococcus Sepsis
- persistent pulmonary hypertension of the newborn
- hypoxic ischaemic encephalopathy
- intraventricular haemorrhage
- seizures in the newborn
- necrotizing enterocolitis
- malrotation with volvulus
- rhesus isoimmunisation
- congenital infections
- common variations of normal in newborn period, e.g. plagiocephaly, skin lesions
- chronic neonatal lung disease
- neonatal abstinence syndrome.

Newborn screening programme:

- · healthy hearing
- inborn errors of metabolism
- hip assessment.

SKILLS (Cont.)

The trainee recognises the presentation of the pre-term infant, plans and arranges appropriate investigations, and independently initiates appropriate management for uncomplicated disease.

If there are complications, the trainee recognises these, and refers appropriately.

Monitors for complications.

Interacts with multidisciplinary team including nursing, social work and allied health colleagues.

THEME 2.5: Medicine Throughout the Lifespan/Growth and Development

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.5.2: Manage common presentations related to growth during childhood

KNOWLEDGE Basic Science Normal growth during childhood. Normal nutritional requirements during infancy and childhood. Malnutrition due to deficiency in macronutrients and micronutrients. Nutritional aspects of failure to thrive. Influence of pre-natal and infant nutrition on long-term health. For the following common and important problems in children the trainee describes the epidemiology, clinical presentation. For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans

problems in children the trainee describes the epidemiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, preventive strategies:

- failure to thrive
- short stature.

For the following conditions, the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral:

- obesity
- the tall child.

For these conditions, the trainee recognises the presentation of illness, establishes a provisional diagnosis, plans and arranges appropriate investigations, and independently initiates appropriate management for uncomplicated disease.

If there are complications, the trainee recognises these, and refers appropriately. Monitors for complications.

For these conditions, the trainee recognises the presentation, establishes a provisional diagnosis, plans and arranges appropriate initial investigations, initiates symptomatic therapy, discusses broad therapeutic options, and refers appropriately.

THEME 2.5: Medicine Throughout the Lifespan/Growth and Development

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.5.3: Manage common presentations in adolescents

ATTITUDES: • Empathy with adolescent issues

• Appreciation of need for confidentiality and balancing autonomy with dependence

Recognises important mental health issues in adolescents. Law and ethical principles in dealing with adolescents. Substance use and abuse in adolescents and their onset. Mental health disorders in adolescence and their various presentations. Risk behaviours and self-harm in adolescence. Sexual and reproductive health. Gender identity of adolescents. Awareness of common comorbidities. Issues relating to transition of care. SKILLS Takes history and conducts a physical examination appropriate to this age group. Negotiates management plan in collaboration with young person. Recognises important mental health issues in adolescents particularly where they arise in setting of chronic disease. Assesses the cognitive ability for understanding choices and ability to make choices and provide informed consent. Identifies risk behaviours and counsels and educates the young person regarding these. Psychosocial assessment – including HEADSS. Appropriate us of chaperone for physical examination Assessment of pubertal status. Assessment of risk and protective factors. Techniques for improving adherence. External perineal examination. Investigation of sexually transmitted diseases. Capacity for liaison and communication with		
Assesses the cognitive ability for understanding choices and provide informed consent. Negotiates management plan in collaboration with young person. Recognises important mental health issues in adolescents development. Law and ethical principles in dealing with adolescents. Eating disorders in adolescence. Issues of body perception and self-awareness in adolescents. Substance use and abuse in adolescents and their onset. Mental health disorders in adolescence and their various presentations. Risk behaviours and self-harm in adolescence. Sexual and reproductive health. Gender identity of adolescents. Awareness of common comorbidities. Issues relating to transition of care. Assessment of pibertal status. • External perineal examination. • Investigation of sexually transmitted diseases. • Capacity for liaison and communication with	KNOWLEDGE	SKILLS
with young person. Recognises important mental health issues in adolescents development. Law and ethical principles in dealing with adolescents. Eating disorders in adolescence. Issues of body perception and self-awareness in adolescents. Substance use and abuse in adolescents and their onset. Mental health disorders in adolescence and their various presentations. Risk behaviours and self-harm in adolescence. Sexual and reproductive health. Gender identity of adolescents. Awareness of common comorbidities. Issues relating to transition of care. with young person. Recognises important mental health issues in adolescents and adolescents particularly where they arise in setting of chronic disease. Assesses the cognitive ability to make choices and provide informed consent. Identifies risk behaviours and counsels and educates the young person regarding these. Psychosocial assessment – including HEADSS. Appropriate use of chaperone for physical examination Assessment of pubertal status. Assessment of risk and protective factors. Techniques for improving adherence. External perineal examination. Investigation of sexually transmitted diseases. Capacity for liaison and communication with	Normal growth patterns including recognition of	
and welfare practitioners.	and social factors in adolescent development and disease. Impact of acute and chronic illness on adolescent development. Law and ethical principles in dealing with adolescents. Eating disorders in adolescence. Issues of body perception and self-awareness in adolescents. Substance use and abuse in adolescents and their onset. Mental health disorders in adolescence and their various presentations. Risk behaviours and self-harm in adolescence. Sexual and reproductive health. Gender identity of adolescents. Awareness of common comorbidities.	with young person. Recognises important mental health issues in adolescents particularly where they arise in setting of chronic disease. Assesses the cognitive ability for understanding choices and ability to make choices and provide informed consent. Identifies risk behaviours and counsels and educates the young person regarding these. Psychosocial assessment – including HEADSS. Appropriate use of chaperone for physical examination Assessment of pubertal status. Assessment of risk and protective factors. Techniques for improving adherence. External perineal examination. Investigation of sexually transmitted diseases. Capacity for liaison and communication with community, health, drug and alcohol, education

THEME 2.5: Medicine Throughout the Lifespan/Growth and Development

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.5.4: Recognise and manage common problems of behaviour and development

ATTITUDES: Appropriate respect and empathy for children and families with intellectual, developmental and behavioural disorders

KNOWLEDGE SKILLS

Basic Science

Development and its variations at all ages.

Various developmental and psychometric assessment tools.

For the following common and important conditions, the epidemiology, pathophysiology, clinical presentation, differential diagnosis, investigations, detailed initial management, principles of ongoing management, potential complications of the disease and its management, preventive strategies:

- behaviour and its variations at all ages, e.g:
 - » temper tantrums
 - » sleep problems
 - » crying baby
 - » oppositional behaviour
 - » school refusal.
- learning and communication
- deafness and blindness.

For the following conditions, the trainee describes the clinical presentation, initial investigations, initial management, potential complications, therapeutic options and indications for referral:

- developmental delay
- · language delay
- intellectual disability
- Attention Deficit Disorder
- specific learning disorders
- conduct disorders
- autistic spectrum disorders.

Conducts a focussed assessment of development, behaviour and psychomotor skills using:

- clinical examination such as 180 degree examination of infants
- Denver II
- parent report
- other appropriate screening tools.

Displays knowledge of simple behavioural modification techniques.

Interacts with a multidisciplinary behavioural developmental team.

Refers to appropriate community or hospital services.

THEME 2.5: Medicine Throughout the Lifespan/Growth and Development

BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH

LEARNING OBJECTIVE 2.5.5: Recognise and manage common child protection problems

ATTITUDES: • Appropriate respect for all children and family members regardless of presentation

- Maintenance of child-focussed perspective
- Awareness of the impact that dealing with situations of child abuse may have on your emotional health and wellbeing and that of others

Basic Science Definitions of child abuse and neglect: physical, emotional and sexual. Legislative requirements for reporting of suspected abuse. Clinical manifestations of child abuse such as: • repeated emergency presentations • fabrication or falsification or induction of illness in a child • behavioural presentations • repeated emergency presentations • physical since		
Definitions of child abuse and neglect: physical, emotional and sexual. Legislative requirements for reporting of suspected abuse. Clinical manifestations of child abuse such as: • repeated emergency presentations • fabrication or falsification or induction of illness in a child • behavioural presentations	KNOWLEDGE	SKILLS
Long-term manifestations of child abuse. Behavioural, emotional, psychological and physical. Collection of appropriate forensic material. Referral processes.	Definitions of child abuse and neglect: physical, emotional and sexual. Legislative requirements for reporting of suspected abuse. Clinical manifestations of child abuse such as: • repeated emergency presentations • fabrication or falsification or induction of illness in a child • behavioural presentations • physical signs. Long-term manifestations of child abuse. Behavioural, emotional, psychological and physical. Collection of appropriate forensic material.	regardless of presentation. Maintains child-focussed perspective. Develops awareness of the impact that dealing with situations of child abuse may have on one's emotional health and wellbeing and that of others.

Domain 2: Medical Expertise THEME 2.5: Medicine Throughout the **BASIC TRAINING CURRICULUM: PAEDIATRICS & CHILD HEALTH** Lifespan/Growth and Development **LEARNING OBJECTIVE 2.5.6:** Manage patients at the end of life **LINKS:** PQC – communication, teamwork ATTITUDES: • Compassion towards those we can no longer 'cure' • Respect for dignity at end of life **KNOWLEDGE SKILLS Basic Science** Pathophysiology of pain. Pharmacology of analgesics and other agents used to treat major symptom complexes. Dose conversions to parenteral or transdermal medications. Medicolegal aspects of end-of-life care: futility, consent. Ethical principles involved in care of a dying patient. Resuscitation orders. For the following major symptom Establishes a differential diagnosis and a complexes, the trainee describes aetiology, provisional diagnosis, based on clinical history and and therapeutic modalities: physical examination. • pain constipation dyspnoea Recognises the dying phase. excessive secretions Uses appropriate agents in symptom control to nausea and vomiting optimise quality of life. · restlessness. Assesses needs of family and carers. Respects wishes of family and carers, e.g.

resuscitation.

dying has on one's self.

Is aware of impact that dealing with death and

APPENDIX 1

Assumed Skills (to be read in conjunction with Theme 1.3 Procedural Skills)

It is assumed that trainees will have the following skills – if not, appropriate remedial action will need to undertaken.

By the end of PGY2, trainees should be competent and confident to perform the following procedures relevant to general medicine:

- venepuncture, cannulation
- blood cultures from peripheral and central sites
- setting up a complete drip set and burette
- ECG recording
- · arterial blood sampling
- injection subcutaneous, intradermal, intramuscular and intravenous
- urethral catheterisation male and female
- application of oxygen administration devices
- minor suturing and debridement of wounds
- dipstick urinalysis

- blood glucose determination using capillary blood
- airway assessment and management including jaw thrust, chin lift and insertion of an oral airway
- intubations in straightforward situations
- bag and mask ventilation of unintubated patients
- spirometry and peak expiratory flow rate determination
- throat/pus/wound swabs
- nasogastric tube insertion
- use of inhaler with and without spacers
- oximetry.

At the end of Basic Training, in addition to the PGY2 skills, the trainee should be competent and confident to perform:

- DC cardioversion emergency and elective
- intercostal drain insertion and management
- lumbar puncture
- pressure measurement and care of central venous lines
- pleural and ascitic fluid aspiration
- nasal support ventilation (CPAP, BiPaP)
- tracheostomy care and immediate complication management.

APPENDIX 2

LINKS TO RCPA BASIC PATHOLOGICAL SCIENCES CURRICULUM

The following areas within the basic pathological sciences curriculum of The Royal College of Pathologists of Australasia (RCPA) are integrated within the Basic Training and Professional Qualities Curricula of the RACP and as such may all be assessable by the completion of Basic Training for trainee physicians and paediatricians. The following table will help to identify specific cross-references.

RCPA Content Area	RACP Learning Objective
Cellular pathology (cell growth and ageing, cell injury and death)	Adult Medicine BTC 2.5.4
Acute and chronic inflammation, healing and repair	BTC 2.3.5
Immunity (building blocks of the immune system, hypersensitivity reactions, autoimmune diseases, AIDS, amyloidosis)	BTC 2.3.5
Haemodynamic disorders (oedema, thrombosis, embolism, infarction, shock)	BTC 2.1.1
Genetic basis of disease (genetic mechanisms of disease, basic knowledge of the more common genetic diseases as well as an understanding of commonly used genetic tests)	BTC 2.4.2
Microbiology (general principles of microbial pathogenesis, common viral and bacterial infections, common parasitic infections)	BTC 2.4.3
Neoplasia (biology of benign and malignant tumours, epidemiology of cancer, molecular and cellular oncogenesis)	BTC 2.4.1, PQC 9.2.1
Occupational and environmental pathology (common toxins and manifestations in the human body, such as smoking, asbestos, industrial toxins)	PQC 9.2.1
Nutrition, metabolism (common nutritional deficiencies, obesity)	BTC 2.3.2, 2.3.3
Acid-base balance and fluid/electrolyte disturbances (basic physiological and pathophysiological mechanisms)	BTC 1.2.1
In each of the above emphasis will be placed on: nomenclature and definitions of disease classifications of diseases disease processes/pathogenesis causation/aetiology scientific methodology and new diagnostic methods	All integrated within Basic Training Curriculum
Ethics, social and political aspects of pathology and disease	PQC domains 5, 9
Analysis of data (incidence, prevalence, accuracy, precision, predictive value, correlation)	PQC 3.2, 6.1

(BTC – Basic Training Curriculum; PQC – Professional Qualities Curriculum)