



**FACULTY OF
PAEDIATRICS**

ROYAL COLLEGE OF
PHYSICIANS OF IRELAND

INTERNATIONAL CLINICAL FELLOWSHIP TRAINING IN

PAEDIATRIC NUEROLOGY



This curriculum of training in Paediatric Neurology was developed in 2016 and undergoes an annual review by Prof Mary King and Dr Webb National Specialty Directors, Dr. Ann O’Shaughnessy, Head of Education and Professional Development and by the Paediatric Neurology Training Committee. The curriculum is approved by the Faculty of Paediatrics .

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Introduction

The International Clinical Fellowship Programme (ICFP) provides a route for overseas doctors wishing to undergo structured and advanced postgraduate medical training in Ireland. The ICFP enables suitably qualified overseas postgraduate medical trainees to undertake a fixed period of active training in clinical services in Ireland. The programme is normally offered over one or two years of clinical training, after which the overseas doctors will be required to return to their country of origin. In limited certain circumstances, the period of training may extend to three years.

The purpose of the ICFP is to enable overseas trainees to gain access to structured training and in active clinical environments that they cannot get in their own country, with a view to enhancing and improving the individual's medical training and learning and, in the medium to long term, the health services in their own countries.

This Programme will allow participants to access a structured period of training and experience as developed by the Royal College of Physicians of Ireland to specifically meet the clinical needs of participants as defined by their home country's health service.

Aims

Upon satisfactory completion of the ICFP, the doctor will be **competent** to undertake comprehensive medical practice in their chosen specialty in a **professional** manner, in keeping with the needs of the healthcare system.

Competencies, at a level consistent with practice in the specialty, 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.
- Capability to be a scholar, contributing to development and research in the field of the chosen specialty.
- Professionalism.
- Ability to understand health care and identify and carry out system-based improvement of care.

Professionalism

Medical professionalism is a core element of being a good doctor. Good medical practice is based on a relationship of trust between profession and society, in which doctors are expected to meet the highest standards of professional practice and behaviour. It involves partnership between patient and doctor that is based on mutual respect, confidentiality, honesty, responsibility and accountability. In addition to maintaining clinical competence, a doctor should also:

- Show integrity, compassion and concern for others in day-to-day practice
- Develop and maintain a sensitive and understanding attitude with patients
- Exercise good judgement and communicate sound clinical advice to patients
- Search for the best evidence to guide professional practice
- Be committed to continuous improvement and excellence in the provision of health care whether working alone or as part of a team

Prior to commencing their sponsored clinical placements, all participants will also be required to undergo the mandatory screening requirements of the relevant clinical site/service including occupational health assessment and Garda/Police clearance.

Training Programme Duration & Organisation of Training

The period of clinical training that will be provided under the International Clinical Fellowship Programme (ICFP) is normally 12-24 months, after which the overseas doctors will be required to return to their country of origin. In certain circumstances, the period of training may extend to three years.

- Each ICFP is developed by the Royal College of Physicians of Ireland will be specifically designed so as to meet the training needs of participants to support the health service in their home country.
- All appointees to the ICFP will be assessed by the Royal College of Physicians of Ireland to ensure that they possess the necessary requirements from a training and clinical service perspective.
- Each overseas doctor participating in the ICFP will be enrolled with the Royal College of Physicians of Ireland and will be under the supervision of a consultant doctor who is registered on the Specialist Division of the Register of Medical Practitioners maintained by the Medical Council and who is an approved consultant trainer.
- Appointees to the ICFP will normally be registered on the Supervised Division of the Register of Medical Practitioners maintained by the Medical Council in Ireland.
- Appointees will agree a training plan with their trainers at the beginning of each training year.
- For the duration of their International Medical Graduate (IMG) programme and associated clinical placements, all participants will remain directly employed and directly paid by their sponsoring state at a rate appropriate to their training level in Ireland and benchmarked against the salary scales applicable to NCHD's in Ireland;
- Successful completion of an ICFP will result in the participant being issued with a formal Certificate of completion for the Fellowship Programme by the Royal College of Physicians of Ireland. This Certificate will enable the participant's parent training body in their sponsoring home country to formally recognise and accredit their time spent training in Ireland.

The training programme offered will provide opportunities to fulfil all the requirements of the curriculum of training. There will be posts in both general hospitals and teaching hospitals. Each post within the programme will have a named trainer/educational supervisor and programmes will be under the direction of the National Specialist Director for the relevant medical speciality to be confirmed by the College. Programmes will be as flexible as possible consistent with curricular requirements, for example to allow the trainee to develop their sub-specialty interest.

ePortfolio logbook

Each trainee is responsible for maintaining an up-to-date record of progress through training and compiling a portfolio of achievements for presentation at each annual assessment review. The trainee also has a duty to maximise opportunities to learn, supplementing the training offered with additional self-directed learning in order to fulfil all the educational goals of the curriculum.

Up-to-date training records and an ePortfolio of achievements will be maintained by the trainee throughout. The training records will be countersigned as appropriate by the trainers to confirm the satisfactory fulfilment of the required training experience and the acquisition of the competencies set out in the training plan. They will remain the property of the trainee and must be produced at their annual assessment review.

Trainees must co-operate with the College in completing their training plan.

It is in a trainee's own interest to maintain contact with the Royal College of Physicians of Ireland, and to respond promptly to all correspondence relating to training. At review, your ePortfolio will be examined.

Review

A consultant trainer/educational supervisor will be identified for each participant in the programme. He/she will be responsible for ensuring that the educational potential of the post is translated into effective training which is being fully utilized. Only departments approved for Training by the Royal College of Physicians of Ireland and its constituent training bodies will be used.

The training objectives to be secured should be agreed between each trainee and trainer at the commencement of each posting in the form of a written training plan. The trainer will be available throughout, as necessary, to supervise the training process. In each year trainees undergo a formal review by an appropriate panel. The panel will review in detail the training record, will explore with the trainee the range of experience and depth of understanding which has been achieved and consider individual trainer's reports. An opportunity is also given to the trainee to comment on the training being provided; identifying in confidence any deficiencies in relation to a particular post.

A quarterly and annual review of progress through training will be undertaken on behalf of the International Clinical Fellowship Programme (ICFP). These will include assessments and reports by educational supervisors, confirmation of achievements and the contents of the ePortfolio will be reviewed. At some or all of these annual reviews a non-specialty assessor will be present capable of addressing core competencies.

The award of a Certificate of completion will be determined by a satisfactory outcome after completion of the entire series of assessments.

Generic Components

This chapter covers the generic components which are relevant to trainees of all specialties 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 trainees with differing application levels in practice.

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
- Knowledge of the procedure for the 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 e.g. driving

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, strategies applicable to smoking, alcohol, drug abuse, lifestyle changes
- 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
- The need and place for specific types of notes e.g. problem-orientated discharge, letters, concise out-patient reports
- 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
- Ability to enlist patients' involvement in solving their health problems, providing information, education
- Availing of support provided by voluntary agencies and patient support groups, as well as expert services e.g. detoxification / psychiatric services
- Valuing contributions of health education and disease prevention to health in a community
- Compiling adequate case notes, with 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)
- 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
- ACLS 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/ACLS (or APLS for Paediatrics)
- 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
- 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 tool (e.g. ISBAR)

ASSESSMENT & LEARNING METHODS

- ACLS course
- Record of on call experience
- Mini-CEX (acute setting)
- Case based discussions
- Consultant feedback

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
- Disclosure – know 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 patients 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 according to Data Protection Act 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)

- When and how to report a near miss or adverse event
- Knowledge of preventing and managing near misses and adverse events. 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

- The importance of patient safety relevance in health care setting
- Standardising common processes and procedures – checklists, vigilance
- The multiple factors involved in failures
- Safe healthcare systems and provision of a safe working environment
- The relationship between ‘human factors’ and patient safety
- Safe working practice, role of procedures and protocols in optimal practice
- How to minimise incidence and impact of adverse events
- 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

SKILLS

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

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
- Patient Safety (on-line) – recommended
- Leadership in Clinical Practice III
- Quality improvement methodology course - recommended
- RCPI Ethics programmes (I-IV)
- Medical Council Guide to Professional Conduct and Ethics
- Reflective learning around ethical dilemmas encountered in clinical practice

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 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 infectious disease requiring notification
- In surgery or during an invasive procedure, understanding the increased risk of infection in these patients 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

- Practising 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
- Healthcare Associated Infections (on-line) – recommended

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
- Effects of medications on patient activities including potential effects on a patient's fitness to drive
- The role of The National Medicines Information Centre (NMIC) in promoting safe and efficient use of medicine
- Differentiating drug allergy from drug side effects
- Good Clinical Practice guidelines for seeing and managing patients who are on clinical research trials

SKILLS

- Writing a prescription in line with guidelines
- Appropriately prescribing for the elderly, children and pregnant and breast feeding women
- 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
- Advising patients (and carers) about important interactions and adverse drug effects including effects on driving
- 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
- Taking a history of drug allergy and 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
- Principles of Antibiotics Use (on-line) – recommended
- Guidance for health and social care providers - Principles of good practice in medication reconciliation (HIQA)

Self-Care and Maintaining Well-Being

Objective:

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 knowledge – understand own psychological strengths and limitations
- Understand how own personality characteristics (such as need for approval, judgemental tendencies, needs for perfection and control) affect relationships with patients and colleagues
- 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 for specific patients
- 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 (love, anger, frustration, vulnerability, intimacy, etc) in “easy” and difficult 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

- Occupational Stress course
- On-going supervision
- Ethics courses
- Leadership in Clinical Practice III

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
- How to structure an interview to obtain/convey information; identify concerns, expectations and priorities; promote understanding, reach conclusions; use appropriate language.
- How to empower the patient and encourage self-management

Difficult circumstances

- Understanding of potential areas for difficulty and awkward situations, knowing how and when to break bad news, how to negotiate cultural, language barriers, dealing with sensory or psychological and/or intellectual impairments, how to deal with challenging or aggressive behaviour
- How to communicate essential information where difficulties exist, how to appropriately utilise the assistance of interpreters, chaperones, and relatives.
- How to deal with anger, 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 concise, problem-orientated statement of facts and opinions (written, verbal or electronic)
- Knowledge of legal context of status of records and reports, of data protection (confidentiality), Freedom of Information (FOI) issues
- Understanding of the relevance to continuity of care and the importance of legible, accessible, records
- Knowing when urgent contact becomes necessary and the appropriate place for verbal, telephone, electronic, 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 to outcome of continuity of care, within and between phases of healthcare management
- The importance of completion of tasks and documentation (e.g. before handover to another team, department, specialty), of identifying outstanding issues and uncertainties
- Knowledge of the required attitudes, skills and behaviours which facilitate continuity of care such as maintaining (legible) records, 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, retain attention avoid distraction
- Understanding how adults receive information best, the relative value of the spoken, written, visual means of communication, use of reinforcement to assist retention
- Knowledge of risks of information overload
- Interpreting results, significance of findings, diagnosis, explaining objectives, limitations, risks of treatment, using communication adjusted to recipients' ability to comprehend
- Ability to achieve level of understanding necessary to gain co-operation (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, assistance available
- The importance of obtaining and recording accurate and full information, seeking confirmation from multiple sources
- Knowledge of how to establish facts, identifying issues and responding quickly and appropriately to a complaint received

SKILLS

- Ability to elicit facts, using a mix of open and closed-ended questions appropriately
- 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 (and attempting to reach) realistic objectives, identifying and prioritising outstanding problems
- Using language, literature (leaflets) diagrams, educational aids and resources appropriately
- Ability to 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
- 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
- Ethics courses
- Leadership in Clinical Practice III

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
- Leadership in Clinical Practice III
- 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

- Leadership in Clinical Practice III
- 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 – An Introduction
- Effective Teaching and Supervising Skills course - recommended
- Educational Assessment Skills course - recommended
- Performing audit course
- 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 course
- Leadership in Clinical Practice III
- Annual audit
- Consultant feedback on management and leadership skills
- Involvement in hospital committees

General Paediatrics

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
- Appreciate the impact on the child's ability
- Develop sensitivity on assessing the impact of being disadvantaged

Health promotion/education

- Knowledge of local and national health promotion initiatives
- Knowledge of health promotion and education 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
- Knowledge of the national policy on health gain

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
- Awareness of groups who do not agree with immunisations and their reasons

Behavioural Paediatrics

- Self-harm in young people and its consequences
- Immediate and longer term reactions to stress, bereavement, loss and trauma and how to manage them as part of a clinical network
- 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

Child abuse

- Knowledge of forensic medicine, especially in relation to sexual abuse
- Strategies and agencies available to help children and families cope with child abuse
- 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
- Understand the role and responsibilities of the named and designated professional for child protection and looked-after children
- Be aware of the difficulties of asylum seekers, refugees, travelling families, Forces families and young carers

Developmental Paediatrics

- Diagnosis
- Parental Diagnosis
- Management

Neurological and 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 development
- 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

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

Nutrition and Metabolic Disease

- Methodologies of energy expenditure
- Principles of dietary analyses: indications and procedures
- Understanding of measurement of body composition
- Nutrient turnover: obligatory nutrient losses
- Advise on health eating for normal children, including minority groups
- Prescribe parenteral nutrition
- Use and care of central venous catheters
- PEGs
- Be willing to discuss impact of disease (disease burden) on family functioning

Metabolism

- 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

SKILLS

- History taking
- Take a detailed history, including eliciting painful information sensitively and efficiently
- Detailed developmental and neurological assessment
- Drawing up a management plan, taking into account continuing medical problems and attendant social, educational and psychological factors
- Work as part of a clinical network in management of childhood issues
- Reassure and advise parents and professionals on management
- 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
- Multidisciplinary team working
- 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

- Attend outpatient clinics
- Inpatient care

Emergency Medicine

KNOWLEDGE

Accident prevention

- Understanding models and strategies of prevention

Principles of emergency care

- Recognition and management of non-accidental injury
- Resuscitation: recognition of treat 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
- 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

- 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

- Assessment and initial management of the seriously injured child
- Management of non-accidental injury
- Resuscitation
- Organisation of safe transport

ASSESSMENT & LEARNING METHODS

- Experience in Emergency Department
- ACLS

APLS

Specialty Section

Basic Neurological Knowledge and Skills

Objective: To acquire basic knowledge and skills in order to benefit from engaging in clinical training in Neurology.

Relating Structure and Function to Physical Findings and Complaints

Objective: In order to benefit from clinical training in the specialty, the trainee must first acquire a sound knowledge of neuroanatomy and neurophysiology and be capable of taking a full neurological history and carrying out a detailed physical examination of the nervous system including neurodevelopment assessment.

KNOWLEDGE

Basic neurology

- Anatomy of the central, peripheral and autonomic nervous systems. Functional anatomy and co-ordination in the nervous system: neurophysiology and biochemistry, the autonomic and neuroendocrine systems, neurotransmitters.
- Able to perform a detailed physical examination of the nervous system.
- Able to evaluate the significance of symptoms and physical findings and suggest a differential diagnosis.
- Appreciates the importance of knowledge of the structure, function and biochemistry of the nervous system in understanding the basis upon which the symptoms and physical signs of disease may develop.

SKILLS

- To elicit and concisely report a factual medical, developmental, family, social and personal history in a patient as relevant to suspected neurological disease.

ASSESSMENT & LEARNING METHODS

- Mini-CEX

Basic Sciences: Specialities Relevant To Neurology Used To Support Neurological Practice

Objective: The trainee should have sufficient knowledge and skills in basic science and in the specialities relevant to neurology to be able to understand, assess and plan the management of neurological problems as they present in children and adolescents.

Investigations:

1. Clinical Neurophysiology

Objective: Acquire knowledge and skills to understand the role and practice of neurophysiology investigations in children and adolescents with disorders of the nervous system.

KNOWLEDGE

- EEG, EMG nerve conduction, evoked potentials
- Normal range of EEG findings, common epileptiform abnormalities.
- Capabilities and limitations of EEG in neurological disorders other than epilepsy.
- Role of monitoring techniques (telemetry, ambulatory).
- Use of EEG in evaluation of sleep disorders.
- EEG in neurological emergencies with impaired consciousness.
- Principles of techniques of EMG, NCS.
- Abnormalities in muscle disease; peripheral neuropathies, anterior horn cell disease and disorders of neuromuscular junction.
- Common abnormalities of Evoked Potentials (EP) in neurological diseases, particularly demyelination.
- Knowledge of role of intraoperative EP monitoring.
- Appreciation of the importance of close working relationship with Clinical Neurophysiologists, and need to provide clinical detail in referral.
- Appreciates the value and limitation of these techniques used in the investigation of neurological disease and the importance of critically evaluating the results obtained.
- Willing to explain to the child/adolescent and their parents/carers the procedures involved and to interpret the results obtained in ways which can assist them in understanding their significance.

SKILLS

- Ability to formulate and appropriate investigation plan.
- Interpret and explain reports/results.
- Interpretation of EEG
- Interpret EMG and NCS

ASSESSMENT & LEARNING METHODS

- Observe EMG
- Observe NCS
- CBD

2. Neuroradiology and Imaging

Objective: To provide the trainee with the skills and knowledge to select, explain, arrange radiology and/or imaging which is appropriate to the patient's needs in the management of neurological disorders, and to understand and interpret findings and reports.

KNOWLEDGE

- Ultrasound; Brain, spine, muscle,

- Imaging; CT, MRI Scans; myelograms; angiography, PET and SPECT studies
- Applications and limitations of investigative techniques
- To be able to explain the capability, risks and limitations of all common neuroradiological techniques.
- Appreciates the need of the neuroradiologist for full clinical information to be provided.
- Appreciates the need for close working with the neuroradiology services in arriving at a diagnosis and planning treatment.

SKILLS

- Request, interpret and utilise neuroradiological investigations for outpatients, inpatients and acutely ill children and adolescents in a cost effective manner.
- Explain the nature, risks and benefits of neuroradiological investigations to children and adolescents and their parents/carers.
- Recognise the anatomy of the neural axis from imaging studies and to recognise abnormal images.
- Give a reasonable differential diagnosis of the observed abnormalities.
- Understand the role and place of interventional studies.

ASSESSMENT & LEARNING METHODS

- Weekly neuroradiology meetings
- CBD

3. Cerebrospinal Fluid

Objective: To understand normal and abnormal production and circulation of the CSF.

KNOWLEDGE

- Abnormal CSF and raised intracranial pressure
- CSF composition and dynamics. Anatomy and radiology of ventricular system. Biochemistry and immunology of CSF. Blood brain barrier.
- To understand the changes in CSF dynamics and composition in disease. Symptoms, signs and causes of raised intracranial pressure. Genesis of hydrocephalus.
- Indications and contraindications to LP. LP techniques. Methods of intracranial pressure monitoring.
- To be familiar with and be able to advise on the treatment of disorders of CSF.
- Always ready to explain the details and purpose of the procedure to the child/adolescent and their parents/carers and obtain and informed consent.
- Seeks technical proficiency.

SKILLS

- Management of raised CSF and raised intracranial pressure
- To be able to carry out LP safely and with maximum patient comfort and to be familiar with other methods of CSF examination.

ASSESSMENT & LEARNING METHODS

- Lumbar puncture

Neuropathology

Objective: To understand the pathological basis of neurological disorders, recognise the scope and limitations of examination of material from biopsies and necropsies: recognise the needs and concerns of children and adolescents and their parents/carers.

KNOWLEDGE

Obtaining, preparing, interpreting pathological specimens

- Anatomy of brain sections, brain preparation.
- Histological, histochemical, immunocytochemical and E.M. techniques.
- Basic pathology of brain tumours.
- Basic pathology of:
 - Cortical dysplasia
 - Tumours
 - Demyelinating disorders
 - Axonal and demyelinating peripheral neuropathy
 - Muscle disorders
 - Inflammatory infection
 - Vasculitis
 - Guillain Barré
 - Neurodegenerative diseases e.g. mitochondrial disease, leukodystrophy
 - Meaning of gliosis
 - Granulomas
- Understands the need for discussion regarding specimens with laboratory staff, especially if special precautions needed.
- Obtain informed consent for a necropsy examination.
- Appreciates the importance of a detailed knowledge and understanding of the pathological basis of neurological disorders and the limitation of the methods available for tissue diagnosis
- Recognises and is prepared to respond to the concerns of children and adolescents and their parents/carers.

SKILLS

- Understand, interpret and explain a pathology report.
- Examine (under supervision) brain sections, stained material, in laboratory.

ASSESSMENT & LEARNING METHODS

- Study Day with Pathology
- Neuropathology Neuroscience weekly meeting
- HST Ethics

Pharmacology and the Nervous System

Objective: Understand the basis of, application, limitations and risks of neuropharmacological treatments.

KNOWLEDGE

Drugs and their use

- Synapse and neurotransmitter physiology.
- Principles of neuropharmacokinetics and pharmacodynamics.
- Modes of actions of drugs used to treat neurological diseases.
- Principles of pharmacological treatment
- Adverse effects of medications. Interactions involving medications.
- Awareness of need to respond to information needs of children and adolescents and their parents/carers.
- Recognises the importance of a full understanding of neurotransmitter physiology and the limitations and risks of neuropharmacological treatments in the management of children and adolescents.

SKILLS

- Able to take and evaluate a medication history.
- Able to plan treatment strategies, re-evaluate and awareness of cost implications.

ASSESSMENT & LEARNING METHODS

- Study Day

Immunology

Objective: To have working knowledge of those neurological disorders which have an immunological or inflammatory basis.

KNOWLEDGE

- Basic principles of immune responses in relation to the nervous system. The immunological basis underlying autoimmune neurological disease
- The clinical phenotypes of these diseases.
- The diagnostic techniques needed to confirm or refute these diseases, and their appropriate use.
- Immunosuppressive and immunomodulatory therapies: their actions, side effects and indications, and how critically to evaluate evidence for their efficacy.
- Appreciates the importance and knowledge of immunological and inflammatory mechanisms in understanding the neurological disease processes and in guiding the development of therapeutic strategies.
- Autoimmune encephalopathy such as NMDA and VGKC antibodies

SKILLS

- Competent in the recognition, of diagnosis and management of children and adolescents with autoimmune neurological disease.

ASSESSMENT & LEARNING METHODS

- Study Day
- CBD

Genetics

Objective: To understand the principles of genetics as applied to Neurology; and particularly as it applies to children and adolescents with neurological disease.

KNOWLEDGE

- Genetics applied to neurology
- DNA, RNA, chromosomes, modes of inheritance (Mendelian, polygenic, multifactorial, mitochondrial)
- The genetic contribution to common multifactorial neurological disease
- Methods of DNA diagnosis including southern blotting, PCR, whole genome sequencing arrays and copy number variation
- Working knowledge of pathology, molecular biology in common genetic conditions
- To be familiar with the clinical presentation and diagnosis of the common neurogenetic diseases, e.g. Hereditary ataxias, muscular dystrophies, neuropathies, and neurocutaneous syndromes
- To understand the principles of genetic counselling including sensitive ethical issues surrounding confidentiality and consent (e.g. in Huntington's disease and the role of specialist genetics nurses)
- Utilize bioinformatics databases on human disease e.g. online Mendelian Inheritance in Man, NCI and Human Genome Project
- Recognise when it is most appropriate to take a detailed family history, to order DNA based diagnostic tests and to liaise with colleagues in Clinical Genetics
- Because of the rapidity of development in this field, basic skills in using electronic resources to aid in the diagnosis of Neurogenetic disease
- Exercises care in the translation of genetic information when counselling children and adolescents and their parents/carers
- Is fully aware of the important issues of confidentiality and consent surrounding ethical considerations

SKILLS

- To be able to take a detailed family history using appropriate standard nomenclature
- Recognises the important contributions from genetic information obtained, towards understanding neurological diseases
- Communicate the uses and limitations of risk variants in disease such as APOE-4 genotype

ASSESSMENT & LEARNING METHODS

- Study Day
- CBD

Neuro-ophthalmology - Otology

Objective: To be competent to assess and manage appropriately ophthalmic and otological abnormalities as they may present in children and adolescents with neurological diseases.

KNOWLEDGE

- Disturbances of vision, hearing and balance
- To be familiar with principal methods used in neuro-ophthalmic diagnosis
- Applied anatomy and physiology of the visual and oculomotor system, hearing and balance
- History taking and examination relevant to the eyes and ears, vision, hearing, and balance
- Conditions which may affect hearing, balance, vision, eye movements, pupils and the eye lids
- Recognises the contribution of other specialist services in this field and liaises effectively with them

SKILLS

- Diagnosis and management of disturbance of vision, hearing and balance
- To form a differential diagnosis for common and uncommon visual symptoms
- To be competent in assessing dizzy children and adolescents and managing any underlying neurological cause
- To be able to diagnose and manage neurological causes of disturbances of hearing or balance, and to appropriately refer others
- Examination of the vestibuloocular system

ASSESSMENT & LEARNING METHODS

- Study Day: Neuro-ophthalmology
- Study Day: Neuro-otology

Child Psychology and Neuropsychiatry

Objective: To understand the basis of normal and abnormally functioning memory, attention, perception and language, and to be familiar with basic psychological testing.

KNOWLEDGE

- Be familiar with psycho-pharmacology for child and adolescent mental health problems
- Be familiar with the theoretical bases, principles and indications of the major models of psychological treatment
- The use and limitations of questionnaire measures in child and adolescent mental health, including disorder-specific and more global functioning measures
- The epidemiology, aetiology and co-morbidities of a range of child psychiatric conditions
- The indications for a range of therapies and medication for childhood psychiatric conditions
- Knowledge of the resources for families and professionals relevant to children with a range of psychiatric disorders

SKILLS

- Perform simple bedside testing of higher cognitive function e.g. mini-mental state examination.
- Interpret a neuropsychological report in the context of the child's/adolescents overall management.
- Demonstrate a high level of skill in engaging with children, adolescents and parents/carers, including "hard to reach" children and families
- Be able to complete a mental state examination and to assess the mental health problems of a child or young person
- Demonstrate developing skills in reaching a psychiatric formulation
- Demonstrate developing skills in judging the severity of emotional and behavioral difficulties and their impact on children and families
- Demonstrate an understanding of the ways in which emotional, behavioral and developmental problems can result from physical disorders and demonstrate appropriate thresholds for involvement of Child and Adolescent Mental Health Services (CAMHS) professionals for advice or direct assessment
- Demonstrate an understanding of the roles and potential contributions of members of the multidisciplinary CAMHS team
- Assess and manage acute and chronic presentations of mental health conditions
- Know when to seek advice from the CAMHS in a timely fashion

ASSESSMENT & LEARNING METHODS

- Study Day: Psychology

Clinical Encounters in Neurology

Objective: The trainee should acquire the knowledge and skills necessary to be fully competent to assess and manage children and adolescents presenting neurological problems in the following clinical contexts.

Infections of the Nervous System

Objective: To have an understanding and a working knowledge of neurological disorders which have an infectious basis and the ability to diagnose, investigate and treat infectious diseases of the nervous system

KNOWLEDGE

Causes and management of infection in the nervous system

- Basic principles relevant to pathogenesis, clinical presentation, management and complications of neurological infectious disease.
- The clinical phenotypes of these diseases.
- Clinical features, investigation findings, treatment and prognosis of:
 - Bacterial/viral meningitis
 - Encephalitis (e.g. Herpes Simplex)
 - Congenital infection
 - Opportunistic infections in the immunosuppressed
 - Syndromes associated with herpes zoster and herpes simplex
 - Neurological aspects of TB and AIDS
 - Spinal infections and cortical thrombophlebitis
 - The neurological aspects of endocarditis and septicaemia
- The epidemiology of common neurological infections.
- Available vaccination programmes.
- Understand the effectiveness of and need for vaccination against specified neurological infections. The public health responsibilities of physicians.
- To become competent in the recognition, prevention, diagnosis and management of children and adolescents with these disorders.
- Recognises the supreme importance of the early recognition and the correct diagnosis of infection in the nervous system.
- Fully appreciates the need for close liaison and effective working with other specialists and teams in the co-ordination of multidisciplinary care.
- Demonstrates a responsible attitude to the public health aspects of infections.

SKILLS

- The diagnostic techniques needed to confirm or refute infection in the nervous system and their appropriate use.
- Anti-microbial therapies and their proper use; preventative medicine in relation to neurological infections.
- Services offered by microbiology, interpretation of reports, antibiotic resistance, diagnostic methods available for common neurological infections.
- To know how to liaise and work closely with Infectious Disease Physicians, Microbiologists and ICU teams in order properly to co-ordinate multi-disciplinary care where appropriate.
- Assessment of vital signs and respiratory function in critically ill children and adolescents and timing of referral for intensive care.
- Notification of infectious disease, advice to and referral/treatment of contacts

ASSESSMENT & LEARNING METHODS

- Study Day
- CBD

Cerebrovascular Disease

Objective: The trainee should have the knowledge, skills and competencies to diagnose, assess, manage effectively and advise on the care of children and adolescents who present with the neurological effects of cerebrovascular diseases.

KNOWLEDGE

Stroke and TIA, Haemorrhage

- Clinical features of stroke and TIA. Pathophysiology of cerebral infarction, cerebral haemorrhage
- To be familiar with the anatomy of the cerebral circulation and its appearances on imaging, CT, MRI, and DSA appearances
- Investigations available, including blood tests, carotid ultrasound, TCD, echocardiography, CT, MRI, MRA, and DSA. Rare causes of stroke risks and costs of investigations
- Value and organisation of multidisciplinary stroke care, nutrition after stroke, rehabilitation techniques, community stroke care
- Stroke scales
- Epidemiology and prevention, risk factors for stroke
- Shows willingness to use the full range of professional skills and resources available for patient's support and rehabilitation
- Recognises the supreme importance of preventive measures in addressing the problem of vascular disease within the nervous system
- Anatomy and pathology of subarachnoid haemorrhage, cerebral aneurysm and AVM. Interventional, surgical and radiotherapy treatment

Intracranial venous thrombosis

- Symptoms, investigation and treatment of intracranial venous thrombosis

SKILLS

- To form a differential diagnosis of stroke and TIA
- To order appropriate investigations for stroke
- Manage acute stroke including the role of thrombolysis, antiplatelet therapy, control of blood pressure, complications of stroke
- Manage acute stroke where immediate large vessel occlusion may require neuroradiological stenting or embolectomy
- Assess impairment, activities of daily living and disability in a stroke patient
- To give advice and prescribe treatment for stroke prevention
- To advise on the treatment of subarachnoid haemorrhage, cerebral aneurysm and AVM.
- To manage intracranial venous thrombosis
- Recognises that most acute stroke in children without cardiac/haemo-oncology disease is inflammatory vascular disease in aetiology

ASSESSMENT & LEARNING METHODS

- Neurovascular meetings in house
- CBD

Disordered Consciousness

Objective: To enable the trainee to assess the unconscious, unresponsive patient, to formulate a plan of investigation and management action in the best interests of the child/adolescent and within the legal frameworks provided.

KNOWLEDGE

- The anatomy and physiology of consciousness, and the pathophysiology of disorders of consciousness.
- Definitions, causes, pathophysiology, clinical features and prognosis of persistent vegetative state, locked in state and brainstem death.
- Legal issues relating to disorders of consciousness.
- Assessment of patient with disordered consciousness.
- The use of tests for brainstem death.
- Interpersonal skills relating to communication, management and resolution of issues with the family of children and adolescents with disorders of consciousness.
- Appreciates the right of the patient (and of their relatives) to be kept informed of the results of investigations, other assessments and treatment intentions and their right to challenge or refuse advice.
- Fully aware of the need for effective communication in difficult circumstances and of legal and ethical aspects in forming decisions.

SKILLS

- Assess and manage the unconscious child/adolescent

ASSESSMENT & LEARNING METHODS

- Study Day

Epilepsy and Altered Consciousness

Objective: To acquire knowledge, skills and attitudes to evaluate and treat children and adolescents with epilepsy.

KNOWLEDGE

- Distinction of epilepsy from other paroxysms, management of epilepsy
- Differential diagnosis of paroxysmal and transient events.
- Indications, scope and limitations of: EEG, brain imaging, psychology, haematology and biochemistry.
- Understand the principles of antiepileptic drug treatment: efficacy, adverse effects, interactions; treatment of chronic epilepsy; treatment of refractory seizures, psychological and psychiatric concomitants of epilepsy.
- Role of neurosurgery.
- Epilepsy in relation to pregnancy, contraception, driving, legal aspects, risk of sudden death.
- Psychological and social consequences of epilepsy. Patient support groups and charities.
- Arrange appropriate investigation in evaluating children and adolescents with epilepsy, and possible epilepsy.
- Advising, explaining antiepileptic drug treatment appropriate to the child's/adolescent's needs.
- Able to convey important relevant information to children and adolescents and their parents/carers.
- Ability to manage emergency situations e.g. serial seizures, status epilepticus.
- Sensitive to and willing to deal with the concerns of children and adolescents and their parents/carers and the legal and employment implications of the diagnosis of epilepsy in an individual.
- Knowledge of NICE guidelines on epilepsy
- Knowledge of the role of paediatric neurology services including the use of newer AEDs, the use of non-drug treatments such as the ketogenic diet, and the selection of patients for surgical treatment of epilepsy, vagal nerve stimulation and novel treatments

SKILLS

- Diagnose and management of epilepsy

ASSESSMENT & LEARNING METHODS

- Study Day
- Mini-CEX
- CBD

Head Injury (accidental and non-accidental)

Objective: To provide trainee with the skills and knowledge to assess the head injured patient, including gaining the ability to perform immediate resuscitative measures and formulate a strategy for immediate and short-term management.

KNOWLEDGE

- Immediate and early phase management of head injury
- Primary and secondary effects of head injury.
- The Glasgow Coma Scale.
- Recognises symptoms and signs of head injury including extradural and subdural haematomas, increased intracranial pressure.
- Understand and can manage post-concussion syndrome, post-traumatic headache and post-traumatic epilepsy.
- Serial assessment of head injury patient, indications for intervention including urgent and delayed neurosurgery.
- Appreciates the value of multidisciplinary team working and the need to involve other specialists at times in optimising the care and rehabilitation of children and adolescents following head injury.
- Willing to meet and respond to the concerns and anxieties of the child's/adolescent's parents/carers.

SKILLS

- Diagnosis of suspected non-accidental head injury using a multidisciplinary and multi-agency approach
- Management of acute and sub acute head injury
- Rehabilitation aspect of head injuries

ASSESSMENT & LEARNING METHODS

- Study Day
- Mini-CEX: in ICU

Regression and Neurodegenerative Disease

Objective: To be able to assess and manage children and adolescents with regression

KNOWLEDGE

- Know the presentations, differential diagnosis and investigations of common neurodegenerative conditions, including metabolic, mitochondrial and neurotransmitter disorders
- Know the differential diagnosis of psychomotor regression presenting in adolescence

SKILLS

- Able to recognise regression of developmental skills
- Able to demonstrate a systematic and logical approach to the investigation of neurodevelopmental regression guided by age, ethnicity and other clinical features
- Long-term management of neurometabolic and neurodegenerative disorders

ASSESSMENT & LEARNING METHODS

- Study Day

Demyelinating Diseases

Objective: To be competent to diagnose, assess and advise on the early and long term management of children and adolescents with demyelinating diseases and disability arising as a result.

KNOWLEDGE

- Demyelination: causes, recognition, management
- Pathogenesis, presentation and clinical manifestations of multiple sclerosis and related conditions, such as acute disseminated encephalomyelitis, Neuromyelitis Optica(NMO)Behcet's disease,
- The role of imaging and other investigations in the assessment of demyelinating disease
- Drugs and other available treatments
- The ability to formulate a strategy for investigation, assessment and management of a child/adolescent with demyelinating disease
- Recognises how an improved understanding of demyelinating diseases has influenced and guided treatment to date, and the importance of using emerging knowledge appropriately to the advantage of children and adolescents
- Monoclonal and other biological therapies such a natalizumab and fingolimod
- Know the differential diagnosis of Multiple Sclerosis (MS), including Acute disseminated encephalomyelitis (ADEM)
- Know the role of steroids, symptomatic therapies and disease modifying therapies
- Recognise typical magnetic resonance (MR) appearances of multiple sclerosis and differential diagnosis
- Knowledge of multiple sclerosis, clinically isolated syndrome, optic neuropathy, neuromyelitis optica etc.

SKILLS

- Able to take a history from a child/adolescent and their parents/carers with demyelinating disease; identify the salient features, and identify signs through the neurological examination
- Application of McDonald criteria in the diagnosis of MS
- Assessing risk related to new biological therapies
- Able to diagnose relapsing and remitting multiple sclerosis
- Able to initiate appropriate steroid treatment in an acute relapse of multiple sclerosis

ASSESSMENT & LEARNING METHODS

- Journal Club
- Test ability of application of McDonald criteria

Disorders of the Spine and Spinal Cord

Objective: To provide trainees with skills and knowledge to assess and manage the child/adolescent with a neurological disturbance affecting the spinal cord.

KNOWLEDGE

- The anatomy of the spine and spinal cord, features of regional damage at different levels.
- Clinical features of spinal cord, nerve root and cauda equina syndromes
- Indications for urgent investigation including an understanding of the potential and limitations of spinal MRI scanning
- Common neurosurgical procedures performed on the spine and spinal cord. Their indications, limitations and risk
- Principles of management of paraplegia and the role of specialist spinal injury units
- Advise on and expedite the emergency management of spinal cord or cauda equina compression

SKILLS

- Recognition and management of acute and progressive spinal cord damage
- To identify important symptoms and signs of spinal cord dysfunction through neurological examination
- The ability to formulate a strategy for investigation of children and adolescents with disorders of the spine and spinal cord
- Management of spinal injury

ASSESSMENT & LEARNING METHODS

- Study Day
- CBD

Movement Disorders

Objective: To be able to diagnose, investigate and manage common movement disorders to include Parkinsonism, chorea/athetosis, dystonia, tics and tremor.

KNOWLEDGE

- Chorea/athetosis, Dystonia, Parkinsonism, Tremor, Myclonus
- Specific knowledge of MRI/CT scan appearances in movement disorders: use of gene testing, blood and CSF investigations
- Knowledge of optimal appropriate therapy/treatment of movement disorders

SKILLS

- Interpret clinical features and make differential diagnosis in chorea/athetosis, dystonia, tics, tremor and myclonus
- Use of appropriate investigations to make a diagnosis and guide treatment
- Provide specialist spasticity and dystonia management, usually working in partnership with disability, orthopaedic and neurosurgery services

ASSESSMENT & LEARNING METHODS

- Study Day
- CBD

Disorders of Peripheral Nerves and Muscles

Objective: To be familiar with the clinical presentation and diagnosis of common neuromuscular conditions, to recognise typical patterns of motor and sensory deficit and formulate an appropriate differential diagnosis.

KNOWLEDGE

- Background knowledge of the anatomy and pathology of peripheral nerve and muscle
- Neuropathies:
 - Axonal and demyelinating
 - Entrapment neuropathies and plexopathies
 - Environmental toxin and drug-induced neuropathy
 - Inflammatory/immune
 - Critical illness neuropathies and myopathies
- Inflammatory muscle disease
- Inherited disease of muscle and nerve; muscular dystrophy, Charcot-Marie-Tooth disease
- Disorders of the neuromuscular junction; myasthenia gravis etc.
- Be familiar with acute and chronic presentations of disease of muscles and nerves

SKILLS

- Diagnose and management of common neuromuscular conditions
- Management of acute neuromuscular paralysis
- To be able to interpret the results of nerve conduction studies and EMG and apply these to clinical decision-making
- To be clinically competent in the assessment and management of children and adolescents with acute and chronic neuromuscular paralysis both in the general ward and intensive care setting
- Interpretation of acute spinal/brain imaging on children/adolescents with acute paralysis
- Diagnose children and adolescents with neuromuscular disorders
- Collaborate with disability services for long-term management including new treatment trials
- Manage complications by collaborating with spinal, respiratory (including non-invasive ventilation) and cardiac services
- Recognise that end-of-life care is an important aspect of services for some of these disorders

ASSESSMENT & LEARNING METHODS

- Study Day

Disorders Affecting the Cranial Nerves

Objective: To equip the trainee with the knowledge necessary to diagnose disorders of the cranial nerves and their central connections, to carry out appropriate investigations, and to formulate management plans for these disorders.

KNOWLEDGE

- Cranial neuropathies
- The anatomy of the skull base, particularly the orbit, cavernous sinus, pituitary fossa, foramen magnum and jugular foramen
- Pathological processes involving the cranial nerves and their central connections.
- Methods of clinical assessment of cranial nerve function
- The use and limitation of investigative techniques in the cranial nerves, including CSF analysis, imaging, EMG, video fluoroscopy, VER, ERG and audiometry

SKILLS

- Management of cranial nerve disorders including multiple disciplinary approaches to cerebellopontine angle and pituitary disorders

ASSESSMENT & LEARNING METHODS

- Journal clubs

Headache

Objective: The trainee will be able to diagnose and treat common causes of headache and distinguished benign causes from sinister ones.

KNOWLEDGE

- Assessment and management of children and adolescents complaining of headache
- Common causes of headaches, persistent or recurrent. Clinical features distinguishing different causes and types including psychological
- Investigatory techniques e.g. appropriate urgent use of blood tests, lumbar puncture, brain scanning

SKILLS

- Differentiate common causes and more serious underlying problems of headaches
- Recognise papilloedema
- Advise and arrange treatment which is appropriate to the child's/adolescent's needs
- Take a history from headache sufferer, recognising important diagnostic features and identifying a psychological contribution
- Examination of the nervous system, particularly identification of papilloedema, visual field defects. Investigate appropriately

ASSESSMENT & LEARNING METHODS

- CBD

Sleep Disorders

Objective: To acquire knowledge, skills and attitudes to evaluate and treat children and adolescents with common sleep disorders.

KNOWLEDGE

- The diagnosis, effects of sleep disorders and their management
- Differential diagnosis of sleep disorders. Narcolepsy, daytime hyper somnolence, parasomnia, obstructive sleep apnoea
- Effects of neurological conditions on sleep
- Indications, scope and limitations of the sleep laboratory. Effects of sleep on the EEG.
- Principles of physical treatment. Principles of pharmacological treatment
- Consequences and complications of sleep disorders
- Understands the role of investigations in evaluation of children and adolescents with possible sleep disorders

SKILLS

- Able to evaluate a history of disordered sleep and reach an appropriate diagnosis
- Able to advise and / or inform the family of the nature of sleep disorder and initiate treatment if necessary

ASSESSMENT & LEARNING METHODS

- Study Day
- CBD

Neurosurgery (Optional)

Objective: To provide the trainees with factual knowledge of the capability and limitations of neurosurgery in common neurological conditions.

KNOWLEDGE

- Place of neurosurgery, appropriate referral
- Clinical features, natural history, investigation, treatment and prognosis of:
 - Hydrocephalus and Spina Bifida
 - Head injury
 - Brain tumour
 - Spinal cord compression
 - Intracranial and spinal abscess
 - Epilepsy
- Pain syndromes
- Extradural, subdural and intracerebral haematoma
- Deep brain stimulation and various indications
- Intracranial aneurysm, carotid artery stenosis
- Nerve root compression
- Congenital abnormalities of skull and spine

SKILLS

- To assess the need for and urgency of neurosurgical referral
- To be able to give children and adolescents and their parents/carers a realistic expectation of results of neurosurgical treatment

ASSESSMENT & LEARNING METHODS

- Study Day

Intensive Care

Objective: To enable the trainee to manage neurological disorders in the neurological or general intensive care unit. The level of competence will be that to be expected of a consultant neurologist with access to adequate diagnostic investigations and with adequate anaesthetic, neurosurgical and nursing support available.

KNOWLEDGE

- Neurological assessment in ICU including withdrawal of care and palliation
- Neurological complications of major surgery
- Understands the principles of cardiovascular and respiratory support
- Indications for and methods of artificial nutrition of children and adolescents in the ITU

SKILLS

- Manage neurological disorders in the neurological or general intensive care

ASSESSMENT & LEARNING METHODS

- Attend in-house ICU training
- CBD

Palliative Care

Objective: To provide the trainee with the knowledge and skills of the role of palliative care in managing children and adolescents in the end stages of neurological disorders.

KNOWLEDGE

- Be familiar with local and national guidelines on withdrawing and withholding treatment
- Be familiar with guidelines on the management of sudden infant death
- Be aware of legal and ethical issues relating to withdrawing life support
- Know the importance of seeking advice when treatment may not be in the best interests of a child
- Know about appropriate therapeutic intervention in symptom control
- Be aware of the ethical issues in therapeutic intervention in children with life-limiting conditions
- Know about local opportunities for respite care, including hospice availability
- Know the tests for brain stem death
- Be aware of local bereavement support services
- Understand the need for respect of the wishes of the child or your person particularly when these are different from those of the family and health professionals
- Know about guidelines on the management of sudden infant death
- Know about the broad definition of palliative care in childhood
- Know the differential diagnosis of chronic sensory symptoms and chronic pain

SKILLS

- Recognise factors which determine when care of a patient becomes palliative
- Recognise loss and grief and their effects on the health and well-being of children, families and professionals
- Recognise the skills and experience of other professionals, acknowledge personal needs for support and the needs of other professionals involved in the care of the dying child for support networks
- Recognise factors which determine when care of a patient becomes palliative
- Investigate and manage chronic pain and chronic sensory symptoms appropriately

ASSESSMENT & LEARNING METHODS

- Time in palliative care
- MDT meetings with palliative care

Rehabilitation

Objective: To provide the trainee with the knowledge and skills to assess function and prognosis, advise on setting realistic goals and assist in the planning of programmes for the rehabilitation of children and adolescents with various neurological problems.

KNOWLEDGE

Trauma to central and peripheral nervous systems

- Aware of the implications of severe head injury and the possibilities for rehabilitation
- Know about other neurological trauma such as brachial plexus injury
- Aware of acute management and need to transfer appropriately
- Work effectively with the multidisciplinary team to manage the medium and longer term applications and rehabilitation

SKILLS

- Planning rehabilitation of children and adolescents
- Multidisciplinary team meetings
- Recognise the place of occupational therapy, physiotherapy and speech and language therapy
- Able to lead initial acute management and transfer appropriately

ASSESSMENT & LEARNING METHODS

- Study Day

Participate in multidisciplinary assessment of children/adolescents undergoing rehabilitation in the hospital setting

Minimum Requirements for Training

- These are minimum **tracking** requirements. This generally means that in practice, trainees will perform above the stated requirements; however, for record tracking purpose, the following figures have been allocated.
- Where the minimum requirement state “1”, there is no allocated minimum – eLogbook will automatically default to “1”

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	Form 052
Personal Goals Review Form	Desirable	1	Training Post	Form 137
Weekly Timetable (Sample Weekly Timetable for Post/Clinical Attachment)	Required	1	Training Post	Form 045
On Call Rota	Desirable	1	Training Post	Form 064
Section 2 - Training Activities				
Outpatient Clinics				
Epilepsy	Required	25	Year of Training	Form 001
Neuromuscular	Required	10	Year of Training	Form 001
Movement disorders	Required	5	Year of Training	Form 001
Inflammatory disorders	Required	10	Year of Training	Form 001
General Neurology	Required	40	Year of Training	Form 001
Ward Rounds	Required	40	Year of Training	Form 002
Consultations	Required	20	Year of Training	Form 002
Emergencies/Complicated Cases	Required	1	Training Programme	Form 003
Procedures/Practical Skills				
Interpretation of EEG	Required	200	Training Programme	Form 004
Additional/Special Experience Gained	Desirable	1	Training Programme	Form 005
Section 3 - Educational Activities				
Mandatory Courses				
Ethics I Professionalism	Desirable	1	Training Programme	Form 006
Ethics II Ethics & Law	Desirable	1	Training Programme	Form 006

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Ethics III Research	Desirable	1	Training Programme	Form 006
Ethics IV: Paediatrics (End of Life)	Desirable	1	Training Programme	Form 006
Headache	Desirable	1	Training Programme	Form 006
Health Research – An Introduction	Required	1	Training Programme	Form 006
HST Leadership in Clinical Practice	Required	1	Training Programme	Form 006
Mastering Communications	Required	1	Training Programme	Form 006
Movement Disorder	Desirable	1	Training Programme	Form 006
Neonatal Neurology	Desirable	1	Training Programme	Form 006
Performing Audit	Required	1	Training Programme	Form 006
PET 1, 2, and 3	Required	1	Training Programme	Form 006
Non – Mandatory Courses	Desirable	1	Training Programme	Form 007
Study Days (Minimum 6 attended) as per training programme	Required	6	Training Programme	Form 008
Participation at In-house activities minimum of 1 per month from the categories below:				
Grand Rounds	Required	10	Year of Training	Form 011
Journal Club	Required	20	Year of Training	Form 011
MDT Meetings	Required	20	Year of Training	Form 011
Delivery of Teaching (1 per month)				
Lecture	Required	10	Year of Training	Form 013
Tutorial	Required	10	Year of Training	Form 013
Bedside Teaching	Required	10	Year of Training	Form 013
Research	Desirable	1	Training Programme	Form 014
Audit Activities and Reporting (1 per year to start or complete, Quality Improvement (QI) projects can be uploaded against audit)	Required	1	Training Programme	Form 135
Publications	Desirable	1	Training Programme	Form 016
Presentations	Desirable	1	Training Programme	Form 017
National/International meetings	Desirable	1	Training Programme	Form 010
Additional Qualifications	Desirable	1	Training Programme	Form 065
Committee Attendance	Desirable	1	Training Programme	Form 063
Section 4 - Assessments				
CBD	Required	1	Training Programme	Form 020
DOPS				
Interpretation of EEG	Required	1	Training Programme	Form 022

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Mini-CEX (At least two Mini-CEX assessments)	Required	2	Training Programme	Form 023
Quarterly Assessments/End-of-Post Assessment	Required	4	Year of Training	Form 092
End-of-Year Assessment	Required	1	Training Programme	Form 092