



# FACULTY OF PATHOLOGY

ROYAL COLLEGE OF  
PHYSICIANS OF IRELAND

HIGHER SPECIALIST TRAINING IN

# HISTOPATHOLOGY



**This curriculum of training in Histopathology was developed in 2010 and undergoes an annual review by Dr Cynthia Heffron and Dr Niall Swan, National Specialty Directors, Dr Ann O’Shaughnessy, Head of Education, and by the Histopathology Training Committee. The curriculum is approved by the Faculty of Pathology.**

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## Introduction

The overall aim of the specialist training in Histopathology is to produce clinicians who are competent to practice at consultant level in the specialty of Histopathology. Registration as a specialist in Histopathology and award of a Certificate of Satisfactory Completion of Specialist Training (CSCST) will require satisfactory completion of a structured training programme. In addition, trainees in Histopathology are required to have passed the FRCPath examinations (Part 1, CHAT, Part 2 with or without Gynae cytology).

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

## Aims

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

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

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

## **Professionalism:**

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

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

## Entry Requirements

Applicants for Higher Specialist Training (HST) in Histopathology must be on the medical register and

1. Have completed Basic Specialist Training (BST) in approved or equivalent Histopathology posts.
2. Have demonstrated their aptitude for the specialty by satisfactory performance in the Aptitude Assessment that is usually conducted during the second year of Senior House Officer (SHO) training (BST).

Candidates may apply for the Higher Specialist Training Programme in November of second year of SHO training (or equivalent) for entry onto the Specialist Registrar (SpR) scheme the following July. In effect, this point of entry to the SpR scheme will be two years' experience in Histopathology.

Applications may be submitted pending the result of the Aptitude Assessment as the latter may not be carried out prior to the closing date for applications to the SpR scheme.

The entry requirements for BST in Histopathology and the aims and objectives for Histopathology SHO training are contained within Appendix 2 of this document. A summary of the Aptitude Assessment is contained within Appendix 3.

Entry on the training programme is at year 1. Deferrals are not allowed one entry to Higher Specialist Training.

## Duration & Organisation of Training

Training in Histopathology consists of BST and HST periods. The duration of training **in the SpR grade** will **normally** be four to five years. The total training duration will therefore be six years or seven years **including two years of BST**. The **minimum total** training time for award of a CSCST **is six years**. If a trainee has completed their part FRCPath part II successfully in HST year 2 or 3, a part of their subsequent training may be spent in a fellowship style period of training in a sub speciality within the training programme.

One year of two years spent at while on the BST programme may in certain circumstances\* be credited towards HST total.

The nature of specialist registrar training in Histopathology is such that it is not appropriate to specify individual skills to be acquired by the end of each year; rather the five years should be looked at as a whole so that by the end of the training period the overall objectives listed in the following sections will have been achieved. Training programmes will include suitable rotations to cover all the necessary areas of experience such that each trainee gains the breadth of experience needed for their future career.

*It is preferable that trainees spend 1- 2 years in training in clinical posts in Ireland before undertaking any period of research or Out of Programme Clinical Experience (OCPE).*

In order to obtain CSCST a trainee must

1. Complete at least 6 years of training in Histopathology, with satisfactory annual assessments.
2. Obtain the FRCPath examinations.

\*Note:

In circumstances where a trainee has, following successful Aptitude Assessment, spent two years in Histopathology at BST level, the second of these two years may be assessed for equivalence to a Year 1 programme of Higher Specialist Training. This evaluation will be made at annual assessments.

## **Training Programme**

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

The experience gained through rotation around different departments is recognised as an essential part of HST.

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

## Assessment Process

The methods used to assess progress through training must be valid and reliable. The assessment grade will be awarded on the basis of direct observation in the workplace by consultant supervisors. Time should be set aside for appraisal following the assessment e.g. of clinical presentations, case management, observation of procedures. As progress is being made, the lower levels of competence will be replaced progressively by those that are higher. Where the grade for an item is judged to be deficient for the stage of training, the assessment should be supported by a detailed note which can later be referred to at annual review.

The assessment of training will utilise Direct Observation of Procedures (DOPS), and Case Based Discussions (CBD) methods. These methods of assessment have been made available by HST for use at the discretion of the NSD and nominated trainer. They are offered as a means of providing the trainee with attested evidence of achievement in certain areas of the Curriculum e.g. competence in procedural skills, or in generic components. Assessment will also be supported by the trainee's portfolio of achievements and performance at relevant meetings, presentations, audit, in tests of knowledge, attendance at courses and educational events.

The FRCPATH examinations will be the main summative assessments of progress. The FRCPATH Part I examination is a written test of knowledge which consists of multiple choice questions, extended matching format questions and short answer type questions. The FRCPATH recommends that candidates attempt the Part I examination after two years of recognised training

## **Generic Components**

**This chapter covers the generic components which are relevant to HST 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 HST trainees with differing application levels in practice.**



## Good Professional Practice

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

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

### KNOWLEDGE

#### Effective Communication

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

#### Ethics

- Respect for autonomy and shared decision making
- How to enable 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 in accordance with data protection legislation and how to maintain confidentiality
- The judicious sharing of information with other healthcare professionals where necessary for care following Medical Council Guidelines
- Maintaining competence and assuring quality of medical practice
- How to work within ethical and legal guideline when providing clinical care, carrying research and dealing with end of life issues

#### Honesty, openness and transparency (mistakes and near misses)

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

#### Raising concerns about patient safety

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

**SKILLS**

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

**ASSESSMENT & LEARNING METHODS**

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

## Infection Control

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

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

### KNOWLEDGE

#### Within a consultation

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

#### During an outbreak

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

### SKILLS

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

**ASSESSMENT & LEARNING METHODS**

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

## Self-Care and Maintaining Well-Being

### Objectives:

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

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

### KNOWLEDGE

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

### SKILLS

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

**ASSESSMENT & LEARNING METHODS**

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

## Communication in Clinical and Professional Setting

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

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

### KNOWLEDGE

#### Within a consultation

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

#### Dealing with professional colleagues and others

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

#### Maintaining continuity of care

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

#### Giving explanations

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

**Responding to complaints**

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

**SKILLS**

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

**ASSESSMENT & LEARNING METHODS**

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



## Leadership

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

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

### KNOWLEDGE

#### Personal qualities of leaders

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

#### Working with others

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

#### Managing services

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

#### Setting direction

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

**SKILLS**

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

**Demonstrating personal qualities**

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

**ASSESSMENT & LEARNING METHODS**

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

## Quality Improvement

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

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

### KNOWLEDGE

#### Personal qualities of leaders

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

#### Managing services

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

#### Improving services

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

#### Setting direction

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

### SKILLS

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

#### Demonstrating personal qualities

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

### ASSESSMENT & LEARNING METHODS

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

## Scholarship

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

**Medical Council Domains of Good Professional Practice:** Scholarship

### KNOWLEDGE

#### Teaching, educational supervision and assessment

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

#### Research, methodology and critical evaluation

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

#### Audit

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

### SKILLS

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

### ASSESSMENT & LEARNING METHODS

- An Introduction to Health Research (online)
- Performing audit course (online)
- Effective Teaching and Supervising Skills course (online) - recommended
- Educational Assessment Skills course - recommended
- 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 (online)
- RCPI HST Leadership in Clinical Practice
- Annual audit
- Consultant feedback on management and leadership skills
- Involvement in hospital committees

## Standards of Care

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

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

### KNOWLEDGE

#### Diagnosing Patients

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

#### Investigation, indications, risks, cost-effectiveness

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

#### Treatment and management of disease

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

#### Notes, records, correspondence

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

#### Prioritising, resourcing and decision taking

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

**Handover**

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

**Relevance of professional bodies**

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

**SKILLS**

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



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

#### **ASSESSMENT & LEARNING METHODS**

- Consultant feedback
- Workplace based assessment e.g. Mini-CEX, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace)
- Annual 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, including complex discharge
- Knowledge of HIPE (Hospital In-Patient Enquiry)
- Multidisciplinary team working
- Communication skills
- Delivering early, regular and on-going consultation with family members (with the patient's permission) and primary care physicians
- Remaining calm, delegating appropriately, ensuring good communication
- Attempting to meet patients'/ relatives' needs and concerns, respecting their views and right to be informed in accordance with Medical Council Guidelines
- Establishing liaison with family and community care, primary care, communicate / report to agencies involved
- Demonstrating awareness of the wide ranging effects of illness and the need to bridge the gap between hospital and home
- Categorising a patients' severity of illness
- Performing an early detection of patient deterioration
- Use of structured communication tools (e.g. ISBAR)

**ASSESSMENT & LEARNING METHODS**

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

## Therapeutics and Safe Prescribing

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

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

### KNOWLEDGE

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

### 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
- Take and record an accurate drug allergy history and history of previous side effects

**ASSESSMENT & LEARNING METHODS**

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

## Specialty Section

## General Laboratory Knowledge and Skill

**Objectives:** To demonstrate the knowledge and skills required for working in a laboratory setting.

### KNOWLEDGE

- Health and Safety aspects of working in a histopathology laboratory and autopsy environment
  - Transmission and protection e.g. HIV, hepatitis, tuberculosis
  - Vaccination
- Formalin fixation, tissue processing, sectioning and staining
- Workflow within the histopathology laboratory
- Principles of histochemical and immunohistochemical staining
- Principles of light microscopy
- Principles of the common molecular pathology techniques
- The laboratory information system
- Departmental protocols for the handling of specimens including identification, documentation, entering patient data onto computer and measures to prevent specimen mix-ups
- Specimen reporting, including use of hard-copy and electronic reports, urgent reports and protocols, direct contact with clinicians
- Principles of Quality Assurance/Quality Improvement in histopathology, causes and types of error, clinical audit
- Role of multidisciplinary team (MDT) meetings and clinicopathological meetings

### SKILLS

- Experience with health and safety aspects of working in a laboratory and autopsy room environment
- Experience with workflow within a laboratory including laboratory information systems
- Use of departmental protocols for handling of specimens including patient identification, documentation, entering patient data onto computer and measures to prevent specimen mix-ups
- Competently handle the range of specimens encountered in a histopathology laboratory including description, dissection and sampling
- Handling the high risk specimen (e.g. hepatitis, HIV, tuberculosis)
- Experience with writing and issuing reports
- Liaising with clinicians
- Participation at MDT and clinicopathological meetings

### ASSESSMENT AND LEARNING METHODS

- Department education sessions (black box, journal club, tutorials)
- Study days
- Textbooks and journals
- e-learning
- Personal study
- Attending national and international courses and meetings
- Log book reporting of number and range of specimens handled
- In-house reviews by trainers/Lead Trainer
- Annual assessment
- FRCPath Parts I and II

## Surgical Pathology

**Objective:** To demonstrate the knowledge and skills of laboratory procedures associated with surgical pathology.

### KNOWLEDGE

- Broad general clinical knowledge including current practice and major changes in trends of diagnosis and treatment
- Comprehensive knowledge of general and systemic pathology and its role in diagnosis and patient management
- Knowledge of the details of specimen dissection, macroscopic description and block selection in neoplastic and non-neoplastic disease
- Knowledge of dissection and sampling of all standard cancer resection specimens to enable completion of template-based reporting of cancer cases
- Knowledge of laboratory procedures to be able to evaluate problems including accessioning and staining problems to ensure accurate and high quality diagnostic material is available
- Knowledge of the microscopic features of the range of common disease for each of the major organs systems, including the role of special stains, immunocytochemistry, molecular pathology and other ancillary techniques such as , flow cytometry, immunofluorescence
- Know when to use additional techniques including further sampling, deeper sectioning, special and immunocytochemical stains, molecular techniques or other ancillary tests

### SKILLS

- Perform tissue dissection safely, accurately, without unnecessary damage to tissue integrity, and with attention to detail during description and block selection
- Photography and radiography of specimens
- Accurately complete the macroscopic and microscopic components of specimen reporting templates
- Respect the role of scientific and other staff in the preparation of diagnostic material, and of administrative staff in the generation of reports
- Progress specimens in a timely manner, including minimising delays in specimen accession, appropriate early initiation of special techniques, avoiding delays in reporting, and use of expedited reporting
- Ensuring that request form and specimen identification details are accurate and be able to resolve any issues of discordance
- Be able to report routine histopathology (including frozen sections), and to know one's own limitations, recognising the cases that can be confidently reported and those that need to be referred for further opinions
- Request and source additional techniques and correctly interpret the results
- Understand the budgetary background to histopathology, and the cost/benefit implications of timely reporting and of routine and ancillary tests
- Produce a comprehensive report that includes macroscopic and microscopic detail, results of any supplementary techniques, with appropriate clinicopathological correlation, notes or comments to the clinician and with a final conclusion or diagnosis
- Offer opinion to clinicians as to the choice of biopsy material most likely to yield relevant information for the suspected disease process being investigated
- Liaise with clinicians and explain the limitations of biopsies in the formulation of clinicopathological correlations
- Participate in MDT – Preparation and presentation



**ASSESSMENT AND LEARNING METHODS**

- DOPS:
  -
- Annual assessment
- Independent reporting of straightforward cases desirable
- FRCPath Parts I and II

## **Cytopathology**

### **Gynaecological Cytopathology**

**Objectives:** To demonstrate the skills in the reporting of cervical cytopathology and to understand the importance of cervical screening.

#### **KNOWLEDGE**

##### **Cervical screening programme (CSP)**

- Rationale, methodology and organisation of the CSP

##### **Smear taking**

- Technical aspects of spreading and fixing a smear
- Liquid-based cytopathology (LBC) techniques

##### **Microscopy**

- How to screen a smear

##### **Use of national classified nomenclature**

- Use of classified nomenclature in cervical screening

##### **Infections**

- Knowledge of features of infections in cervical smears

##### **Borderline nuclear change**

- Understanding of criteria for diagnosis

##### **Dyskaryosis**

- Knowledge of criteria for diagnosis of mild, moderate and severe dyskaryosis
- Knowledge of criteria for diagnosis of glandular abnormality
- Knowledge of criteria of diagnosis of possibly invasive lesions
- Knowledge of features of common pitfalls in the diagnosis of dyskaryosis (e.g.tubo-endometrioid metaplasia [TEM], follicular cervicitis, metaplasia)

##### **Clinical aspects**

- Basic knowledge of process of colposcopy, treatment modalities
- 

##### **New technologies**

- Knowledge of liquid-based cytopathology, HPV testing and other new developments

**SKILLS**

- Understand the importance of the CSP to the population
- Awareness of uncertainty in diagnosis in some cases
- Awareness of the dangers of over and under calling

**ASSESSMENT & LEARNING METHODS**

- Record of number of specimens handled
- Attend (1 – 2 weeks desirable) in gynaecological cytopathology laboratory

## Non-Gynaecological Cytopathology

**Objectives:** To be able to diagnose malignancy with confidence and to give clear and accurate reports.

### KNOWLEDGE

#### Technical aspects

- Basic knowledge of preparation and staining techniques for common specimen types
- Knowledge of use of special techniques, e.g. immunocytochemistry
- Knowledge of panels of antibodies for particular diagnostic applications, e.g. mesothelioma

#### Diagnosis

- Features of malignancy in sites commonly investigated with cytopathology
- Features of specific non-malignant diagnoses, e.g. infection

#### Reporting

- Requirements for a report
- Relevant datasets
- Coding systems
- Knowledge of the likely outcome in terms of further investigation or management of the patient

### SKILLS

- Able to recognise faults and artefacts of preparation, e.g. air-drying
- Ability to work with medical scientific staff
- Able to diagnose malignancy with confidence in specimens from breast, gastro intestinal (GI) tract, respiratory tract, urinary tract, head and neck, lymphoreticular system, serous fluids and thyroid
- Ability to integrate clinical information and histology or other investigations into diagnosis
- Ability to recognise when definitive diagnosis is beyond capability
- Ability to write an accurate report that gives clinicians the information they need
- Understand multidisciplinary approach to diagnosis and management

### ASSESSMENT & LEARNING METHODS

- Record of number of specimens handled
  - DOPS

## Autopsy

**Objectives:** To demonstrate the ability to carry out and report autopsies including the interpretation of relevant histopathology and other special investigations.

### KNOWLEDGE

- Possess a broad understanding of the pathological basis of disease and be conversant with current clinical practice
- Understand the importance of the clinical information, through both the patient medical record and direct contact with clinicians, and Garda information (including information from the C71 form) in formulating the questions to be addressed in the autopsy
- Know the distinction between a coroner autopsy and a non-coroner consented autopsy
- Have a detailed knowledge of the role and practice of the coroner, including the circumstances in which a coroner may order an autopsy, and of the need for a direction from the coroner to perform the autopsy and for participation of a garda in the formal identification process
- Know the consent or authorisation requirements for a non-coroner autopsy
- Know the purpose of an inquest and the reasons the coroner may hold an inquest
- Know the legal basis and guidelines for autopsy including the Anatomy Act, Coroner Acts, Human Tissue Act (in preparation), coroner rules, Faculty of Pathology guidelines
- Knowledge of the UK laws, regulations and guidelines for the purpose of the FRCPath examination (see RCPPath.org.uk)
- Respect the body of the deceased and know the importance attached to the body and its organs by the next of kin, the implications of organ and tissue retention and the need to provide information about such retention, and know the funeral procedures and expectations of the various religious faiths
- Know the regulations and practice related to organ donation, and its implications for the autopsy
- Have an understanding of the role of the anatomical pathological technician, social worker, embalmer and undertaker in the autopsy
- Know the external appearance, gross and microscopic feature of the major diseases and causes of death
- Know the approach to death in specific circumstance such as sudden unexpected death, alcoholism, carbon monoxide, fire, drowning, epilepsy, suicide, hanging, industrial accidents, industrial disease (asbestos, lung disease), maternal death, illicit drug use, road traffic accidents, perinatal deaths, bodies repatriated, deaths without pathological findings, the decomposed body
- Understand the standard autopsy examination and dissection techniques
- Know the risks to the pathologist and assistants of injury (cuts or needlesticks) and risk of infection through injury, aerosol inhalation, or splashes including bacterial infection, hepatitis, HIV, tuberculosis, Creutzfeldt Jacob, and the remote potential of exposure to yet-to-be-identified diseases
- Be aware of the value of the autopsy to relatives, to the coroner, as a teaching aid, in providing statistics, in research
- Knowledge of :
  - RCPPath: Guidelines on autopsy practice 2002
  - RCPPath Best Practice Scenarios 2005
  - The coroner autopsy (Dublin City Coroner)
  - Report of the Coroner Rules Committee
  - Coroner Rules
  - Anatomy Act
  - Coroners Act
  - Human Tissue Bills

**SKILLS**

- Assess the circumstances of death including history and clinical information to determine if the proposed autopsy has been correctly assigned as a coroner or non-coroner autopsy
- Advise when an autopsy is not necessary or when its aim may be achieved by a more limited examination
- Identify public interest issues that may arise from an autopsy and recognise the importance, where appropriate, of informing relevant personnel such as the coroner, head of department, hospital management and having appropriate communication skills to discuss the issues when required
- Checking documentation to confirm identity and to confirm that permissions for autopsy (coroner direction, or written next-of-kin authorisation or permission) are complete and correct, and to establish if there are any restrictions on the extent of the examination
- Perform a detailed external examination with accurate description (and if appropriate photography) of lesions and be able to distinguish post mortem artefact, or the effects of resuscitation efforts from disease
- Perform a safe examination including choice of appropriate protective equipment and use of safe techniques to minimise the risk of aerosol and injury to oneself or one's assistants
- Be able to eviscerate, including making standard incisions, opening the skull, removal of the brain, evisceration of thoracic, abdominal and pelvic organs
- Dissection of the various organs and organ blocks
- How to focus the examination on appropriate areas such as examination for sudden unexpected death, undiagnosed infection, suspected drug overdose, iatrogenic death, anaphylactic death, intraoperative deaths, post-surgical deaths (following cardiac, abdominal, neurological, vascular surgery), death following a period in intensive care, effects of medical appliances (such as lines, drains, pacemakers) deaths from organ disease of unknown cause (endocrine, metabolic, hepatic, renal, neurological, respiratory etc)
- Perform additional examinations including examination of testes, breasts, head and neck sites, deep veins of the leg, vertebral column and spinal cord, and ability to perform directed examinations in appropriate cases (such as cavernous sinus, brachial plexus)
- Take appropriate tissue section and know when it is appropriate to retain an organ or organs
- Know when to perform appropriate additional examinations including imaging or obtaining samples for microbiological, biochemical, toxicological, molecular and chromosomal analysis
- Communicate the results to clinicians, or the coroner as appropriate, either immediately after the examination or at a later date
- Be able to integrate the findings with the history and clinical feature to develop a clinicopathological correlation, that may address issues of co-morbidity and of uncertainty and may include consultation with others in difficult or specialised areas
- Produce a timely report, including details of the permission or direction for autopsy, the circumstances of death, history and clinical background, the external and internal examination, the results of any histological, toxicological or other additional examination and including anatomical diagnosis, clinicopathological correlation and cause of death
- Familiarity with the coroner court and presenting the autopsy finding at inquest (and in occasional cases, in other courts)
- Be able to meet and communicate with the family of the deceased, if required. This may include, at the time of autopsy, to explain the details of a proposed examination and of any tissue or organ retention. At a later date it may involve explaining the findings and cause of death
- Safe Working and the prevention of infection in the mortuary and autopsy suite (UK Health Service Advisory Commission)

**ASSESSMENT AND LEARNING METHODS**

- DOPS
- CHAT Examination

## Paediatric and Perinatal Pathology

**Objectives:** To demonstrate the ability to carry out and report paediatric and perinatal pathology and to appropriately sample internal organs for histological examination.

### KNOWLEDGE

#### Basic knowledge

- Possess basic knowledge of the normal structure, function and development of all major organ systems
- Be familiar with basic clinical, radiological and genetic information required to ensure accurate pathological diagnoses

#### Surgical cut-up

- Understand principles of specimen dissection, macroscopic description and block selection in neoplastic and nonneoplastic paediatric diseases
- Understand the relationship between the prognosis and the various genetic abnormalities in the most common paediatric neoplasms

#### Surgical reporting

- Knowledge of the microscopic features of the range of normality within tissues and the major common pathological processes and pattern of disease as applied to the paediatric age range
- Be able to complete datasets for paediatric neoplasms

#### Perinatal autopsies

- Possess basic information about development of the major systems such as CNS, GI, respiratory, lympho-reticular and genito-urinary systems
- Aware of the changes occurring after death in utero in macerated stillbirths and implications for interpretations of abnormalities identified on macroscopic and histological examination
- Aware of major fetal features of the most common chromosomal abnormalities (e.g. trisomy 21, 18 and 13) in fetal life
- Aware of the most common complications of prematurity (e.g. lung disease, necrotising enterocolitis, CNS complications)
- Possess sufficient knowledge of anatomy, macroscopic features of major disease processes in fetal and perinatal life and common tissue dissection techniques relevant to perinatal/paediatric autopsies

#### Placenta

- Possess basic knowledge of the most common disorders affecting the placenta (e.g. inflammatory lesions, infarction and placental insufficiency)

#### Paediatric autopsies

- Possess basic knowledge related to the subject of sudden infant deaths

**SKILLS**

- Understand importance of accuracy and requirement for attention to detail during specimen description, marking the margins (if necessary) and block selection
- Recognise basic dysmorphic features, assess gestational age (using published tables and growth charts); recognition of major features of intrauterine growth restriction
- Appropriately sample internal organs for histological examination; develop awareness of appropriate sampling for ancillary investigations (microbiology, virology, cytogenetics and biochemistry)
- Be able to apply photography and X-rays as an accurate way of documentation of abnormalities
- Be able to recognise signs of maceration and timing of intrauterine death in stillbirths.
- Understand issues of autopsy consent, tissue/organ retention, implications of sampling for cytogenetics, coroners' practice
- Demonstrate an understanding of the importance of autopsy findings for genetic counselling, from the parental and clinicians' point of view
- Be able to recognise major features of iatrogenic lesions related to procedures in intensive care unit (e.g. pneumothorax in a premature ventilated baby)
- Be able to appropriately examine singleton and twin placenta with sampling for histology.
- Understand issues related to dual (forensic and paediatric) investigations of suspicious deaths

**ASSESSMENT & LEARNING METHODS**

- Record of number and range of specimens handled



## **Neuropathology**

## General Neuropathology

**Objectives:** To accurately diagnose and report pathological neurological disorders.

### KNOWLEDGE

#### Basic knowledge

- Knowledge of the normal structure, function and development of the nervous system
- Be familiar with the clinical, radiological and genetic information required to ensure accurate pathological diagnoses of neurological disorders

#### Surgical neuropathology

- Tumours: Knowledge of the major primary and metastatic tumours of the brain, spinal cord and their surrounding tissues, in particular the pathology of astrocytic tumours
- Be aware of the genetics of nervous system tumours and their relevance to treatment
- Non-neoplastic lesions: Knowledge of the range of common inflammatory and degenerative lesions and malformations in neurosurgical pathology practice

#### Medical neuropathology

- Muscle disease: Knowledge of histology and histochemistry of skeletal muscle and the major pathological and genetic features of neurogenic and myopathic and dystrophic muscle diseases
- Peripheral nerve diseases: Knowledge of the histology and pathology of peripheral nerves
- Central spinal fluid (CSF) cytopathology: Knowledge of CSF cytopathology in the diagnosis of diseases of the brain and spinal cord

### SKILLS

- Develop the ability to solve clinical problems by applying knowledge of basic principles of pathology to the nervous system
- Smears and frozen sections: Develop the ability to prepare smears; interpret smears and cryostat sections; to recognise the limitations of intraoperative diagnoses
- Histology and immunocytochemistry: Develop ability to interpret histology and immunocytochemistry for the accurate diagnosis of tumours and nonneoplastic lesions of the central and peripheral nervous system tumours
- Develop the practice of integrating clinical, radiological and pathological data in formulating accurate pathological diagnoses
- 
- Develop the ability to interpret muscle and nerve histology and histochemistry for accurate diagnosis of disease
- 
- Understand the importance of genetics in the diagnosis and management of muscle, nerve and central nervous system (CNS) disease

### ASSESSMENT & LEARNING METHODS

- Record of number and range of specimens handled

## Neuropathology Autopsies and Post-Mortem Brain Pathology

**Objectives:** To develop skills in autopsy techniques for the examination of the central and peripheral nervous system at autopsy.

### KNOWLEDGE

- Autopsies: Possess sufficient knowledge of the anatomy and pathology of the central and peripheral nervous systems and how the nervous system interacts with the other organ systems in the body
- Fixed brains: possess sufficient knowledge of anatomy and pathology of the nervous system in all age groups including fetuses for the selection of appropriate blocks for histology and for evaluating trauma, vascular disease, infections, tumours, multiple sclerosis, dementias, epilepsy, fetal and childhood disorders of the nervous system
- 
- 
- Possess knowledge of health and safety, law, ethics and legal practices as they apply to the practice of neuropathology

### SKILLS

- Develop skills in autopsy technique for the examination of the central and peripheral nervous system at autopsy
- Recognise limitations and when to refer cases or specimens to a specialist laboratory.
- Interpret histological and immunocytochemical preparations for the evaluation of major pathological lesions of the nervous system
- 
- Develop skills in reporting of pathological findings and the presentation of evidence in court.
- Understand the relevance of clinical and radiological data in planning and successfully completing a neurological autopsy

### ASSESSMENT & LEARNING METHODS

- Record of the number and range of specimens handled

## Molecular Pathology

### Objectives:

- To attain and consolidate knowledge of molecular biology (particularly with reference to current diagnostics) allowing the trainee to competently interact with on/off site referral labs and provide informed histopathology expertise
- To attain knowledge and understanding of the broad array of techniques and their application including surrogate molecular techniques such as IHC

### KNOWLEDGE

- Basic concepts in molecular genetics/pathology
  - Structure and biochemistry of nucleic acids
  - Gene organisation and expression
- Molecular classification of organ systems
  - Haematolymphoid
  - Paediatric
  - Molecular neuropathology
  - Molecular pathology of common solid tumours (skin, breast, gastrointestinal (colorectal, gastric GIST), thyroid, genitourinary, pulmonary, gynaecological)
- Design, optimisation and validation of molecular assays
- Quality assurance and quality control for molecular diagnostics
- Molecular oncology
- Broad knowledge of current and emerging diagnostic, prognostic and predictive molecular assays (e.g. ER, PR, Her2, EGFR mutations, ALK rearrangements, RAS mutations, BRAF, HPV typing, c-Kit, c-MET, mismatch repair, microsatellite instability etc.)
- Techniques and instrumentation of relevance to molecular diagnostics
  - Isolation and quantitation of DNA and RNA in cells, DNA digestion, separation and probing for nucleic acids
  - In vitro amplification of DNA and RNA: PCR including variant PCR strategies, RTPCR, whole genome amplification
  - Solid and solution hybridization: blot analysis, FISH, CISH/SISH, RNA, ISH, comparative genomic hybridization, expression arrays
  - Nucleic acid detection
  - Nucleic acid enrichment: laser capture microdissection and macrodissection
  - Sequencing: Sanger, massive parallel sequencing
  - Other molecular and surrogate molecular techniques, immunohistochemistry, flow cytometry
  - Basic bioinformatics
  - Biobanking

**SKILLS**

- Appropriate ordering of molecular diagnostic investigations
- Tissue selection: fresh vs. FFPE, indication for full sections, macro or micro dissection
- Estimation of tumour percentage and its relevance
- Interpreting results in clinical context and informed report writing
- Liaising with molecular scientists and conveying contextual results to clinicians

**ASSESSMENT AND LEARNING METHODS**

- Record of number and range of molecular sign out
- Molecular pathology research projects
- Study days
- Textbooks and journals
- National study days
- International courses
- Online lectures
- eLogbook reporting of molecular sign out
- Audit in relation to molecular diagnostic
- Trainer assessment

## Documentation of Minimum Requirements for Training

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

Curriculum Requirement	Required/Desirable	Minimum Requirement		Reporting Period	Form Name
<b>Section 1 - Training Plan</b>					
<b>Personal Goals Plan</b> (Copy of agreed Training Plan for your current training year signed by both Trainee & Trainer)	Required	1		Training Post	Personal Goals Form
<b>Section 2 - Training Activities</b>					
<b>Surgical Pathology</b> (number of cases handled)		Resection	Biopsy		Clinical Activities
• Breast	Required	50	200	Training Programme	
• Skin (biopsies include small skin ellipses)	Required	50	300	Training Programme	
• Gynaecology	Required	50	100	Training Programme	
• Soft Tissue Tumours	Required	10	20	Training Programme	
• Liver (including medical liver biopsies)	Required	5	50	Training Programme	
• Kidney (including medical renal biopsies)	Required	20	20	Training Programme	
• Lung	Required	20	50	Training Programme	
• Haematopathology <ul style="list-style-type: none"> <li>○ Lymph Node</li> <li>○ Bone Marrow</li> </ul>	Required Required	N/A N/A	100 50	Training Programme	
• GI Specimens <ul style="list-style-type: none"> <li>○ Oesophagus</li> </ul>	Required	10	100	Training Programme	

Curriculum Requirement	Required/ Desirable	Minimum Requirement		Reporting Period	Form Name
○ Stomach	Required	10	100	Training Programme	
○ Small Bowel	Required	10	100	Training Programme	
○ Colon	Required	50	200	Training Programme	
○ Rectum	Required	25	100	Training Programme	
● Bone	Required	5	10	Training Programme	
● Bladder	Required	5	25	Training Programme	
● Testes	Required	10	1	Training Programme	
● Penis	Required	1	5	Training Programme	
● Prostate	Required	20	100	Training Programme	
● Pancreas	Required	5	5	Training Programme	
● Head and Neck	Required	20	50	Training Programme	
● Frozen Sections	Required	50		Training Programme	
<b>Autopsies</b>					Clinical Activities
● Adult Autopsies	Required	50		Training Programme	
● Paediatric autopsies (observations)	Desirable	5		Training Programme	
● Brain cuts (attendance)	Required	15		Training Programme	
<b>Cytopathology</b>	Required	200		Training Programme	Clinical Activities
<b>Special Techniques</b>					Clinical Activities

Curriculum Requirement	Required/ Desirable	Minimum Requirement	Reporting Period	Form Name
Immunocytochemistry	Required	200	Training Programme	
Immunofluorescence <ul style="list-style-type: none"> <li>• Skin</li> <li>• Renal</li> </ul>	Desirable Desirable	5 5	Training Programme	
Molecular Pathology	Required	20	Training Programme	
Other (e.g. electromicroscopy)	Desirable	1	Training Programme	
<b>Complicated cases handled</b> (Cases requiring extensive investigations or external consultation)	Required	10	Training Programme	Cases
<b>Additional Special Experience</b>				Clinical Activities
<ul style="list-style-type: none"> <li>• Gynaecological Cytopathology experience (2 weeks experience or Cervical Cytology Training Course)</li> </ul>	Desirable	1	Training Programme	
<ul style="list-style-type: none"> <li>• Inquest</li> </ul>	Required	1	Training Programme	
<ul style="list-style-type: none"> <li>• Health &amp; Safety</li> </ul>	Desirable	2	Training Programme	
<ul style="list-style-type: none"> <li>• Medico legal cases</li> </ul>	Desirable	1	Training Programme	
<ul style="list-style-type: none"> <li>• Mortality conferences attended</li> </ul>	Desirable	2	Training Programme	
<b>Relatively Unusual Cases</b>	Desirable	1	Training Programme	Cases
<b>Section 3 - Educational Activities</b>				
<b>Mandatory Courses</b>				Teaching Attendance
<ul style="list-style-type: none"> <li>• Core pathology I</li> </ul>	Required	1	Training Programme	
<ul style="list-style-type: none"> <li>• Core pathology II</li> </ul>	Required	1	Training Programme	
<ul style="list-style-type: none"> <li>• Core pathology III</li> </ul>	Required	1	Training Programme	



Curriculum Requirement	Required/ Desirable	Minimum Requirement	Reporting Period	Form Name
<ul style="list-style-type: none"> <li>Ethics for Histopathology</li> </ul>	Required	1	Training Programme	
<ul style="list-style-type: none"> <li>An Introduction to Health Research Methods (Online)</li> </ul>	Required	1	Training Programme	
<ul style="list-style-type: none"> <li>HST Leadership for Pathology (Year 3+)</li> </ul>	Required	1	Training Programme	
<ul style="list-style-type: none"> <li>Mastering Communication (Year 1)</li> </ul>	Required	1	Training Programme	
<ul style="list-style-type: none"> <li>Performing Audit (Year 1)</li> </ul>	Required	1	Training Programme	
<ul style="list-style-type: none"> <li>Wellness Matters</li> </ul>	Required	1	Training Programme	
<b>Non – Mandatory Courses</b>	Desirable	1	Training Programme	Teaching Attendance
<b>Study Days (including in person and weekly Zoom lectures)</b>	Required	30	Year of Training	Teaching Attendance
<b>Participation at in-house activities</b>				Attendance at Hospital Based Learning
<ul style="list-style-type: none"> <li>Grand Rounds</li> </ul>	Required	5	Year of Training	
<ul style="list-style-type: none"> <li>Journal Club Attendance</li> </ul>	Required	10	Year of Training	
<ul style="list-style-type: none"> <li>MDT Meetings</li> </ul>	Required	20	Year of Training	
<b>Examinations</b>				Examinations
FRCPATH Part I examination	Required	1	Training Programme	
FRCPATH Part II examination (please note, a minimum of one year of HST training post successful completion of the FRCPATH is desirable)	Required	1	Training Programme	
Certificate in Higher Autopsy Training (CHAT)	Required	1	Training Programme	

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
<b>Delivery of Teaching</b>				Delivery of Teaching
Lecture	Desirable	1	Year of Training	
Grand Rounds	Desirable	1	Year of Training	
Journal Club	Required	1	Year of Training	
Tutorial	Desirable	1	Year of Training	
<b>Research</b>	Desirable	1	Year of Training	Research Activities
Research Presentation	Desirable	1	Year of Training	
Research Publication	Desirable	1	Year of Training	
<b>Audit activities and Reporting</b> (1 per year either to start or complete, Quality Improvement (QI) projects can be uploaded against audit)	Required	1	Year of Training	Audit and QI
<b>National/International meetings</b>	Required	1	Year of Training	Additional Professional Experience
<b>Additional Qualifications</b>	Desirable	1	Year of Training	Additional Professional Experience
<b>Committee Attendance</b> (1 per year)	Required	1	Year of Training	Additional Professional Experience
<b>Section 4 - Assessments</b>				
<b>DOPS</b>				Procedures, Skills, & DOPS
<ul style="list-style-type: none"> <li>Macroscopy – examine one gross specimen and select blocks for microscopy</li> </ul>	Required	10	Training Programme	
<ul style="list-style-type: none"> <li>Microscopy (surgical specimens)</li> </ul>	Required	10	Training Programme	

Curriculum Requirement	Required/ Desirable	Minimum Requirement	Reporting Period	Form Name
<ul style="list-style-type: none"> <li>Immunohistochemistry – reporting stains on a malignant tumour</li> </ul>	Required	5	Training Programme	
<ul style="list-style-type: none"> <li>Non GYN Cytopathology</li> </ul>	Required	1	Training Programme	
<ul style="list-style-type: none"> <li>GYN Cytopathology</li> </ul>	Desirable	1	Training Programme	
<ul style="list-style-type: none"> <li>Adult Autopsy</li> </ul>	Required	1	Training Programme	
<ul style="list-style-type: none"> <li>Paediatric Autopsy</li> </ul>	Desirable	1	Training Programme	
<ul style="list-style-type: none"> <li>Molecular pathology</li> </ul>	Desirable	5	Training Programme	
<b>Case Based Discussion (CBD)</b>	Required	2	Year of Training	Case Based Discussion
<b>Quarterly Assessments/End-of-Post Assessment</b>	Required	1	Year of Training	End Of Post
<b>End of Year Evaluation</b>	Required	1	Year of Training	End of Year Evaluation