



**FACULTY OF
PAEDIATRICS**

ROYAL COLLEGE OF
PHYSICIANS OF IRELAND

HIGHER SPECIALIST TRAINING IN

GENERAL PAEDIATRICS



This curriculum of training in General Paediatrics was developed in 2010 and undergoes an annual review by Dr Michael O'Grady, Dr Patrick Gavin, Dr Anne-Marie Murphy and Dr Michael Boyle, National Specialty Directors, Leah O'Toole, Head of Postgraduate Training and Education, and by the General Paediatrics Training Committee. The curriculum is approved by the Faculty of Paediatrics Faculty of Paediatrics.

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Introduction

A trainee in General Paediatrics must be competent in the prevention, diagnosis and management of a wide range of diseases and in hospital based interventional procedures. Above all the general paediatrician should have the competencies to deal with acute presentation of illness affecting concurrently one or more organ systems and the administration of all necessary immediate care. These competencies must relate to all aspects of Paediatrics including the special needs in both treatment and immediate care of the neonate.

General Paediatrics is a multidisciplinary specialty, primarily dealing with diagnosis, treatment and prevention of diseases affecting one or sometimes many organs. In most cases treatment is non-surgical but it is essential that during the training period the general paediatrician should have developed the necessary competencies to make a total evaluation of the patient and prioritise treatment which may include surgery. To fulfil these objectives the paediatrician must have, besides any subspecialty training, an expert knowledge of diagnosis and treatment of a broad range of common acute disorders as well as familiarity with the care of the neonate. Training in General Paediatrics is designed to prepare for a career at a senior and independent level of practice providing care (usually together with two or more colleagues) for acute and chronically ill or disabled children, either in out-patient consultation and supervision, or in-patient or other ward-based provision, or both. This will also include acute neonatal care.

Many trainees will wish to develop special expertise in one or more areas of Paediatrics. Because of the complexity of their speciality practise, consultants in some specialities e.g. Paediatric Cardiology, usually practise exclusively in their speciality. In most other specialties however, it is usual to aim for competence in the Specialty and in General Paediatrics. The balance of work between General and specialty Paediatrics varies widely.

Besides these specialty specific elements, trainees in General Paediatrics must also acquire certain core competencies which are essential for good medical practice. These comprise the generic components of the curriculum.

Aims

Upon satisfactory completion of specialist training in General Paediatrics, the doctor will be **competent** to undertake comprehensive medical practice in that specialty in a **professional** manner, unsupervised and independently and/or within a team, in keeping with the needs of the healthcare system.

Competencies, at a level consistent with practice in the specialty of General Paediatrics, will include the following:

- Patient care that is appropriate, effective and compassionate dealing with health problems and health promotion.
- Medical knowledge in the basic biomedical, behavioural and clinical sciences, medical ethics and medical jurisprudence and application of such knowledge in patient care.
- Interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professionals, the scientific community and the public.
- Appraisal and utilisation of new scientific knowledge to update and continuously improve clinical practice.
- The ability to function as a supervisor, trainer and teacher in relation to colleagues, medical students and other health professionals.
- Capability to be a scholar, contributing to development and research in the field of General Paediatrics.
- Professionalism.
- Knowledge of public health and health policy issues: awareness and responsiveness in the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, the practice of cost-effective health care, health economics and resource allocations.
- Ability to understand health care and identify and carry out system-based improvement of care.

Professionalism

Being a good doctor is more than technical competence. It involves values – putting patients first, safeguarding their interests, being honest, communicating with care and personal attention, and being committed to lifelong learning and continuous improvement. Developing and maintaining values are important; however, it is only through putting values into action that doctors demonstrate the continuing trustworthiness with the public legitimately expect. According to the Medical Council, Good Professional Practice involves the following aspects:

- Effective communication
- Respect for autonomy and shared decision-making
- Maintaining confidentiality
- Honesty, openness and transparency (especially around mistakes, near-misses and errors)
- Raising concerns about patient safety
- Maintaining competence and assuring quality of medical practice

Duration & Organisation of Training

The duration of HST in General Paediatrics is 5 years, one year of which **may** be gained from a period of full-time research. The period of research can only be gained after entry to the HST programme. Research credit cannot be allocated retrospectively. Each trainee must complete the core training elements of HST in General Paediatrics, which are 12 months of Neonatology and 12 months of General Paediatrics, including 3 months of Community Paediatrics.

At least 2 years is spent in acute General Paediatrics in both in-patient and out-patient settings. General on-call is mandatory, and while the frequency is related to that of the participating hospital, the annual average should be at least one-in-eight in the first two years of training. HST in Paediatrics will provide opportunity for experience in teaching hospitals or other major centres with academic activity, or regional hospitals.

For those intending to complete HST in General Paediatrics, at least **one** year should include experience in one or more of the sub-specialties of Paediatrics, the preferred option being to train in a number of sub-specialties. For example, one year in Neonatology; one year in General Paediatrics which will include three months of Community Paediatrics; and three years of sub-specialty Paediatrics.

Experience at an intermediate grade in acute General Paediatrics in-patient care must involve assessment and treatment of acutely ill infants and children and the support and supervision of junior medical staff.

In-Patient Responsibilities:

- The trainee will be expected to have direct supervisory responsibilities for general Paediatric in-patients. This will require at least three personal ward rounds per week and supervising the activities of the more junior members of the clinical team at other times. An additional ward round with a consultant each week is also expected for educational experience.

Out-Patient Responsibilities:

- The trainee is expected to have personal responsibility for the assessment and review of General Paediatric out-patients with a minimum of at least one consultant led Paediatric clinic per week. New patient referrals should be assessed by the trainee independently but access to consultant opinion/supervision as necessary during the clinic is an essential requirement. Ward follow-ups are an important part of General Paediatric training particularly for the purposes of on-going care commitment by the trainee.
- A minimum of 12 months continuous experience in neonatal intensive care must be completed during HST.
- Experience in assessment and treatment of children in Accident & Emergency departments.
- Experience of multidisciplinary work including the care of children with chronic illness, disability and social disadvantages: child protection work: community services, population medicine, basic epidemiology and health information.
- Opportunities must exist for seminar discussions in regard to management of patients with colleagues in haematology, pathology, radiology, Paediatric Surgery, child psychiatry and genetics.
- Research project work, with supervision.

Essential Training: Trainees must attend study days as advised by the National Speciality Director(s).

While no particular order or sequence of training will be imposed and programmes offered should be flexible i.e. capable of being adjusted to meet trainees' needs, trainees must spend the first two years of training in clinical posts in Ireland before undertaking any period of research or out of programme clinical experience (OCPE). The earlier years will usually be directed towards acquiring a broad general

experience of General Paediatrics under appropriate supervision. An increase in the content of hands-on experience follows naturally, and, as confidence is gained and abilities are acquired, the trainee will be encouraged to assume a greater degree of responsibility and independence.

If an intended career path would require a trainee to develop further an interest in a sub-specialty within General Paediatrics (e.g. cardiology), this should be accommodated as far as possible within the training period, re-adjusting timetables and postings accordingly.

Generic knowledge, skills and attitudes support competencies which are common to good medical practice in the all the Medical and related specialties. It is intended that all Specialist Registrars would continue to build these competencies during Higher Specialist Training. No time-scale of acquisition is offered, but failure to make progress towards meeting these important objectives **at an early stage** would cause concern about a SpR's suitability and ability to become independently capable as a specialist.

Training Programme

The training programme offered will provide opportunities to fulfil all the requirements of the curriculum of training for General Paediatrics in approved training hospitals. Each post within the programme will have a named trainer/educational supervisor and programmes will be under the direction of the National Specialty Director(s) for General Paediatrics. Programmes will be as flexible as possible consistent with curricular requirements, for example to allow the trainee to develop a sub-specialty interest.

The experience gained through rotation around different departments is recognised as an essential part of HST. A Specialist Registrar may **not** remain in the same unit for longer than 2 years of clinical training; or with the same trainer for more than 1 year.

Where an essential element of the curriculum is missing from a programme, access to it should be arranged, by day release for example, or if necessary by secondment.

Generic Components

This chapter covers the generic components which are relevant to HST trainees within the Faculty of Paediatrics but with varying degrees of relevance and appropriateness, depending on the specialty.

As such, this chapter needs to be viewed as an appropriate guide of the level of knowledge and skills required from all HST trainees with differing application levels in practice.

Good Professional Practice

Objective: Trainees must appreciate that medical professionalism is a core element of being a good doctor and that good medical practice is based on a relationship of trust between the profession and society, in which doctors are expected to meet the highest standards of professional practice and behaviour.

Medical Council Domains of Good Professional Practice: Relating to Patients, Communication and Interpersonal Skills, Professionalism, Patient Safety and Quality of Patient Care.

KNOWLEDGE

Effective Communication

- How to listen to patients and colleagues
- The principles of open disclosure
- Knowledge and understanding of valid consent
- Teamwork
- Continuity of care

Ethics

- Respect for autonomy and shared decision making
- How to enable children and their family to make their own decisions about their health care
- How to place the patient at the centre of care
- How to protect and properly use sensitive and private patient information in accordance with data protection legislation and how to maintain confidentiality
- The judicious sharing of information with other healthcare professionals where necessary for care following Medical Council Guidelines
- Maintaining competence and assuring quality of medical practice
- How to work within ethical and legal guideline when providing clinical care, carrying research and dealing with end of life issues

Honesty, openness and transparency (mistakes and near misses)

- Preventing and managing near misses and adverse events.
- When and how to report a near miss or adverse event
- Incident reporting; root cause and system analysis
- Understanding and learning from errors
- Understanding and managing clinical risk
- Managing complaints
- Following open disclosure practices
- Knowledge of national policy and National Guidelines on Open Disclosure

Raising concerns about patient safety

- Safe working practice, role of procedures and protocols in optimal practice
- The importance of standardising practice through the use of checklists, and being vigilant
- Safe healthcare systems and provision of a safe working environment
- Awareness of the multiple factors involved in failures
- Knowledge and understanding of Reason's Swiss cheese model
- Understanding how and why systems break down and why errors are made
- Health care errors and system failures
- Human and economic costs in system failures
- The important of informing a person of authority of systems or service structures that may lead to unsafe practices which may put patients, yourself or other colleagues at risk
- Awareness of the Irish Medical Councils policy on raising concerns about safety in the environment in which you work

SKILLS

- Effective communication with patients, parents, guardians and colleagues
- Co-operation and collaboration with colleagues to achieve safe and effective quality patient care
- Being an effective team player
- Ethical and legal decision making skills
- Minimising errors during invasive procedures by developing and adhering to best-practice guidelines for safe surgery
- Minimising medication errors by practicing safe prescribing principles
- Ability to learn from errors and near misses to prevent future errors
- Managing errors and near-misses
- Using relevant information from complaints, incident reports, litigation and quality improvement reports in order to control risks
- Managing complaints
- Using the Open Disclosure Process Algorithm

ASSESSMENT & LEARNING METHODS

- Consultant feedback at annual assessment
- Workplace based assessment e.g. Mini-CEX, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace): prioritisation of patient safety in practice
- RCPI HST Leadership in Clinical Practice
- RCPI Ethics programmes
- Medical Council Guide to Professional Conduct and Ethics
- Reflective learning around ethical dilemmas encountered in clinical practice
- Quality improvement methodology course - recommended

Infection Control

Objective: To be able to appropriately manage infections and risk factors for infection at an institutional level, including the prevention of cross-infections and hospital acquired infection

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care; Management (including Self-Management).

KNOWLEDGE

Within a consultation

- The principles of infection control as defined by the HIQA
- How to minimise the risk of cross-infection during a patient encounter by adhering to best practice guidelines available, including the 5 Moments for Hand Hygiene guidelines
- The principles of preventing infection in high risk groups e.g. managing antibiotic use to prevent *Clostridium difficile*
- Knowledge and understanding of the local antibiotic prescribing policy
- Awareness of infections of concern, e.g. MRSA, *Clostridium difficile*
- Best practice in isolation precautions
- When and how to notify relevant authorities in the case of notifiable infectious disease
- Understanding the increased risk of infection to patients in surgery or during an invasive procedure and adhering to guidelines for minimising infection in such cases
- The guidelines for needle-stick injury prevention and management

During an outbreak

- Guidelines for minimising infection in the wider community in cases of communicable diseases and how to seek expert opinion or guidance from infection control specialists where necessary
- Hospital policy/seeking guidance from occupational health professional regarding the need to stay off work/restrict duties when experiencing infections the onward transmission of which might impact on the health of others

SKILLS

- Practicing aseptic techniques and hand hygiene
- Following local and national guidelines for infection control and management
- Prescribing antibiotics according to antibiotic guidelines
- Encouraging staff, patients and relatives to observe infection control principles
- Communicating effectively with patients regarding treatment and measures recommended to prevent re-infection or spread
- Collaborating with infection control colleagues to manage more complex or uncommon types of infection including those requiring isolation e.g. transplant cases, immunocompromised host
- In the case of infectious diseases requiring disclosure:
 - Working knowledge of those infections requiring notification
 - Undertaking notification promptly
 - Collaborating with external agencies regarding reporting, investigating and management of notifiable diseases
 - Enlisting / requiring patients' involvement in solving their health problems, providing information and education
 - Utilising and valuing contributions of health education and disease prevention and infection control to health in a community

ASSESSMENT & LEARNING METHODS

- Consultant feedback at annual assessment
- Workplace based assessment e.g. Mini-CEX, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace): practicing aseptic techniques as appropriate to the case and setting, investigating and managing infection, prescribing antibiotics according to guidelines
- Completion of infection control induction in the workplace
- Personal Protective Equipment Training Course (In hospital)

Self-Care and Maintaining Well-Being

Objectives:

1. To ensure that trainees understand how their personal histories and current personal lives, as well as their values, attitudes, and biases affect their care of patients so that they can use their emotional responses in patient care to their patients' benefit
2. To ensure that trainees care for themselves physically and emotionally, and seek opportunities for enhancing their self-awareness and personal growth

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care, Relating to Patients, Communication and Interpersonal Skills, Collaboration and Teamwork, Management (including self-management).

KNOWLEDGE

- Self-awareness including preferences and biases
- Personal psychological strengths and limitations
- Understand how personality characteristics, such as need for approval, judgemental tendencies, needs for perfection and control etc., affect relationships with patients and others
- Knowledge of core beliefs, ideals, and personal philosophies of life, and how these relate to own goals in medicine
- Know how family-of-origin, race, class, religion and gender issues have shaped own attitudes and abilities to discuss these issues with patients
- Understand the difference between feelings of sympathy and feelings of empathy
- Know the factors between a doctor and patient that enhance or interfere with abilities to experience and convey empathy
- Understanding of own attitudes toward uncertainty and risk taking and own need for reassurance
- How own relationships with certain patients can reflect attitudes toward paternalism, autonomy, benevolence, non-maleficence and justice
- Recognise own feelings in straightforward and complex patient-doctor interactions
- Recognising the symptoms of stress and burn out

SKILLS

- Exhibiting empathy and showing consideration for all patients, their impairments and attitudes irrespective of cultural and other differences
- Ability to create boundaries with patients that allow for therapeutic alliance
- Challenge authority appropriately from a firm sense of own values and integrity and respond appropriately to situations that involve abuse, unethical behaviour and coercion
- Recognise own limits and seek appropriate support and consultation
- Work collaboratively and effectively with colleagues and other members of health care teams
- Manage effectively commitments to work and personal lives, taking the time to nurture important relationship and oneself
- Ability to recognise when falling behind and adjusting accordingly
- Demonstrating the ability to cope with changing circumstances, variable demand, being prepared to re-prioritise and ask for help
- Utilising a non-judgemental approach to patient's problem
- Recognise the warning signs of emotional ill-health in self and others and be able to ask for appropriate help
- Commitment to lifelong process of developing and fostering self-awareness, personal growth and well being
- Be open to receiving feedback from others as to how attitudes and behaviours are affecting their care of patients and their interactions with others
- Holding realistic expectations of own and of others' performance, time-conscious, punctual
- Valuing the breadth and depth of experience that can be accessed by associating with professional colleagues

ASSESSMENT & LEARNING METHODS

- On-going supervision
- RCPI Ethics programmes
- Wellness Matters Course (Mandatory)
- RCPI HST Leadership in Clinical Practice course

Communication in Clinical and Professional Setting

Objective: To demonstrate the ability to communicate effectively and sensitively with patients, their relatives, carers and with professional colleagues in different situations.

Medical Council Domains of Good Professional Practice: Relating to Patients; Communication and Interpersonal Skills.

KNOWLEDGE

Within a consultation

- How to effectively listen and attend to patients, parents and guardians
- How to structure an interview to obtain/convey information; identify concerns, expectations and priorities; promote understanding, reach conclusions and use age appropriate language.
- How to empower the patient, and/or parent, and encourage self-management

Difficult circumstances

- Understanding of potential areas for difficulty and awkward situations
- How to negotiate cultural, language barriers, dealing with sensory or psychological and/or intellectual impairments and how to deal with challenging or aggressive behaviour
- Knowing how and when to break bad news
- How to communicate essential information where difficulties exist, how to appropriately utilise the assistance of interpreters, chaperones, and relatives.
- How to deal with anger and frustration in self and others
- Selecting appropriate environment; seeking assistance, making and taking time

Dealing with professional colleagues and others

- How to communicate with doctors and other members of the healthcare team
- How to provide a concise, written, verbal, or electronic, problem-orientated statement of facts and opinions
- The legal context of status of records and reports, of data protection confidentiality
- Freedom of Information (FOI) issues
- Understanding of the importance of legible, accessible, records to continuity of care
- Knowing when urgent contact becomes necessary and the appropriate place for verbal, telephone, electronic, or written communication
- Recognition of roles and skills of other health professionals
- Awareness of own abilities/limitations and when to seek help or give assistance, advice to others; when to delegate responsibility and when to refer

Maintaining continuity of care

- Understanding the relevance of continuity of care to outcome, within and between phases of healthcare management
- The importance of completion of tasks and documentation, e.g. before handover to another team, department, specialty, including identifying outstanding issues and uncertainties
- Knowledge of the required attitudes, skills and behaviours which facilitate continuity of care including, being available and contactable, alerting others to avoid potential confusion or misunderstanding through communications failure

Giving explanations

- The importance of possessing the facts, and of recognising uncertainty and conflicting evidence on which decisions have to be based
- How to secure and retain attention avoiding distraction
- Understanding how children and their guardians receive information best, the relative value of the spoken, written, visual means of communication, use of reinforcement to assist retention
- Knowledge of the risks of information overload
- Tailoring the communication of information to the level of understanding of the recipient
- Strategies to achieve the level of understanding necessary to gain co-operation and partnership; compliance, informed choice, acceptance of opinion, advice, recommendation

Responding to complaints

- Value of hearing and dealing with complaints promptly; the appropriate level, the procedures (departmental and institutional); sources of advice, and assistance available
- The importance of obtaining and recording accurate and full information, seeking confirmation from multiple sources
- Knowledge of how to establish facts, identify issues and respond quickly and appropriately to a complaint received

SKILLS

- Ability to appropriately elicit facts, using a mix of open and closed-ended questions
- Using “active listening” techniques such as nodding and eye contact
- Giving information clearly, avoiding jargon, confirming understanding, ability to encourage co-operation, compliance; obtaining informed consent
- Showing consideration and respect for other’s culture, opinions, patient’s right to be informed and make choices
- Respecting another’s right to opinions and to accept or reject advice
- Valuing perspectives of others contributing to management decisions
- Conflict resolution
- Dealing with complaints
- Communicating decisions in a clear and thoughtful manner
- Presentation skills
- Maintaining (legible) records
- Being available, contactable, time-conscious
- Setting realistic objectives, identifying and prioritising outstanding problems
- Using language, literature (e.g. leaflets) diagrams, educational aids and resources appropriately
- Establish facts, identify issues and respond quickly and appropriately to a complaint received
- Accepting responsibility, involving others, and consulting appropriately
- Obtaining informed consent
- Discussing informed consent
- Giving and receiving feedback

ASSESSMENT & LEARNING METHODS

- Mastering Communication course (Year 1)
- Consultant feedback at annual assessment
 - Workplace based assessment e.g. Mini-CEX, DOPS, CBD
 - Educational supervisor’s reports on observed performance (in the workplace): communication with others e.g. at handover. ward rounds, multidisciplinary team members
- Presentations
- RCPI Ethics programmes
- RCPI HST Leadership in Clinical Practice Course

Leadership

Objective: To have the knowledge, skills and attitudes to act in a leadership role and work with colleagues to plan, deliver and develop services for improved patient care and service delivery.

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care; Communication and Interpersonal Skill; Collaboration and Teamwork; Management (including Self-Management); Scholarship.

KNOWLEDGE

Personal qualities of leaders

- Knowledge of what leadership is in the context of the healthcare system appropriate to training level
- The importance of good communication in teams and the role of human interactions on effectiveness and patient safety

Working with others

- Awareness of own personal style and other styles and their impact on team performance
- The importance of good communication in teams and the role of human interactions on effectiveness and patient safety

Managing services

- The structure and function of Irish health care system
- Awareness of the challenges of managing in healthcare
 - Role of governance
 - Clinical directors
- Knowledge of planning and design of services
- Knowledge and understanding of the financing of the health service
 - Knowledge of how to prepare a budget
 - Defining value
 - Managing resources
- Knowledge and understanding of the importance of human factors in service delivery
 - How to manage staff training, development and education
- Managing performance
 - How to perform staff appraisal and deal effectively with poor staff performance
 - How to rewards and incentivise staff for quality and efficiency

Setting direction

- The external and internal drivers setting the context for change
- Knowledge of systems and resource management that guide service development
- How to make decisions using evidence-based medicine and performance measures
- How to evaluate the impact of change on health outcomes through ongoing service evaluation

SKILLS

- Effective communication with patients, families and colleagues
- Co-operation and collaboration with others; patients, service users, carers colleagues within and across systems
- Being an effective team player
- Ability to manage resources and people
- Managing performance and performance indicators

Demonstrating personal qualities

- Efficiently and effectively managing one-self and one's time especially when faced with challenging situations
- Continues personal and professional development through scholarship and further training and education where appropriate
- Acting with integrity and honesty with all people at all times
- Developing networks to expand knowledge and sphere of influence
- Building and maintaining key relationships
- Adapting style to work with different people and different situations
- Contributing to the planning and design of services

ASSESSMENT & LEARNING METHODS

- Mastering Communication course (Year 1)
- RCPI HST Leadership in Clinical Practice (Year 3 – 5)
- Consultant feedback at annual assessment
- Workplace based assessment e.g. Mini-CEX, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace): on management and leadership skills
- Involvement in hospital committees where possible e.g. Division of Medicine, Drugs and Therapeutics, Infection Control etc.

Quality Improvement

Objective: To demonstrate the ability to identify areas for improvement and implement basic quality improvement skills and knowledge to improve patient safety and quality in the healthcare system.

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care; Communication and Interpersonal Skills; Collaboration and Teamwork; Management; Relating to Patients; Professionalism

KNOWLEDGE

Personal qualities of leaders

- The importance of prioritising the patient and patient safety in all clinical activities and interactions

Managing services

- Knowledge of systems design and the role of microsystems
- Understanding of human factors and culture on patient safety and quality

Improving services

- How to ensure patient safety by adopting and incorporating a patient safety culture
- How to critically evaluate where services can be improved by measuring performance, and acting to improve quality standards where possible
- How to encourage a culture of improvement and innovation

Setting direction

- How to create a 'burning platform' and motivate other healthcare professionals to work together within quality improvement
- Knowledge of the wider healthcare system direction and how that may impact local organisations

SKILLS

- Improvement approach to all problems or issues
- Engaging colleagues, patients and the wider system to identify issues and implement improvements
- Use of quality improvement methodologies, tools and techniques within every day practice
- Ensuring patient safety by adopting and incorporating a patient safety culture
- Critically evaluating where services can be improved by measuring performance, and acting to raise standards where possible
- Encouraging a culture of improvement and innovation

Demonstrating personal qualities

- Encouraging contributions and involvement from others including patients, carers, members of the multidisciplinary team and the wider community
- Considering process and system design, contributing to the planning and design of services

ASSESSMENT & LEARNING METHODS

- RCPI HST Leadership in Clinical Practice
- Consultant feedback at annual assessment
- Involvement in hospital committees where possible e.g. Division of Medicine, Drugs and Therapeutics, Infection Control etc.

Scholarship

Objective: To develop skills in personal/professional development, teaching, educational supervision and research

Medical Council Domains of Good Professional Practice: Scholarship

KNOWLEDGE

Teaching, educational supervision and assessment

- Principles of adult learning, teaching and learning methods available and strategies
- Educational principles directing assessment methods including, formative vs. summative methods
- The value of regular appraisal / assessment in informing training process
- How to set effective educational objectives and map benefits to learner
- Design and delivery of an effective teaching event, both small and large group
- Use of appropriate technology / materials

Research, methodology and critical evaluation

- Designing and resourcing a research project
- Research methodology, valid statistical analysis, writing and publishing papers
- Ethical considerations and obtaining ethical approval
- Reviewing literature, framing questions, designing a project capable of providing an answer
- How to write results and conclusions, writing and/or presenting a paper
- How to present data in a clear, honest and critical fashion

Audit

- Basis for developing evidence-based medicine, kinds of evidence, evaluation; methodologies of clinical trials
- Sources from which useful data for audit can be obtained, the methods of collection, handling data, the audit cycle
- Means of determining best practice, preparing protocols, guidelines, evaluating their performance
- The importance of re-audit

SKILLS

- Bed-side undergraduate and post graduate teaching
- Developing and delivering lectures
- Carrying out research in an ethical and professional manner
- Performing an audit
- Presentation and writing skills – remaining impartial and objective
- Adequate preparation, timekeeping
- Using technology / materials

ASSESSMENT & LEARNING METHODS

- Health Research (online) – An Introduction
- Effective Teaching and Supervising Skills course (online) - recommended
- Educational Assessment Skills course - recommended
- Performing audit (online) course –mandatory
- Health Research Methods for Clinicians - recommended

Management

Objective: To understand the organisation, regulation and structures of the health services, nationally and locally, and to be competent in the use and management of information on health and health services, to develop personal effectiveness and the skills applicable to the management of staff and activities within a healthcare team.

Medical Council Domains of Good Professional Practice: Management.

KNOWLEDGE

Health service structure, management and organisation

- The administrative structure of the Irish Health Service, services provided in Ireland and their funding and how to engage with these for best results
- Department of Health, HSE and hospital management structures and systems
- The national regulatory bodies, health agencies and patient representative groups
- Understanding the need for business plans, annual hospital budgets, the relationship between the hospital and PCCC

The provision and use of information in order to regulate and improve service provision

- Methods of collecting, analysing and presenting information relevant to the health of a population and the apportionment of healthcare resources
- The common ways in which data is presented, knowing of the sources which can provide information relevant to national or to local services and publications available

Maintaining medical knowledge with a view to delivering effective clinical care

- Understanding the contribution that current, accurate knowledge can make to establishing clinical effectiveness, best practice and treatment protocols
- Knowledge of sources providing updates, literature reviews and digests

Delegation skills, empowerment and conflict management

- How to assess and develop personal effectiveness, improve negotiating, influencing and leadership skills
- How to manage time efficiently, deal with pressure and stress
- How to motivate others and operate within a multidisciplinary team

SKILLS

- Chairing, organising and participating in effective meetings
- Managing risks
- Managing time
- Delegating tasks effectively
- Managing conflicts
- Exploring, directing and pursuing a project, negotiating through the relevant departments at an appropriate level
- Ability to achieve results through an understanding of the organisation and its operation
- Ability to seek / locate information in order to define an issue needing attention e.g. to provide data relevant to a proposal for change, establishing a priority, obtaining resources
- Ability to make use of information, use IT, undertake searches and obtain aggregated data, to critically evaluate proposals for change e.g. innovative treatments, new technologies
- Ability to adjust to change, apply management, negotiating skills to manage change
- Appropriately using management techniques and seeking to improve these skills and personal effectiveness

ASSESSMENT & LEARNING METHODS

- Mastering Communication course
- Performing Audit online course
- RCPI HST Leadership in Clinical Practice
- Annual audit
- Consultant feedback on management and leadership skills
- Involvement in hospital committees

Standards of Care

Objective: To be able to consistently and effectively assess and treat patients' problems

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care; Relating to Patients; Communication and Interpersonal Skills; Collaboration and Teamwork: Management (including Self-Management); Clinical Skills.

KNOWLEDGE

Diagnosing Patients

- How to carry out appropriate history taking
- How to appropriately examine a patient
- How to make a differential diagnosis

Investigation, indications, risks, cost-effectiveness

- The pathophysiological basis of the investigation
- Understand the clinical significance of reference ranges, positive and negative predictive value and potential risks of inappropriate tests
- The procedures for commonly used investigations, common or/and serious risks
- Understanding of the sensitivity and specificity of results, artefacts, PPV and NPV
- Understanding significance, interpreting and explaining results of investigations
- Logical approach in choosing, sequencing and prioritising investigations

Treatment and management of disease

- Natural history of diseases
- Quality of life concepts
- How to accurately assess patient's needs, prescribe, arrange treatment, recognise and deal with reactions / side effects
- How to set realistic therapeutic goals, to utilise rehabilitation services, and use palliative care approach appropriately
- Recognising that illness (especially chronic and/or incapacity) has an impact on relationships and family, having financial as well as social effects

Disease prevention and health education

- Screening for disease: methods, advantages and limitations
- Health promotion and support agencies; means of providing sources of information for patients
- Risk factors, preventive measures, and change strategies applicable to smoking, alcohol, drug abuse, and lifestyle
- Disease notification; methods of collection and sources of data

Notes, records, correspondence

- Functions of medical records, their value as an accurate up-to-date commentary and source of data
- An understanding of the need and appropriate use of problem-orientated discharge notes, letters, more detailed case reports, concise out-patient reports and focused reviews
- Appreciating the importance of up-to-date, easily available, accurate information, and the need for communicating promptly e.g. with primary care

Prioritising, resourcing and decision taking

- How to prioritise demands, respond to patients' needs and sequence urgent tasks
- Establishing (clinical) priorities e.g. for investigations, intervention; how to set realistic goals; understanding the need to allocate sufficient time, knowing when to seek help
- Understanding the need to complete tasks, reach a conclusion, make a decision, and take action within allocated time
- Knowing how and when to conclude

Handover

- Know what are the essential requirements to run an effective handover meeting
 - Sufficient and accurate patients information
 - Adequate time
 - Clear roles and leadership
 - Adequate IT
- Know how to prioritise patient safety
 - Identify most clinically unstable patients
 - Use ISBAR (Identify, Situation, Background, Assessment, Recommendations)
 - Proper identification of tasks and follow-ups required
 - Contingency plans in place
- Know how to focus the team on actions
 - Tasks are prioritised
 - Plans for further care are put in place
 - Unstable patients are reviewed

Relevance of professional bodies

- Understanding the relevance to practice of standards of care set down by recognised professional bodies – the Medical Council, Medical Colleges and their Faculties, and the additional support available from professional organisations e.g. IMO, Medical Defence Organisations and from the various specialist and learned societies

SKILLS

- Taking and analysing a clinical history and performing a reliable and appropriate examination, arriving at a diagnosis and a differential diagnosis
- Liaising, discussing and negotiating effectively with those undertaking the investigation
- Selecting investigations carefully and appropriately, considering (patients') needs, risks, value and cost effectiveness
- Appropriately selecting treatment and management of disease
- Discussing, planning and delivering care appropriate to patient's needs and wishes
- Preventing disease using the appropriate channels and providing appropriate health education and promotion
- Collating evidence, summarising, recognising when objective has been met
- Screening
- Working effectively with others including
 - Effective listening
 - Ability to articulate and deliver instructions
 - Encourage questions and openness
 - Leadership skills
- Ability to prioritise
- Ability to delegate effectively
- Ability to advise on and promote lifestyle change, stopping smoking, control of alcohol intake, exercise and nutrition
- Ability to assess and explain risk, encourage positive behaviours e.g. immunisation and preventive measures
- Involve patients' in solving their health problems, by providing information and education
- Availing of support provided by voluntary agencies and patient support groups, as well as expert services e.g. detoxification / psychiatric services
- Act in accordance with, up to date standards on palliative care needs assessment
- Valuing contributions of health education and disease prevention to health in a community
- Compile accurate and appropriate detailed medical notes and care reports including the results of examinations, investigations, procedures performed, sufficient to provide an accurate, detailed account of the diagnostic and management process and outcome, providing concise, informative progress reports (both written and oral)
- Transfer information in an appropriate and timely manner

- Maintaining legible records in line with the Guide to Professional Conduct and Ethics for Registered Medical Practitioners in Ireland
- Actively engaging with professional/representative/specialist bodies

ASSESSMENT & LEARNING METHODS

- Consultant feedback
- Workplace based assessment e.g. Mini-CEX, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace)
- Audit
- Medical Council Guide to Professional Conduct and Ethics

Dealing with & Managing Acutely Ill Patients in Appropriate Specialties

Objectives: To be able to assess and initiate management of patients presenting as emergencies, and to appropriately communicate the diagnosis and prognosis. Trainees should be able to recognise the critically ill and immediately assess and resuscitate if necessary, formulate a differential diagnosis, treat and/or refer as appropriate, elect relevant investigations and accurately interpret reports.

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care, Clinical Skills.

KNOWLEDGE

Management of acutely ill patients with medical problems

- Presentation of potentially life-threatening problems
- Indications for urgent intervention, the additional information necessary to support action (e.g. results of investigations) and treatment protocols
- When to seek help, refer/transfer to another specialty
- APLS protocols
- Ethical and legal principles relevant to resuscitation and DNAR in line with National Consent Policy
- How to manage acute medical intake, receive and refer patients appropriately, interact efficiently and effectively with other members of the medical team, accept/undertake responsibility appropriately
- Management of overdose
- How to anticipate / recognise, assess and manage life-threatening emergencies, recognise significantly abnormal physiology e.g. dysrhythmia and provide the means to correct e.g. defibrillation
- How to convey essential information quickly to relevant personnel: maintaining legible up-to-date records documenting results of investigations, making lists of problems dealt with or remaining, identifying areas of uncertainty; ensuring safe handover

Managing the deteriorating patient

- How to categorise a patients' severity of illness using Early Warning Scores (EWS) guidelines
- How to perform an early detection of patient deterioration
- How to use a structured communication tool (ISBAR)
- How to promote an early medical review, prompted by specific trigger points
- How to use a definitive escalation plan

Discharge planning

- Knowledge of patient pathways
- How to distinguish between illness and disease, disability and dependency
- Understanding the potential impact of illness and impairment on activities of daily living, family relationships, status, independence, awareness of quality of life issues
- Role and skills of other members of the healthcare team, how to devise and deliver a care package
- The support available from other agencies e.g. specialist nurses, social workers, community care
- Principles of shared care with the general practitioner service
- Awareness of the pressures/dynamics within a family, the economic factors delaying discharge but recognise the limit to benefit derived from in-patient care

SKILLS

- BLS/APLS
- Dealing with common medical emergencies
- Interpreting blood results, ECG/Rhythm strips, chest X-Ray, CT brain
- Giving clear instructions to both medical and hospital staff
- Ordering relevant follow up investigations
- Discharge planning, including complex discharge
- Knowledge of HIPE (Hospital In-Patient Enquiry)
- Multidisciplinary team working
- Communication skills
- Delivering early, regular and on-going consultation with family members (with the patient's permission) and primary care physicians
- Remaining calm, delegating appropriately, ensuring good communication
- Attempting to meet patients'/ relatives' needs and concerns, respecting their views and right to be informed in accordance with Medical Council Guidelines
- Establishing liaison with family and community care, primary care, communicate / report to agencies involved
- Demonstrating awareness of the wide ranging effects of illness and the need to bridge the gap between hospital and home
- Categorising a patients' severity of illness
- Performing an early detection of patient deterioration
- Use of structured communication tools (e.g. ISBAR)

ASSESSMENT & LEARNING METHODS

- APLS course
- Record of on call experience
- Mini-CEX (acute setting)
- Case Based Discussion (CBD)
- Consultant feedback

Therapeutics and Safe Prescribing

Objective: To progressively develop ability to prescribe, review and monitor appropriate therapeutic interventions relevant to clinical practice in specific specialities including non-pharmacological therapies and preventative care.

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care.

KNOWLEDGE

- Pharmacology, therapeutics of treatments prescribed, choice of routes of administration, dosing schedules, compliance strategies; the objectives, risks and complications of treatment cost-effectiveness
- Indications, contraindications, side effects, drug interaction, dosage and route of administration of commonly used drugs
- Commonly prescribed medications
- Adverse drug reactions to commonly used drugs, including complementary medicines
- Identifying common prescribing hazards
- Identifying high risk medications
- Drugs requiring therapeutic drug monitoring and interpretation of results
- The effects of age, body size, organ dysfunction and concurrent illness or physiological state e.g. pregnancy on drug distribution and metabolism relevant to own practice
- Recognising the roles of regulatory agencies involved in drug use, monitoring and licensing e.g. IMB, and hospital formulary committees
- Procedure for monitoring, managing and reporting adverse drug reaction
- The role of The National Medicines Information Centre (NMIC) in promoting safe and efficient use of medicine
- Differentiating drug allergy from drug side effects
- Know the difference between an early and late drug allergy, and drug side-effects
- Good Clinical Practice guidelines for seeing and managing patients who are on clinical research trials
- Best practice in the pharmacological management of cancer pain
- The management of constipation in children receiving palliative care

SKILLS

- Writing a prescription in line with guidelines
- Appropriately prescribing for children and pregnant adolescent
- Making appropriate dose adjustments following therapeutic drug monitoring, or physiological change (e.g. deteriorating renal function)
- Reviewing and revising patients' long term medications
- Anticipating and avoiding defined drug interactions, including complementary medicines
- Providing comprehensible explanations to the patient, and carers when relevant, for the use of medicines
- Being open to advice and input from other health professionals on prescribing
- Participating in adverse drug event reporting
- Take and record an accurate drug allergy history and history of previous side effects

ASSESSMENT & LEARNING METHODS

- Consultant feedback
- Workplace based assessment e.g. Mini-CEX, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace): prioritisation of patient safety in prescribing practice
- Guidance for health and social care providers - Principles of good practice in medication reconciliation (HIQA)

Specialty Section

Community Paediatrics

Objective: **To have knowledge and skill to address the case areas of Social Paediatrics.**

To become competent in addressing (i) the needs of the disadvantaged child, (ii) Health promotion/education, (iii) immigration, (iv) child abuse and child protection, (v) fostering and adoption, (vi) epidemiology and (vii) accidents and poisoning.

KNOWLEDGE

The disadvantaged child

- Community problems: racism, bullying, gender issues, traffic-safe play spaces, pollution. Access to health care for marginalised groups
- Local community: demographic structure, areas of deprivation, service provision and access.
- Ethnic minority health needs
- Ability to elicit accurate information about a family's social circumstances with sensitivity.
- Awareness of potential communication problems with people of different social, ethnic and racial backgrounds – strategies to cope with these
- Develop sensitivity on assessing the impact of being disadvantaged

Health promotion/education

- Knowledge of local and national health promotion initiatives in relation to injury prevention
- Knowledge of the role of the public health service.
- Liaise with health promotion departments and other groups involved in health promotion, i.e. PHN, GPs, teachers, school nurses

Immunisation

- Local and national immunisation policy: role of the local immunisation committee
- Knowledge of infectious diseases controlled by immunisation
- Knowledge of the role of immunisation co-ordinator
- To be competent in the training and giving advice in respect of immunisation
- Awareness of groups who do not agree with immunisations and their reasons

Behavioural Paediatrics

- Self-harm in young people and its consequences
- Recognition of time-limited emotional and behavioural symptoms as response to psychological or social stress
- Origin of enuresis and encopresis in children, including those with special needs
- Indirect effects of substance misuse on mental and physical health, through experimental behaviour and lifestyle, the effects on educational, emotional and behavioural development and the impact on self-care skills
- Possible impact of a sleep disorder on child and family
- The association of sleep disorder in developmental disorders such as ADHD, ASD, Learning Disability
- Principles of treatment of chronic fatigue syndrome/ME and the need to engage the family with a rehabilitative approach
- Impact of behaviour disorders on those with developmental difficulties, including specific phenotypes

SKILLS

- Work as part of a clinical network in management of these issues
- Recognise the nature and severity of behavioural difficulties in the context of developmental stage and social context
- Offer advice on behavioural difficulties to parents and young people
- Provide individual behavioural treatment with parents and young people in straightforward cases and to recognise when to liaise with specialists
- Involve colleagues for behavioural difficulties, taking into account the possible complications of coexisting conditions
- Help families recognise the impairment resulting from medically unexplained symptoms and help them engage with HSE Child and Adolescent Mental Health Services for a range of treatment inputs
- Reassure and advise parents and professionals on management, explaining normal adjustment processes and distinguishing them from more significant psychopathology

Child public health**KNOWLEDGE**

- Be familiar with the work of the National Screening Committee and Irish Paediatric Surveillance Unit
- Be aware of data sources relating to health, the census, education and social services
- Awareness of the evidence base for the prevention of childhood obesity and promotion of breast feeding, healthy eating and physical exercise
- Awareness of the factors which contribute to low immunisation uptake and some of the interventions which can improve these
- Recognise the opportunity costs of introducing a new service

SKILLS

- Use existing data and survey results in support of advice to funding of child health services
- Explain criteria for screening to parents and other professionals
- Explain the ethical dilemmas posed by screening to parents and others
- Use available outcome measures to monitor the health of a child population and understand how they might be used to guide, monitor and improve service delivery
- Ability to communicate key health messages during public health crisis
- Be able to provide advice for parent and professionals regarding children with complex immunisation histories and queries
- Be able to advise schools on the management of common infectious diseases and infestations
- Advise parents on injury prevention and contribute to local injury prevention programmes

Neurodisability**KNOWLEDGE**

- Understanding of the broad range of causes of disability
- Understand the aetiology and prevalence of disability, including sensory impairment, in the population, how prevalence is monitored and the use of population registers
- How to manage the ongoing difficulties of children with neurological, neurodisabling conditions and sensory impairment as part of a clinical network, recognizing the limits of own expertise and seeking expert advice
- How information systems can be used to manage individual cases of childhood disability and to collect population data on disability
- Understand the basics of seating and equipment for children with disabling conditions
- Recognize the breadth of presentations of children with developmental, neurological and sensory disorders
- Know and be able to recognise the early signs of common complications, associated medical conditions and mental health problems in children with neurodisabling conditions
- Be able to distinguish simple developmental delay from developmental disorders and be aware of the cases which require specific or multi-disciplinary input and refer appropriately
- Recognise when children's levels of cognitive functioning fall outside the broadly normal range for age
- Be able to identify infants and children at risk of sensory impairment and be able to recognise when that impairment might contribute to developmental difficulties and refer appropriately

SKILLS

- Appropriately use neuro-diagnostic tools, including neuro-imaging and neurophysiology seeking expert advice appropriately recognize symptoms and signs of serious and life-threatening neurological disorders and initiate an appropriate and timely clinical response
- Manage common seizure disorders within national guidelines
- Contribute to the local provision of long-term care, working with specialty services and neurological and neurodisability networks
- Lead long-term management of the child's overall health and developmental needs working effectively with the family and other professionals involved
- Perform an accurate assessment of neuro-developmental status at all ages
- Examine the nervous system of a newborn baby, child and young person and interpret the findings
- Use a range of communication skills with disabled children, their families and other professionals
- Assess, investigate and diagnose a broad range of developmental, visual and hearing disorders, explain the outcome and management plan to parents, care-givers and young people
- Assess and diagnose all main syndromes and behavioural phenotypes at all ages and stages of development
- Recognise when a developmental pattern does not follow the normal pattern for that disorder, when further investigation and specialist advice may be indicated and to arrange timely and appropriate investigation and referral when necessary have developed a range of skills to recognise complex language disorders which may present as behavioural disorders, selective mutism, pragmatic language deficits or where communication skills are regressing (such as those associated with epilepsy) and be able to liaise appropriately with colleagues regarding specialist investigations and management
- Prescribe and monitor therapy for the common neurological and developmental disorders, recognizing the limits of own expertise and seeking expert advice appropriately
- Manage medical problems and secondary complications in children with disabilities in conjunction with other paediatric and specialist colleagues
- Liaise with the neonatal team and provide timely support and assessment for those at risk of developing problems and requiring follow-up and those with serious congenital abnormalities
- Recognise the features of common chromosome or genetic disorders, malformation or deformation syndromes, investigate and identify associated anomalies in conjunction with specialist colleagues

- Participate in establishing and presenting genetic diagnosis to parents, offering appropriate information and support to parents whilst awaiting definitive diagnosis and responding appropriately when a chromosome or genetic condition is diagnosed within a clinical network, even when this is unexpected

Visual Impairment

KNOWLEDGE

- Recognise when a child with other disabilities may have a visual impairment
- Know how to investigate and refer appropriately
- Understand the anatomy, physiology, genetics and functional effects of a range of eye conditions, especially those that cause visual impairment
- Understand the implications of nystagmus, refer appropriately for further visual and/or neurological assessment and be able to provide paediatric input to management
- Be able to differentiate between, and understand the management of, paralytic and nonparalytic squint, refer appropriately and explain this to parents

SKILLS

- Take and interpret a history for a child with suspected visual impairment including family history, developmental history and possible causes
- Assess a child with suspected visual impairment, undertake and interpret a range of visual tests
- Establish the likely extent of impairment in conjunction with specialist colleagues
- Recognise congenital cataract, corneal opacities, eye tumours and retinal infections and refer urgently for further management
- Recognise when ptosis may affect vision and refer appropriately for further management
- Explain the results of tests and their implications to the child or young person, parents, carers and other professionals

Hearing Impairment

KNOWLEDGE

- Screening methods and referral pathways for suspected hearing loss
- Risk factors, common and preventable causes hearing impairment
- Understand the anatomy, pathophysiology and neuroscience of the ear and its relation to hearing loss
- Understand the effect of hearing loss on the child and family and how this may affect emotional development, social relationships and leisure activities
- The principles of management of hearing loss, including hearing aids, cochlear implantation and communication needs
- Specific developmental patterns that occur in the child with hearing impairment
- Recognize and interpret abnormal hearing behaviour
- Educational approaches to the child with hearing impairment
- Know about the effects hearing impairment may have on other disabilities especially the particular problems of the deaf child

SKILLS

- Be able to recognise when a child with other disabilities may have a hearing impairment and be able to investigate and refer appropriately
- Recognise common conditions including otitis externa, otitis media with effusion, acute otitis media, perforation
- Take and interpret a history for a child with suspected hearing impairment including family history, developmental history and possible causes
- Assess a child with suspected hearing impairment, undertake and interpret a range of hearing tests
- Establish the likely extent of impairment in conjunction with specialist colleagues
- Explain the results of tests and their implications to the child or young person, parents, carers and other professionals

Child abuse**KNOWLEDGE**

- Knowledge of forensic medicine, especially in relation to sexual abuse
- Sexually transmitted diseases: investigation and treatment
- Strategies and agencies available to help children and families cope with child abuse
- Appreciation of normal and abnormal genital findings
- Competence in writing legal reports for police and case conferences: legal proceeding
- Presenting evidence at case conferences and court
- Develop sensitivity in elucidating information
- Develop understanding of the multifaceted team that may be involved
- Be aware of the importance of accurate assessments
- Knowledge of induced illness

Child protection and children in special circumstances

- The immediate and long term impact of parental factors on outcomes for children in child protection and for children looked after, for example substance misuse, domestic violence, mental health problems, chronic physical illness, learning difficulties
- Health and lifestyle factors of carers/birth parents which may impair the current and future health and wellbeing of children, for example smoking, mental health problems, learning difficulties
- The long term implications of being looked after, for example, the consequences of separation, loss, multiple moves, risk of subsequent abuse in care, disrupted education and routine health care
- Consent and parental responsibility in relation to child protection examinations and the health needs of looked-after children and the relevance of the child's care status
- The paediatrician's role and how fits in with those of other agencies in the management of children in need and those in need of protection and ensure suitable follow up
- Know how to assess and support the needs of children in families where there are child protection concerns
- Know the appropriate investigations and management of physical injuries in relation to abuse including use of radiology, medical photography and forensic tests and the limitation of these
- Be aware it is impossible to date bruises accurately
- Recognise that frequent attendance at the Emergency Department may be a presentation of child abuse and neglect
- Know that behaviour changes including soiling and/or wetting can be a presentation of emotional abuse or neglect, sometimes in association with other forms of abuse including sexual abuse
- Know about forensic assessment in relation to child abuse and understand the importance of a chain of evidence
- Know how a forensic medical examination is performed and how this complements the role of the paediatrician
- Recognise the role of the Forensic Odontologist in relation to bite marks
- Know that sexual abuse forms part of the differential diagnosis of vaginal or rectal bleeding and vaginal discharge
- Know when an expert genital examination is needed
- Know how to access help for appropriate investigation and management of sexually transmitted disease
- Know about emergency contraception and how this can be accessed
- Be able to recognise fabricated and induced illness including the significance of repeated or bizarre physical symptoms, and be able to take appropriate action and know when and where to access help
- Know the pathways to gather medical, education or social information on the child in whom factitious or induced illness may be considered and how to take this concern forward in a multi-agency setting
- Know the medical conditions that may mimic abuse of all kinds

- Understand the role and responsibilities of the named and designated professional for child protection and looked-after children
- Know about the role of the medical adviser on adoption and have attended the local adoption panel
- Be aware of the difficulties of asylum seekers, refugees, travelling families, Forces families and young carers

SKILLS

- Conduct an assessment for physical abuse
- Assess injuries in relation to history, developmental stage and ability of the child
- Recognise when additional expert advice is needed, for example radiology, orthopaedics, neurology, ophthalmology
- Recognise fabricated or induced illness including the significance of repeated or bizarre physical symptoms and be able to take appropriate action and be able to access help at an appropriate time
- Instigate appropriate investigations and to initiate and contribute to multi-agency involvement in all forms of abuse
- Take part in and understand the importance of peer review in relation to all forms of abuse examinations and investigations
- Recognise signs of abuse in disabled children and know that this group is more vulnerable
- Provide the medical opinion to case conferences, strategy meetings and court hearings
- Compile and write the range of reports required in child protection work including Garda statements, medical reports from social services and court reports

ASSESSMENT & LEARNING METHODS

- Study Day: Public Health incorporating disease prevention, vaccination and impact of health inequality
- Case discussion : Vaccinations (Controversies)
- Study day : Health in ethnic minorities
- Study Day: Course in Child protection (CPRR programme)
- Case Based Discussion/liaison with local Adoption team
- Study Day: Immunisation
- Study Day: Disease prevention & health education
- Report writing course (Optional)
- Research Skills course (Optional)

Developmental Paediatrics

Objective: The trainee must be competent in addressing the issues of (i) genetics and congenital defects and (ii) neurological and developmental disorders, genetics and congenital defects (errors of morphogenesis).

Objective: The trainee should be able to undertake a comprehensive genetic history, inclusive of laboratory testing and dysmorphic database searching.

KNOWLEDGE

- Diagnosis
 - Modern developments: uniparental disomy, triplet expansion disorders, (e.g. fragile X), imprinting, germline mosaicism
 - Know the function of the cytogenetics and molecular genetics laboratories and the available diagnostic tests including:
 - Modern developments such as microarray and the application of FISH (fluorescent in-situ hybridisation) to studies of microdeletion syndromes
 - The DNA diagnosis of Duchenne muscular dystrophy, cystic fibrosis and fragile X
- Parental Diagnosis
 - Awareness of availability of prenatal diagnosis – where to get help and advice
 - Knowledge of the techniques used in foetal medicine: ultrasound, amniocentesis, chorionic villous sampling, foetal blood sampling, Cell-free foetal DNA, fetoscopy
- Management
 - Importance of liaison with the National Genetic Service
 - Be aware of the management in childhood of some common disorders, including screen for complications:
 - Common chromosomal abnormalities, Down syndrome, fragile X
 - Common multi-system mendelian disorders, e.g. neurofibromatosis type 1
 - Common isolated birth defects e.g. cleft lip and palate

NB: Relevant disorders are covered in other parts of this curriculum notably, learning difficulties and metabolic disorders.

SKILLS

- Assess the dysmorphic child
- Arrange appropriate investigations (e.g. photography, chromosomal analysis, skeletal x-rays, renal/cardiac scans, DNA studies as appropriate).
- Understand the ethical difficulties involved in the testing of children for late onset diseases (e.g. Huntington's disease, adult polycystic kidney disease), and for carrier detection (e.g. cystic fibrosis, balanced translocations)

ASSESSMENT & LEARNING METHODS

- General Paediatrics clinics
- Developmental clinics
- Case Based discussion: The dysmorphic child
- Study day: Genetics

Neurological and Development Disorders

Objective: The trainee must be competent in addressing the core components of paediatric developmental and neurology disorders as outlined below.

KNOWLEDGE

Developmental disorders:

- General
 - The acute management of neurological emergencies in childhood: organising transfer to the specialist unit: safe transport
 - The inter-relationship of neurological diseases with other body systems, including growth and nutrition: feeding difficulties, reflux, aspiration
 - Paediatric assessment of the child with hearing and/or vision impairment
 - The child with regression in abilities – causes and investigation
 - Liaison with the specialist, district clinics: when to seek specialist advice
- Diagnostic methods
 - appropriate use of neuroradiology and other screening modalities
 - significance of common patterns of abnormality on the EEG
 - of the place for special investigations e.g. nerve conduction, electromyogram, muscle biopsy, MRI
 - Neurometabolic investigations (in conjunction with the specialist laboratory)
- Therapy
 - Basic knowledge of aids to treatment and rehabilitation: hearing and vision aids, eating, mobility aids, orthosis, communications aids, computers etc.
 - The principles of management of behaviour disorders, including counselling and psychotherapy
- Multidisciplinary approach
 - Use a team approach to management of neurological and developmental disorders, and understand its advantages and limitations
 - Understand the methods used by occupational, speech and physiotherapists, nurses, specialist health visitors, play therapists, dieticians, clinical and educational psychologists, teachers and social workers in assessment, treatment and rehabilitation
 - Knowledge of the methods used by other medical specialists including paediatric neurologists, ophthalmologists, ENT surgeons, community paediatrician, child and adolescent psychiatrist, neurosurgeon
 - Planning handover to adult services
- Appreciate the importance of early diagnosis and family support
- Appreciate the importance of a co-ordinated multidisciplinary assessment and management plan

Movement problems

- Normal variations in motor development: rollers, shufflers
- Abnormal patterns of movement
- Clumsy children
- The ataxic child
- Early diagnosis of cerebral palsy
- Rational investigation of cerebral palsy
- Differential diagnosis of cerebral palsy
- Appreciate importance of multidisciplinary approach to assessment
- Enforce need for ongoing assessment of patient

Speech and language

- Knowledge of :
 - developmental phonological problems: deviant patterns
 - developmental language delay: differentiation
 - role of speech therapist in disorders of language, phonology, articulation/feeding
 - taking a history of communication and language development
 - role of speech therapist in assessment
 - importance of treatment speech plan

Developmental paediatrics

- Understand the common causes and the patterns of disability
- Understanding of the tests of cognitive function
- Competence in assessing disability at different ages, in conjunction with other relevant specialists
- Acknowledge the impact on child and family inclusive of schooling

Visual system

- Knowledge of:
 - investigation and management of cataracts, a mass behind the lens, tumours of the visual pathway
 - development of the severely visually impaired child: treatments/therapies used
 - Colour vision defects: recognition, effects on learning, career counselling
 - relationships of health/social/educational/voluntary sector organisations for the visually impaired child and family
 - role of orthoptists, community optician/ophthalmologist and consultant ophthalmologist
 - impact on learning and the need for specialist education

Auditory system

- Knowledge of :
 - functional anatomy and physiology of the auditory system
 - acoustics and principles of hearing assessment
 - reports of hearing assessment
 - competence to identify infants at risk of hearing problems
 - principles of assessment and management of neurosensory hearing impairment
 - Investigation
 - Otoacoustic emissions
 - BAERs
 - Hearing aids
 - Communication aids
 - Role of speech therapy
 - principles of assessment, management of middle ear disease
 - Natural history
 - Tympanogram
 - Medical approach
 - Surgical approach
 - Alternative therapies
 - secondary effects of hearing impairment on behaviour and language
 - hearing impairment in the multiply disabled child
- Relationships of health/social/educational/voluntary sector organisations for the hearing-impaired child and family
- Understand the process involved in tympanograms and BAERs
- Appreciate the role of speech therapist, audiologist and ENT surgeons

Behavioural and psychological problems

- Members and roles of the child and family counselling team
- Other health service resources available to families
- How to apply a child psychiatry perspective to normal, as well as abnormal illness behaviour, as encountered in all aspects of child health
- Understanding the concept of therapeutic interventions used and perspectives in child psychiatry, psychology and psychiatric social work
- Understand the use of behaviour questionnaires
- Knowledge and understanding of drug and alcohol abuse
- Knowledge of normal and abnormal reactions to stress, bereavement, chronic illness, death
- knowledge of how to take a detailed child psychiatric history, including eliciting painful information sensitively and efficiently
- Make a mental state examination
- Use and understand non-verbal communication
- Define which are appropriate referrals to child psychiatry and psychology
- Learn to be sensitive to opportunities for therapeutic intervention during history taking
- Learn basic skills in supportive psychotherapy, behaviour therapy, family therapy
- Develop sensitivity to the impact of behaviour and psychological problems on relationships and family functioning
- Knowledge of Autism, ADHD, learning disabilities
- Knowledge of tests to determine brain death

SKILLS

- Detailed developmental and neurological assessment
- Acute management of neurological emergencies in childhood: organising transfer to the specialist unit: safe transport
- Paediatric assessment of the child with hearing and/or vision impairment
- Multidisciplinary team working
- Investigations and assessment of the child with regression in abilities
- Clinical Skills:
 - History taking - communication and language development
 - Take a detailed child psychiatric history, including eliciting painful information sensitively and efficiently
 - Assessment of Autism, ADHD, Learning disabilities as part of clinical history assessment
 - Detailed developmental assessment
 - Detailed neurological examination
 - Neurological assessment of the neonate
 - Drawing up a management plan, taking into account continuing medical problems and attendant social, educational and psychological factors
 - Co-ordination of care for the critically ill child, the initial management of neurological emergencies, the principles of safe transport
 - Make a mental state examination
 - Differential diagnosis

ASSESSMENT & LEARNING METHODS

- APLS
- Exposure to child psychological clinics
- **Childhood Development Disorders course**
- Evidence of attendance at joint assessments and multidisciplinary reviews
- Chair meetings on multidisciplinary planning
- Mini-CEX: Developmental assessment and neurological assessment
- Case discussion: Safe Transport

Assessment at Year 2**Specialist training in year 4:**

- Developmental course
- Case Based Discussion: Evidence of lead role in assessment diagnosis and co-ordination of care of child and developmental problems

Nutrition and Metabolic Disease

Objective: The trainee must be competent in addressing the core component of nutrition and related (metabolic) disorders.

KNOWLEDGE

- Principles of dietary analyses: indications and procedures
- Understanding of measurement of body composition
- Advise on health eating for normal children, including minority groups
- Detail an appropriate diet for children with specific diseases, e.g. cystic fibrosis, diabetes, coeliac disease; working knowledge of the diets for PKU and other more common metabolic diseases
- Prescribe parenteral nutrition
- Use and care of central venous catheters
- PEGs
- Appreciate lifelong impact of a diagnosis of metabolic disease

SKILLS

- Health promotion (Generic Assessments)
- Care of PEGs

ASSESSMENT & LEARNING METHODS

- Clinics
- In house training on PEGs
- Study Day: Nutrition disorders in children.

Emergency Medicine

Objectives: **The trainee must be competent in addressing the principles of emergency care.**

KNOWLEDGE

Accident prevention

- Understanding models and strategies of prevention

Principles of emergency care

- Recognition and management of non-accidental injury
- Resuscitation: recognition of threat to life and limb
- Assessment and initial management of the seriously injured child
- Organisation of safe transport
- Paediatrician's role in major incident planning
- System Emergencies:
 - Cardiovascular:
 - Resuscitation of infants and children
 - Recognition and management of shock (including septicaemia)
 - Supraventricular and ventricular tachycardias: bradycardias
 - CNS:
 - Coma: emergency management of raised intracranial pressure
 - Seizures: management of status epilepticus
 - Meningitis
 - Pain relief
 - Respiratory:
 - Recognition and management of acute respiratory failure
 - The choking child and upper airway obstruction
 - Inhalational injury and carbon monoxide poisoning
 - Management of severe or life-threatening asthma
- Behavioural:
 - Deliberate self-harm
 - Alcohol and other drug misuse
- Social: .(see also community paediatrics)
 - Frequent attenders
 - Environmental
 - Burns and scalds: assessment: initial management: when to transfer to the burns unit
 - Electrical injury
 - Treatment of poisoning
 - Anaphylaxis
 - Musculoskeletal trauma including:
 - common childhood fractures
 - minor injuries
 - head injuries
 - the limping child
- APLS (will be expected from trainees in general paediatrics)
- Basic airway management
- Intra-osseous access
- Arterial access
- Understanding of the importance of trauma as a cause of morbidity and mortality in childhood
- Awareness of the importance of early recognition and management of potentially life-threatening illnesses to minimise morbidity and mortality

Accidents and poisoning

- Understanding of injury surveillance systems
- Liaise with A&E Department for:
 - Training of staff
 - Provision of child appropriate service
 - Setting up of information systems
 - Support for parents whose child has died suddenly
- Demonstrate an ability to liaise with General Practitioners
- Appreciate importance of Team Relationships
- Appreciate detection of sentinel events to detect NAI (non-accidental injury) and non-accidental ingestions

SKILLS

- APLS
- Assessment and management of the child in emergency care
- Safe transport
- Multidisciplinary team working
- Child protection

ASSESSMENT & LEARNING METHODS

- Emergency department experience
- Child protection course
- APLS
- Case Based Discussion: Accident prevention
- DOPS: Arterial access, CPR, Cardioversion

Foetal and Neonatal Medicine

Objective: Trainees must be competent in addressing the core components of foetal and neonatal medicine.

KNOWLEDGE

- Epidemiology:
 - Mortality and morbidity rates in the perinatal period
 - Methods of data collection at national/local level,
- Pathophysiology of pregnancy and labour:
 - Detection of foetal anomaly and collaborative prenatal counselling+
 - Preterm labour: antenatal counselling
- Pathophysiology of prematurity:
 - Respiratory distress syndrome and its sequelae
 - Cardiovascular problems including PDA and pulmonary hypertension
 - Neurological problems including IVH and periventricular leukomalacia
- Pathophysiology of mature infants:
 - Differential diagnosis of respiratory distress
 - Management of suspected neonatal early onset sepsis
 - Congenital abnormalities and their management
 - Neonatal encephalopathy
 - Effects of maternal drugs on the foetus and the new born
- Principles of neonatal care:
 - Routine care of the newborn:
 - Screening for neonatal disease by examination and investigation
 - Neonatal ongoing health checks and vaccination
 - Resuscitation:
 - Theoretical background
 - Organisation of training in resuscitation and audit
 - Special situations e.g. prematurity, meconium, congenital abnormality
 - Respiratory care and mechanical ventilation:
 - Supplemental oxygen
 - CPAP
 - High flow nasal cannula (HFNC)
 - Mechanical ventilation (conventional and high frequency oscillation)
 - Use of surfactant and inhaled nitric oxide
 - Long term sequelae of prolonged ventilation including home oxygen
 - Cardiovascular support:
 - Assessment of the cardiovascular system and use of inotropes
 - Assessment and management of patent ductus arteriosus
 - Feeding and gastrointestinal function:
 - Composition and use of feeds (breast milk, different formulae)
 - Parenteral nutrition, prescription, administration and indications.
 - Necrotising enterocolitis – assessment, diagnosis and management
 - Neurology:
 - Assessment using clinical examination and special investigations
 - Prognosis of major neuropathology
 - Therapeutic hypothermia
 - Screening preterm and “at risk” babies for ROP and hearing loss
 - Congenital abnormality and dysmorphology:
 - Investigation and diagnosis of congenital abnormality
 - Co-ordination with the genetics service
 - Investigation of suspected inborn error of metabolism co-ordination with regional metabolic service
 - Ethical issues:

- The child with major congenital abnormality
 - The child with neurological abnormality
 - Management of the extremely preterm infant
 - Management of death
- Early, medium term and late sequelae of neonatal and perinatal events:
 - Risk of neurodisability and relation to neonatal events
 - Support for parents after discharge from the neonatal unit
- Managerial skills:
 - Personal:
 - Awareness of current medical manpower
 - Provider unit function:
 - Data capture and collation, national and local statistics
 - Assessment of equipment and resources
- Appreciate anxiety and concerns of parents with ill children and offer support to parents

SKILLS

- Clinical skills:
 - Newborn exam and common problems
 - Developmental and neurological assessment of the neonate and older child
 - Assessment of disability
 - Approach to distressed and bereaved parents
 - Initiating, monitoring and weaning mechanical ventilation, CPAP
 - Prescribing HFNC
- Diagnostic skills:
 - Radiology: Interpretation of common examinations e.g. chest and abdominal X-rays.
 - Use for neuroimaging: cranial ultrasound, MRI
 - Knowledge of use in imaging cardiovascular system and abdominal organs
 - Laboratory medicine:
 - Liaison with specialist laboratory for investigation of metabolic disease
 - Investigation of neonatal infection including suspected congenital infection
 - Neurophysiology: use and interpretation of results of EEG.
- Technical skills:
 - Understanding basic function of ventilators and monitoring equipment
 - Endotracheal intubation
 - Umbilical catheter insertion

ASSESSMENT & LEARNING METHODS

- APLS
- NRP
- STABLE
- Neonatal experience
- HST Leadership in Clinical Practice
- Mini-CEX: Developmental and neurological assessment of the neonate
- Case Based Discussion

Cardiovascular System

Objective: Trainees must be competent in addressing the core competencies of the cardiovascular system.

KNOWLEDGE

- Duct dependent lesions: use of prostaglandins
- Lesions amenable to balloon dilatation and cardiac catheterisation
- Indications, limitations and complications of cardiac catheterisation
- Basic knowledge of indications for cardiac surgery and interventional cardiac catheterisation: pre and post-operative care in conjunction with the specialist
- Liaison with the specialist department: combined district clinics with the specialists
- Awareness of when to refer for specialist cardiological assessment and treatment
- Knowledge of echocardiology

SKILLS

- Clinical skills:
 - Recognition and management of cyanotic spells in tetralogy of Fallot
 - Diagnosis and emergency treatment of cardiac arrhythmias
 - Emergency treatment of acute hypertension
- Technical skills:
 - Perform and interpret ECGs
 - Insertion of arterial lines

ASSESSMENT & LEARNING METHODS

- DOPS: Insertion of arterial lines

Dermatology

Objective: Trainees must be competent in addressing the core competencies of dermatology.

KNOWLEDGE

- Basic knowledge of structure and function of skin
- A working knowledge of diagnosis and treatment of common skin disorders i.e. eczema, psoriasis, acne, naevi, warts, infections and infestations
- Diagnosis and treatment of atopic eczema
- A basic knowledge of uncommon but important skin disorders
- Common neonatal dermatoses, diagnosis and management
- Skin care in the premature infant
- Diagnosis and treatment of paediatric dermatology emergencies i.e. staphylococcal scalded skin syndrome, eczema herpeticum, Steven Johnson syndrome, toxic epidermal necrolysis, graft versus host disease, Kawasaki disease, epidermolysis bullosa
- Principles of allergy
- Skin infections in the immuno-compromised host
- Haemangiomas and vascular malformations
- Pigmentation disorders including vitiligo
- Cutaneous manifestations of nutritional disorders (i.e. zinc deficiency), in urticarias, mastocytosis and blistering disorders
- Viral exanthems
- Cutaneous drug reactions
- Cutaneous manifestations of systemic disease i.e. lupus, dermatomyositis, localised scleroderma, histiocytosis, erythema nodosum, Henoch Schonlein purpura
- Principles of dermatologic treatment both topical and systemic (hair, alopecia, hair fragility disorders)
- Impact of chronic disease on growth and development
- Awareness of psychological impact and impairment of quality of life in chronic skin disease
- Awareness of prevention of skin disease (photo-protection, infection control)

SKILLS

- Correct technique for examination of the skin and mucous membranes of infants and older children with attention to primary and secondary skin lesions
- Interpretation of microbiology results, specific IgE tests (RAST) and skin prick testing
- Technique of viral and bacterial skin swabs
- Fungal culture
- Indications for skin biopsy

ASSESSMENT & LEARNING METHODS

- Case based discussion
- Weekly journal club
- Dermatopathology and Radiology conference
- Consultant feedback at annual assessment
- Journal club
- Weekly grand rounds
- Photoquiz
- Annual paediatric Royal Academy of Medicine meeting OLVHC (optional)
- Basic paediatric dermatology course Dundee or Birmingham UK (optional)
- Observations – phototherapy, patch testing, nurse-led clinic

Endocrinology, Diabetes and Growth

Objective: Trainees must be competent in addressing the core competencies of endocrinology, diabetes and growth.

KNOWLEDGE

General endocrinology

- Knowledge of common disorders and their appropriate investigation and management
- Recognise the presentation of, initiate diagnostic tests regarding and outline management of:
 - Thyroid disorders (congenital or acquired)
 - Congenital adrenal hyperplasia (including management of an adrenal crisis)
 - Primary and secondary adrenal insufficiency
 - Early and delayed sexual development and variants (thelarche, adrenarche)
 - Ambiguous genitalia
 - Hypoglycaemia
 - Disorders of calcium homeostasis
 - Glucocorticoid excess (iatrogenic, Cushings)
- Pharmacology of commonly-used agents e.g. insulin, steroids, thyroxine, growth hormone, DDAVP
- Relationship with regional endocrine service and indications for referral
- Appreciate anxiety that will be experienced by parent in relation to growth and development and loss of school days / educational opportunity

Diabetes

- Epidemiology, aetiology and pathophysiology of Type 1 and Type 2 diabetes, MODY, and rarer forms of diabetes
- Principles of diabetes management including commonly used insulin regimens
- Basic mode of action of insulin pump therapy & continuous glucose monitoring
- Management and prevention of diabetic ketoacidosis
- 'Sick day rules' in Type 1 Diabetes
- Management of hyperglycaemia and hypoglycaemia. Awareness of fear of hypoglycaemia.
- Develop an empathetic approach to family and patient

Growth

- Pathophysiology of abnormal growth: short stature, growth delay, excessive growth
- Ability to conduct an anthropometric assessment
- Initiate basic diagnostic tests and outline the management of growth disorders
- Appreciate psychosocial problems that may occur because of short stature
- Specific conditions where growth hormone is indicated: e.g. Turners Syndrome, Prader-Willi syndrome, ex- Small-for-gestational age infant, Chronic Renal Failure

Related metabolic diseases

- Metabolic bone disease and calcium disorders
- Lipid biochemistry, lipid disorders, genetic diagnosis and clinical management
- Differential diagnosis and evaluation of polyuria & polydipsia
- Obesity: causes, complications, management and when to suspect an endocrinological cause
- Ability to administer and interpret investigations of related metabolic diseases: liaison with the expert
- Be aware of uncommon presentation

Laboratory assessment of endocrinology

- The importance of an accurate bone age assessment
- Appreciate possible issues with reference ranges and assay sensitivity outside of specialist paediatric centres
- Appreciate that a “normal result” i.e. one within the presented reference range is not always normal
- Appreciate that certain tests are time of day dependent e.g. cortisol, testosterone and others can usually only be interpreted if taken in response to a stimulus e.g. insulin, growth hormone
- Knowledge of protocol for sample collection, storage and transportation
- Appreciation of importance of liaison skills with laboratories
- Basic principles of dynamic endocrine testing

Special aspects of multi-disciplinary training

- Pre and post-operative management of diabetes
- Adolescent perspectives in growth and endocrinology: planning transition
- Appreciation of the basic principles and methods of monitoring of blood glucose and education of patients and patient

SKILLS

- Assess, diagnose, investigate and manage the child with common endocrinology problems
- Assess, diagnose, investigate and manage the child with diabetes
- Assess, diagnose and manage growth disorders

ASSESSMENT & LEARNING METHODS

- Clinics
- Study Day: Nutrition and Growth
- Mini-CEX
- Case Based Discussion

Gastroenterology, Hepatic and Biliary Systems

Objective: Trainees must be competent in addressing the core competencies of gastrointestinal, hepatic and biliary systems.

KNOWLEDGE

- The epidemiology, aetiology, pathophysiology, clinical features, treatment and outcome for common gastrointestinal problems (see appendix), especially chronic inflammatory bowel disease, chronic under-nutrition and failure to thrive, infections of the gastrointestinal tract and liver, gastrointestinal food allergy
- Importance of malnutrition in GI and liver disease: principles of nutritional support
- Presentation of neonatal liver disease
- Understanding of the basis of normal infant/childhood feeding and reasons for methods of nutritional support
- Assessment of feeding and nutrition in a child with severe neuromuscular disorder: tube feeding: gastrostomy
- Liaison with the specialist department: combined district clinics with the specialist.
- Short-term management of enteral and parenteral nutrition
- Prescription of elimination diets: liaison with the dietician
- Knowledge of when to refer for specialist advice and management including specialised investigation e.g. upper gastrointestinal endoscopy, oesophageal pH studies
- Appreciate impact of chronic disease on family and patient functioning
- Enhance education of patient and family to improve coping skills and reduce of morbidity
- Involving relevant professional in nutrition, pharmacy and other care providers in a timely manner

SKILLS

- Assess, diagnose, investigate and manage the child with GI problems
- Acute presentations:
 - Acute abdominal pain
 - Acute diarrhoea and /or vomiting
 - Jaundice including neonatal
 - Upper and lower GI bleeding
 - Abdominal distension
 - Acute Hepatic failure
 - Gastro-oesophageal reflux
- Outpatient presentations:
 - Chronic or recurrent abdominal pain
 - Chronic diarrhoea and or vomiting
 - Constipation

ASSESSMENT & LEARNING METHODS

- Study Day: Nutrition
- Case Based Discussion

Nephro-urology

Objective: Trainees must be competent in addressing the core competencies of the nephro-urology system.

KNOWLEDGE

- Urinary tract:
 - Knowledge of current theories regarding epidemiology of urinary reflux and secondary progression of renal damage and its possible prevention
 - Understanding of the principles involved in the management of children with vesico-ureteric reflux including appropriate consultation with the paediatric nephrologists, surgical colleagues: advice on discharge from the paediatric clinic
 - Ability to diagnose and manage (in consultation with nephrologists and surgical colleagues):
 - Vesicoureteric junction and pelviureteric junction obstruction.
 - Duplex systems
 - Ureterocoele
 - Posterior urethral valves.
 - Ability to liaise with nephrologists, radiologists, obstetricians and surgeon in counselling of mothers with an antenatal diagnosis of a urinary tract malformation in their baby
- Neuropathic bladder:
 - When to suspect neuropathic bladder: role of urodynamic studies
 - Management of bladder and bowel dysfunction in conjunction with the appropriate specialist
- Glomerular disease:
 - Investigation and management (including indications for biopsy) of the following:
 - Haematuria
 - Proteinuria
 - Post-streptococcal nephritis
 - Henoch-Schonlein Purpura
 - Investigation and management of acute nephritis including indications for dialysis
- Nephrotic syndrome:
 - Diagnosis and management of nephrotic syndrome: indications for renal biopsy
 - Long-term management of nephrotic syndrome: awareness of side effects of medications involved
- Hypertension:
 - Non-invasive investigation of hypertension: echocardiography
 - Management of acute and chronic hypertension
- Nephrolithiasis:
 - Understanding of aetiology, need for special investigation, medical and surgical treatments
- Tubular and metabolic dysfunction:
 - Presentation of tubular and metabolic disorders including:
 - Renal tubular acidosis
 - Cystinosis and other Fanconi syndromes
 - Hypophosphataemic rickets
 - Nephrogenic diabetes insipidus
 - Understanding when to refer for specialist investigation and advice on treatment.

- Acute kidney injury (AKI)
 - Appropriate initial investigation and management of AKI when to refer to the specialist
 - Basic knowledge of the principles underlying peritoneal and renal dialysis, CAPD, plasmapheresis
- Chronic kidney disease (CKD):
 - Understanding of the factors involved in failure to thrive in CKD
- Multi-disciplinary approach to care:
 - The importance of a team approach in the management of nephrological disorders and to understand its advantages and limitations
 - Planning handover to adult services
- Integrated care – work with other agencies:
 - Community clinics, e.g. enuresis clinics
 - Specialist nephrology clinics held in district paediatric department
 - Self-help and parent support groups
- Understanding of the psychological stresses for the child and family associated with end-stage renal failure and its management

SKILLS

- Clinical skills:
 - Knowledge of when to refer for specialist advice and management including specialised investigations e.g. urodynamic studies and dialysis.
- Technical skills:
 - Use of the various forms of enuresis alarms.

ASSESSMENT & LEARNING METHODS

- Clinics
- Study Day: Nutrition and Growth
- Mini-CEX
- Case Based Discussion

Haematology and Oncology

Objective: Trainees must be competent in addressing the core competencies of haematology and oncology.

KNOWLEDGE

Haematology

- Acquired anaemias:
 - Iron deficiency
 - Megaloblastic anaemia
 - Haemolytic – immune and non-immune
 - Red cell aplasia – transient erythroblastopenia
- Congenital anaemias:
 - Haemolytic
 - Haemoglobinopathies:
 - Thalassaemia, sickle cell anaemia, transfusion anaemia, iron chelation therapy, pain relief, antenatal diagnosis
 - Red cell membrane defects:
 - Hereditary spherocytosis, hereditary elliptocytosis
 - Red cell enzyme defects:
 - G6PD deficiency, pyruvate kinase deficiency
 - Red cell aplasia
 - Diamond-Blackfan syndrome
- Principles of investigation & management of hereditary coagulation disorders:
 - Haemophilia A and B
 - Von Willebrand's disease
- Acquired coagulation disorders:
 - Neonatal:
 - Normal coagulation in the neonate
 - Vitamin K deficiency
 - DIC
 - Childhood:
 - DIC
 - Liver disease
 - Renal disease
- Aplastic anaemia
- Anaemia of prematurity
- In conjunction with the specialist –ITP and foetal/neonatal thrombocytopenia
- Tests of thrombotic risk factors: investigations and management of thrombosis – in discussion with the regional specialist:
 - Neonate
 - Childhood
- Investigation and management of neutropenia – congenital and acquired
- Understand the parental concerns as they relate to receiving blood or blood products

General Oncology

- Incidence and mortality rates for childhood cancer, including ethnic and geographical variability
- Modes of presentation of haematological malignancies (Acute leukaemia, lymphoma, myelodysplasia) and solid tumours (CNS tumours, Neuroblastoma, Wilms tumours, Retinoblastoma, Sarcomas and LCH)
- Principles and rationale of chemotherapy regimens: appropriate antiemetic control
- Supportive care including:
 - Blood product usage – risks and policies
 - Management of infection including febrile neutropaenia
 - Nutritional assessment and support
 - Appropriate management of pain (acute and chronic)
 - Psychological, educational and social support for patient and family
- Know when to refer patient to Haematologist/Oncologist
- Know the value of utilising tests in diagnosing malignancies
- Appreciate the anxiety caused by diagnosis of malignancy and its psychological impact
- Appreciate the vulnerability of family and patient

Terminal/palliative care

- Principles of analgesia and other symptom control.
- Resources for the support of families at home.
- Awareness of the role offered by hospice care.
- Clinical knowledge (*inclusive of specialist advice*) of treatment strategies.
- Appreciate the needs of family and patient
- Appreciate the patient and family role in decision-making.

Organisation of cancer care

- The importance of close liaison with the national paediatric oncology team in Crumlin
- Importance of long-term follow-up, knowledge of possibility of late effects of treatment.
- Be able to discuss treatment option and back-up plan
- Ability to interface with case provider at a distance from hospital
- Appreciation of multidisciplinary roles

SKILLS

- Clinical skills:
 - Interpretation of basic coagulation screen results
 - The appropriate use of blood and blood products
 - Documentation requirements for blood transfusion
 - Identification and recording of blood transfusion reactions
 - Risks of viral transmission associated with transfusion of blood products
 - The appropriate use of blood and blood products in the neonate

ASSESSMENT & LEARNING METHODS

- Study Day: Haematology & Oncology
- Case Based Discussion: Coagulation disorders

Metabolism

Objective: Trainees must be competent in addressing the core competencies of metabolism.

KNOWLEDGE

- Normal physiology and biochemistry, including changes during childhood of:
 - Fluid and electrolyte balance
 - Acid base regulation
 - Intermediary metabolism including glucose and metabolic response to fasting, lactate, ammonia, amino acids, organic acids, fatty acids
 - Calcium metabolism
- Clinic presentation, immediate investigations and management in conjunction with the regional specialist of the following:
 - Persistent or recurrent episodes of metabolic acidosis
 - Acute encephalopathy including intractable seizures – “Reye’s syndrome”
 - Fatty acid oxidase defects including MCAD
 - Organic acidaemias, e.g. methylmalonic acidaemia
 - Urea cycle abnormalities
 - Maple syrup urine disease
- Principles of dietary therapy in the more common metabolic disorders
- When to suspect a metabolic disorder: instigate diagnosis and initial management in conjunction with the regional specialist: when to arrange transfer
- Understanding of psychological stress of diagnosis of metabolic disorders
- Understanding of ethnic and cultural differences in attitudes to metabolic disorders
- Understanding of problems for the patient and family of progressive disorders: disorders in which the natural history is difficult to predict e.g. *Leigh’s disease*
- Importance of the need to consult with expert colleagues on all aspects of diagnosis and management including prenatal diagnosis: for the older child, the importance of the multidisciplinary team, education authorities etc.

SKILLS

- Appropriate diagnosis, investigation and management of metabolic disorders

ASSESSMENT & LEARNING METHODS

- Study Day: Metabolism
- Mini-CEX
- Case Based Discussion

Rheumatology & Orthopaedics

Objective: Trainees must be competent in addressing the core competencies of the musculoskeletal system.

KNOWLEDGE

- The differential diagnosis for various musculoskeletal presentations, both inflammatory and non-inflammatory
- The investigation and management of the acutely swollen joint including the components of a “reactive screen”
- Investigation and management of the child presenting with a limp
- Gain a working knowledge of the classification of juvenile idiopathic arthritis (JIA): and approaches to diagnosis and management
- Screening for uveitis in children with JIA
- Awareness of the high prevalence and aggressive nature of arthritis in Trisomy 21
- Approach to rheumatological emergencies including acute arthritis, acute severe connective tissue disease e.g. SLE, dermatomyositis, vasculitis: when to contact the specialist
- Principles and main side effects of medical therapy; NSAIDs, disease modifying agents (e.g. methotrexate), immunosuppressive agents, biologics (e.g. TNF or IL-6 inhibitors) glucocorticoids (systemic and intra-articular)
- Long-term morbidity of rheumatological disorders
- Genetic and immunological basis of common rheumatic diseases: methodology of investigations for auto-immunity
- Idiopathic, non-arthritic pain syndromes: nocturnal, localised, generalised
- Understand that teamwork is essential in the care of children with rheumatic disease
- Risk factors for developmental dysplasia of the hip, appropriate screening and management
- Common orthopaedic variants in childhood and their natural history
- Assessment and management of the child presenting with rickets
- Aetiology of scoliosis and principles of management

SKILLS

- To take an appropriate history for various musculoskeletal presentations
- Perform a meticulous clinical examination of a child with suspected rheumatological or musculoskeletal disorder
- Assessment of DDH in infants
- Multidisciplinary team working

ASSESSMENT & LEARNING METHODS

- Study Day: Rheumatology
- Mini-CEX
- Case Based Discussion

Neurology and Muscle Disorders

Objective: Trainees must be competent in addressing the core competencies of neurology and muscle disorders

KNOWLEDGE

- Detailed clinical history of various neurological presentations
- Assessment and management of neurological disorders presenting in the neonatal period e.g. Hypoxic Ischaemic Encephalopathy (HIE), seizures, stroke, spina bifida, hydrocephalus and other brain malformations, hypotonia
- Assessment, investigation and management of the child with microcephaly, macrocephaly or plagiocephaly or a head circumference which is crossing centiles
- Headache disorders; migraine and variants, tension type, raised intracranial pressure or CNS tumour; appropriate investigation and management strategies, avoidance of medication overuse
- Distinguish between epileptiform and non-epileptiform events (e.g. syncope, tics, hyperekplexia, neonatal sleep myoclonus)
- Describe and appropriately classify seizure types; generalised, focal, specific syndromes e.g. Infantile spasms, Rolandic epilepsy etc.
- Rational investigation of suspected seizure disorders, risk of recurrence, long-term prognosis
- Approach to anti-epileptic drug therapy; indications for treatment, choice of appropriate agent, potential adverse effects, counselling and monitoring
- Appropriate referral of complex epilepsy; principles of epilepsy surgery, ketogenic diet, vagal nerve stimulators
- Cerebral palsy; assessment, investigation and classification
- Weakness, its causes and investigations; brain (e.g. stroke), spinal cord (e.g. transverse myelitis), anterior horn cell (e.g. Spinal muscular atrophy), peripheral nerve (e.g. Guillain Barre syndrome), neuromuscular junction (e.g. myasthenia gravis), and muscle (e.g. Duchenne muscular dystrophy) disorders.
- Systems involved in maintenance of balance; vestibular, proprioceptive and cerebellar. Aetiology and investigation of ataxia
- Movement disorders; presentation and basic investigations (tics, chorea etc.)
- Aetiology and appropriate referral of acute encephalopathies (infective, inflammatory, metabolic, autoimmune, demyelinating) and traumatic brain injury
- Aetiology, investigation and management of neuro degenerative disorders and developmental regression
- Investigation, management and routine follow-up of neuro-cutaneous disorders (Neurofibromatosis, Tuberous Sclerosis, Sturge-Weber etc.)
- Common congenital malformations of the central nervous system
- Central nervous system tumours

SKILLS

- Neurological examination of the new born
- Neurological examination of the child
- Lumbar puncture
- Appropriate use of neuroimaging
- Appropriate use and limitations of neurophysiological investigations including EEG

ASSESSMENT & LEARNING METHODS

- Study Day: Neurology
- Mini-CEX: neurological examination of new born and older child

- Case based discussion: Headaches, epilepsy, muscle and other neurological disorders
- PET Courses (Paediatric Epilepsy Training) (optional)

Respiratory Disorders

Objective: Trainees must be competent in addressing the core competencies of respiratory disorders.

KNOWLEDGE

- Normal respiratory defences
- Changes in respiratory signs and symptoms with age and disease
- Investigation of children with abnormal respiratory signs and symptoms, e.g. recurrent cough, persistent wheeze
- Initial management of acute respiratory failure
- Liaison with the specialist: combined district clinics
- Burden of illness on the family
- Principles of mechanical ventilation including HFNC

Respiratory Tract Infections

- Investigation and management of recurrent chest infection: disorders of host defence (in conjunction with the specialist)

Asthma

- Understanding pathophysiology, genetics, environmental influences of atopic diseases
- Investigation and management of the wheezy infant
- Initial management of the asthmatic child in intensive care, when to consider transfer
- Strategies for managing asthma in conjunction with primary care and ability to formulate asthma management plan prior to discharge from hospital
- Investigation and management of atopic diseases other than asthma
- Management of the adolescent asthmatic: planning handover to adult clinic
- Ability to address environmental management and smoking cessation

Cystic fibrosis

- Methods of diagnosis including newborn screening and genetic analysis
- Understanding of management and principles of treatment of all aspects of cystic fibrosis: new therapies for CF
- Liaison with the regional specialist: regular combined review
- Appreciation of multidisciplinary role, interpretation of PFTs, Chest x-ray, sputum cultures
- Communication skills to enhance compliance and self-care
- Develop support and relationship with patient and family
- Appreciation of psychological impact of disease on patient and family

Chronic lung disease

- Understanding of aetiology and long-term management of infants with chronic lung disease
- Methods of assessing and managing long-term oxygen-dependent patients (in conjunction with the specialist)
- Ability to counsel and advise in acute exacerbations of disease
- Be able to discuss different types of O₂ delivery systems
- Appreciate burden of disease on family and need for support to decrease morbidity on patient and family

SKILLS

- Clinical skills:
 - Use and interpretation of tests of immune function (in conjunction with specialist department)
 - Management of neonates, infants and children requiring intensive care including short-term ventilatory support: organising safe transfer
 - Managing upper airway problems
- Technical skills:
 - Knowledge of the range of lung function tests available at different ages
 - Interpretation of Pulmonary Function Test
 - Interpretation of common changes on chest x ray CXR and chest CT

ASSESSMENT & LEARNING METHODS

- Case Based Discussion: Respiratory Disease
- DOPS: Pleural aspiration

Infectious disease and Immunology

Objective: Trainees must be competent in addressing the core competencies of infectious diseases

KNOWLEDGE

Infectious Diseases

- Mechanisms of host resistance, and the basis of immunological responses to infection
- An understanding of serological and molecular biological diagnostic tests
- Pathogenesis of infection and infectious injury including:
 - Bacterial (especially septicaemia, septic shock and toxic shock syndromes)
 - Viral (including postviral complications e.g. encephalomyelitis)
- Therapeutics in infectious disease including:
 - Use of antimicrobials both therapeutically and prophylactically
 - Rationale for use and antibiotic stewardship
 - Interpretation of sensitivity tests (minimum inhibitory and bactericidal tests).
 - Pharmacokinetics of antimicrobials
 - Hospital antibiotic policies
 - Use of immune modulating agents – immunoglobulins
- Infection control:
 - Hospital:
 - Prevention of nosocomial infection e.g. MRSA
 - Handling of biohazardous specimens
 - Community:
 - Notification programmes, disease surveillance
 - Preventative measures, e.g. contact tracing, outbreak control
- Immunisation:
 - Advice for foreign travel (including antimalarial measures)
 - Global importance of vaccine programmes and new developments in vaccinology
- Diagnosis and management of TB, appreciate concern caused by investigation and treatment
- Epidemiology – changing profile of individual infectious diseases nationally and worldwide
- Understand classification of immunodeficiencies and be able to investigate appropriately
- Understand the pathophysiology and the principles of treatment of allergic and auto-immune disorders

SKILLS

- Be aware of psychological impact of illness on patient and families.
- Clinical skills:
 - Diagnosis and management of tuberculosis and atypical mycobacterial disease
 - Parasitic diseases, diagnosis and management e.g. toxoplasma, toxocara
 - Kawasaki disease and other vasculitides
 - Diagnosis, prevention and treatment of congenital and perinatal infection:
 - Recognition and management, in association with the regional centre, of the child and family affected by HIV/AIDS
 - Investigation and management of fever of unknown origin, recurrent infections and anaphylaxis.

ASSESSMENT & LEARNING METHODS

- In house training in Infection control
- Case Based Discussion

Documentation of Minimum Requirements for Training

- These are the minimum number of cases you are asked to document as part of your training. It is recommended you seek opportunities to attain a higher level of exposure as part of your self-directed learning and development of expertise.
- You should expect the demands of your post to exceed the minimum required number of cases documented for training.
- If you are having difficulty meeting a particular requirement, please contact your speciality coordinator.

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Section 1 - Training Plan				
Personal Goals Plan (Copy of agreed Training Plan for your current training year signed by both Trainee & Trainer)	Required	1	Training Post	Personal Goals Form
On Call Rota	Required	1	Training Post	Clinical Activities
Section 2 - Training Activities				
Outpatient Clinics				Clinical Activities
General Paediatrics (minimum 1 per week)	Required	40	Year of Training	
Specialty Clinics	Required	1	Year of Training	
Developmental Clinics (Community paediatrics)	Required	12	Training Programme	
Ward Rounds/Consultations				Clinical Activities
Consultant led (minimum 1 per week)	Required	40	Year of Training	
SpR led (1 per week)	Required	40	Year of Training	
Consultations	Required	1	Year of Training	
Emergencies/Complicated Cases				Cases
Details of Special Procedures in Neonatology				Procedures
Administration of Artificial Surfactant	Required	5	Training Programme	
Arterial Blood Letting	Required	1	Training Programme	
Capillary Blood Sampling	Required	5	Training Programme	
Insertion of Intercostal Drain	Required	1	Training Programme	
Insertion of Peripheral Arterial Line	Required	3	Training Programme	
Intravenous Line	Required	1	Training Programme	
Lumbar Puncture	Required	5	Training Programme	
Needle aspiration of pneumothorax	Required	1	Training Programme	
Peripheral "Long Line" Placement	Required	2	Training Programme	
Tracheal Intubation (including term and pre-term)	Required	6	Training Programme	

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Umbilical Arterial Catheter Placement	Required	5	Training Programme	
Umbilical Venous Catheter Placement	Required	5	Training Programme	
Ventilation (exposure to ventilation can be counted, including multiple episodes of same child)	Required	20	Training Programme	
Procedures/Practical Skills/Surgical Skills in older infants and children				Procedures
Arterial Puncture	Required	1	Training Programme	
Intraosseous Access/Transfusion	Desirable	2	Training Programme	
Lumbar Puncture	Required	10	Training Programme	
Tracheal Intubation	Desirable	1	Training Programme	
Venepuncture, IV Line Placement	Required	20	Training Programme	
Record of Community Child Health Experience	Required	1	Training Programme	Clinical and Other Liaisons
Additional/Special Experience Gained (sub-specialty experience)	Desirable	1	Training Programme	Cases
Relatively Unusual Cases	Desirable	1	Training Programme	Cases
ICU/CCU	Desirable	1	Training Programme	Cases
Chronic Cases/Long term care	Desirable	1	Training Programme	Cases
Management Experience	Desirable	1	Training Programme	Management Experience
Section 3 - Educational Activities				
Mandatory Courses				Course Attendance
ALPS	Required	1	Training Programme	
Childhood Development Disorders	Required	1	Training Programme	
Ethics: Foundation	Required	1	Training Programme	
Ethics for Paediatrics	Required	1	Training Programme	
An Introduction to health and research methods	Required	1	Training Programme	
HST Leadership in Clinical Practice (Year 3+)	Required	1	Training Programme	
Informing families of their child's disability (online)	Required	1	Training Programme	
Mastering Communication (Year 1)	Required	1	Training Programme	
NRP Neonatal Resuscitation Course	Required	1	Training Programme	
Performing Audit (Year 1)	Required	1	Training Programme	
STABLE	Required	1	Training Programme	

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Non – Mandatory Courses	Desirable	1	Training Programme	Course Attendance
Study days (attend minimum of 6 per year)	Required	6	Year of Training	Study Day Attendance
In-house activity attendance				Attendance at Hospital Based Learning
Grand Rounds (minimum 1 per month)	Required	10	Year of Training	
Journal Clubs (minimum 1 per month)	Required	10	Year of Training	
Radiology conferences (minimum 1 per month)	Required	10	Year of Training	
MDT meetings (minimum 1 per month)	Required	10	Year of Training	
Seminar	Required	1	Year of Training	
Lecture	Required	1	Year of Training	
Examinations	Desirable	1	Training Programme	Examinations
Delivery of Formal Teaching (minimum of 1 formal teaching session per month)				Delivery of Teaching
Lecture/Presentation	Required	4	Year of Training	
Tutorial	Required	4	Year of Training	
Bedside teaching	Required	4	Year of Training	
Research	Desirable	1	Training Programme	Research Activities
Audit Activities and Reporting (1 per year either to start or complete, Quality Improvement (QI) project can be uploaded against audit)	Required	1	Year of Training	Audit & QI
Publications	Desirable	1	Year of Training	Additional Professional Experience
Presentations (minimum of 1 oral or poster presentation per year)	Required	1	Year of Training	Additional Professional Experience
National/International meetings (minimum attend 1 per year)	Required	1	Year of Training	Additional Professional Experience
Additional Qualifications	Desirable	1	Training Programme	Additional Professional Experience
Committee Attendance	Desirable	1	Training Programme	Additional Professional Experience

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Section 4 - Assessments				
DOPS				DOPS
Arterial Puncture	Required	1	Training Programme	
Central Venous Line Placement in Neonates	Required	1	Training Programme	
Child protection assessment	Desirable	1	Training Programme	
Developmental assessment of a child over one-year old	Required	1	Training Programme	
Developmental assessment of a child under one-year	Required	1	Training Programme	
Intercostal Drain Insertion/Removal	Desirable	1	Training Programme	
Intraosseous Access/Transfusion	Required	1	Training Programme	
Lumbar Puncture	Required	1	Training Programme	
Tracheal Intubation	Required	1	Training Programme	
Umbilical Arterial & Venous Placement	Required	1	Training Programme	
Venepuncture, IV Line Placement	Required	1	Training Programme	
Ventilation	Required	1	Training Programme	
CBD (minimum 4 per year)	Required	4	Year of Training	CBD
Mini-CEX (At least two Mini-CEX assessments)	Required	2	Year of Training	Mini CEX
Quarterly Assessments/End-of-Post Assessments	Required	4	Year of Training	Quarterly Assessments/ End-of-Post Assessments
End of Year Evaluation	Required	1	Year of Training	End Of Year Evaluation